

# **NIE Networks RP7 Business Plan 2025-2031**

## **Response to the Utility Regulator's Draft Determination**



**22 March 2024**

## CONTENTS

<b>Chapter</b>		<b>Page</b>
1	Introduction and Structure	1
2	Key Messages in this Response	3
3	Network Costs	13
4	Direct Network Investment	38
5	Frontier Shift	154
6	IT, DSO and Digitalisation	164
7	Metering Market Operations	176
8	Innovation and Incentives	205
9	Pensions	239
10	Evaluative Performance Framework Principles and Guidance	244
11	Other Matters	258
12	Price Control Design	268
13	Financeability and WACC	313
14	Consumer Measures and Customer Engagement	340
15	Impact on Customer Bills	342

<b>Annex</b>	<b>Document Description</b>
A3.1	NERA – "Response to the UR RP7 Draft Determinations" – 4 March 2024 (" <b>NERA DD Report</b> ")
A3.2	RP7 Indirect and IMF&T Costs: Dossier of Evidence – March 2024
A3.3	Spreadsheet, "RP7 Cost Analysis – Tree Cutting"
A4.1	Spreadsheet, "Unit Costs - Detail by Cat"
A4.2	Spreadsheet, "OHL Contract Rates Uplift from 2017 Contract Award"

A4.3	Spreadsheet, "3 Phase Cut Outs"
A4.4	Lisburn Main Substation Site Drawing
A4.5	Spreadsheet, "AC Systems Assessment"
A4.6	Spreadsheet, "33-11kV & 33-6.6kV Transformers Condition Scores"
A4.7	Spreadsheet, "EFI CBA"
A4.8	PDF, "D14G and D14H - Coolers and Cooler Controls Condition Evidence"
A4.9	Spreadsheet, "Comms CCTs split over sub categories"
A4.10	PDF, "Molly Mountain Structural Report"
A4.11	PDF, "Temain GDC Report"
A4.12	PDF, "Tandragree GDC Report"
A4.13	Spreadsheet, "Distribution 33kV Protection Modelling"
A4.14	Spreadsheet, "Distribution 11kV Protection Modelling"
A4.15	PDF, "D603 – Pilot Box Condition Evidence"
A4.16	PDF, "D603v – Switchboard VT Evidence"
A4.17	Spreadsheet, "110kV Circuit Breakers Condition"
A4.18	Spreadsheet, "110kV SF6 Figures 050124"
A4.19	Spreadsheet, "110-33kV Transformers Condition Scores"
A4.20	Spreadsheet, "DD-093 and DD-094 – Associated Cable build-up"
A4.21	Spreadsheet, "CBA for 110kV OHL Conductor Asset Replacement"
A4.22	Spreadsheet, "T19ah – 110kV OHL Clearances"
A5.1	EY - "NIAUR's approach to Real price effects and productivity in RP7" - 8 March 2024 (" <b>EY RPE and Productivity Report</b> ")
A6.1	"RP7 – Draft Determination – IT Response"
A10.1	NIE Networks' proposed amendments of the draft Evaluative Performance Framework Guidance

A13.1	Frontier Economics - "Frontier Economics Cost of Capital and Financeability for RP7 – Comments on the Draft Determination" - March 2024 (" <b>Frontier DD Report</b> ")
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## CHAPTER 1

### INTRODUCTION AND STRUCTURE OF RESPONSE

Northern Ireland Electricity Networks Limited ("**NIE Networks**") is the owner of the electricity transmission and distribution networks and the operator of the distribution network in Northern Ireland ("**NI**").

This document sets out NIE Networks' response (the "**Response**") to the Utility Regulator's (the "**UR**") Draft Determination ("**DD**") in respect of NIE Networks' next price control which will run for the six year period from 1 April 2025 to 31 March 2031 ("**RP7**").

NIE Networks submitted its RP7 Business Plan to the UR in March 2023 (the "**RP7 Business Plan**"). The DD was published on 28 November 2023, with the consultation period closing on 22 March 2024.

The UR is aiming to publish its Final Determination in October 2024 taking into account responses received to the DD.

RP7 will take effect from 1 April 2025.

#### Structure of this document

This Response is subdivided into the following Chapters and should be read in conjunction with its supporting Annexes:

- Chapter 2 Key Messages in this Response
- Chapter 3 Network Costs
- Chapter 4 Direct Network Investment
- Chapter 5 Frontier Shift
- Chapter 6 IT, DSO and Digitalisation
- Chapter 7 Metering Market Operations
- Chapter 8 Innovation and Incentives
- Chapter 9 Pensions
- Chapter 10 Evaluative Performance Framework Principles and Guidance
- Chapter 11 Other Matters
- Chapter 12 Price Control Design
- Chapter 13 Financeability and WACC
- Chapter 14 Consumer Measures and Consumer Engagement
- Chapter 15 Impact on Customer Bills

#### Explanatory notes

All prices referred to in this Response are in 2021/22 prices, unless stated otherwise or the context otherwise requires.

There are 3 chapters of the DD (chapters 2, 14 and 15) which NIE Networks does not address in this Response. Insofar as these contain proposals by the UR for RP7, NIE Networks is content with the UR's proposals to be included in the UR's Final Determination.

## CHAPTER 2

### KEY MESSAGES IN THIS RESPONSE

#### 1. INTRODUCTION

- 1.1 In March 2023, NIE Networks submitted a Business Plan to the Utility Regulator ("UR") that set out our plans and expenditure requests for the RP7 price control period. In November 2023, the UR then published its Draft Determination ("DD") for RP7.
- 1.2 NIE Networks is now providing a response to the proposals contained in the DD, so that the UR might reconsider some aspects of its proposals ahead of finalising and publishing its Final Determination for RP7.

#### 2. KEY ASPIRATIONS OF THE RP7 BUSINESS PLAN

- 2.1 In the DD, the UR states that it has assessed NIE Networks' plans for the development, operation and maintenance of the networks, in order to meet the needs of customers. The UR also considered *'the value NIE Networks provides in the delivery of both the Northern Ireland Executive's Energy Strategy and the fulfilment of the targets set by virtue of the Climate Change Act (Northern Ireland) 2022.'*<sup>1</sup>
- 2.2 The UR further acknowledges that RP7 is about delivering investment to facilitate the energy transition, and that its proposals for RP7 are intended to ensure NIE Networks is fully able to support the transition in NI. This acknowledgement is both welcome and very positive.
- 2.3 In our Business Plan we set out the aims of the plan, which are to:
- **Facilitate the decarbonisation of society.** This means developing the network to support the electrification of heat and transport, whilst also enabling the 80% renewables target to be achieved. This will require not only additional capacity to be added to the network, but also a more flexible and digitally enabled operating approach.
  - **Maintain a safe, reliable and resilient network.** As heat and transport electrifies, society's reliance on electricity will increase even more than currently. Accordingly, NIE Networks will need to ensure the network remains safe, reliable and resilient so that customer outages are kept to a minimum.
  - **Ensure our customers continue receiving an excellent level of service.** This will include developing new and more digitalised methods for customers to interact with the network. Digitalisation of the network will allow customers to be more empowered about their energy choices.
  - **Ensure our business is prepared for the future.** Our ambitions for the future are underpinned by a number of key organisational changes that are essential to delivering the transformational change in RP7 and beyond. These include addressing the challenges of environmentally sustainable operations, greater digitalisation and workforce resilience. We also need to re-shape our

<sup>1</sup> DD Executive Summary, 3.

organisation to ensure we have sufficient capability to deliver the investments needed during RP7 and beyond.

- 2.4 We also stated we want to achieve these aims at the least possible cost, in keeping with our long history of delivering a safe, reliable and resilient network for customers, and doing so at a level of cost which the UR has acknowledged benchmarks among the very best in the UK and Ireland.

### 3. HOW WE PLANNED TO GO ABOUT DOING THIS – A SUMMARY OF OUR INVESTMENT APPROACH

- 3.1 To achieve these aims, we described an investment approach in our Business Plan as follows –

- To **facilitate the decarbonisation of society**, we said we would –
  - take a whole system approach, and as far as possible seek to ‘touch the network once’;
  - employ a ‘flexibility first’ approach to investment decisions; and
  - innovate as much as possible.
- To **maintain a safe, reliable and resilient network**, we said we would –
  - maintain network reliability by continuing with programmes to replace and refurbish assets in poor condition whilst improving longer-term network resilience;
  - adhere to relevant safety, legislative and environmental requirements;
  - optimise asset lives; and
  - maximise opportunities to deliver efficiencies within our business.
- To **ensure our customers continue receiving an excellent level of service**, we said we would –
  - focus on protecting vulnerable customers;
  - introduce greater digitalisation to make it easier for customers to do business with us; and
  - enable customers to be more active in their energy usage.
- To **ensure our business is prepared for the future**, we said we would reinvent our business to –
  - increase delivery and network capabilities;
  - improve organisational capability including growing our workforce substantially, and investing in / developing IT systems and processes to make our daily operations more efficient; and
  - transition successfully to the role of DSO.

- 3.2 The UR has, in its DD, been supportive of the thrust of our plan. NIE Networks welcomes this support and also the apparent shared ambition that we set out in our



Business Plan. This provides an excellent platform on which to build as the UR finalises its proposals into a Final Determination.

- 3.3 However, there are some areas in the DD that do cause us concern as we feel they will prevent us delivering the ambitious business plan that the UR has tasked us with delivering for this crucial period in the energy transition.

#### 4. **AREAS OF CONCERNS LOOKING AT THE DD PROPOSALS IN THE ROUND**

- 4.1 In its current form the DD proposals contain a number of issues that, when combined, create significant risks to the deliverability and financeability of all of the commitments we set out in the RP7 plan to achieve our shared objectives for Northern Ireland.

- 4.2 The main issues we see with the price control can be characterised as follows:

- Concerns with aspects of price control design;
- Concerns with aspects of totex allowances; and
- Concerns with aspects of the Weighted Average Cost of Capital (WACC) and financeability proposals

##### **Concerns with aspects of price control design**

*Ability to invest sufficiently early to enable delivery of long-term net zero 2050 goals even where there is uncertainty of shorter-term need*

- 4.3 The UR agrees that a step-change in the amount of investment is needed.

*“However, we are moving into a period where the demands and expectations placed on the electricity network are changing rapidly as it develops to support decarbonisation of the electricity sector and wider society.”<sup>2</sup>*

- 4.4 The UR also agrees that much of the investment will be needed to enable delivery of longer-term net zero 2050 ambitions, and this need exists irrespective of how certain assumptions such as LCT uptake play out in practice.

*“However, the assumptions [for] low carbon technology connections which NIE Networks has made is only one driver for increased investment in RP7. Others include:*

*a) Investment in large scale transmission projects including the North-South Interconnector. In addition to addressing increases in load, these projects will allow increased renewable energy to be generated and distributed. They should also contribute to reductions in other market costs such as imperfection charges.*

*b) A major refresh of existing IT systems, and the introduction of new systems to support digitalisation, publication of information for consumers, and more interactive management of the network.*

*c) Upgrade of low-capacity sections of the network, in particular the 11kV overhead line network serving rural areas.*

<sup>2</sup> DD Executive Summary, 1.1.

*d) Additional refurbishment of an aging existing network.*

*“Significant elements of this additional investment are not dependent on load growth assumptions or the energy transition assumptions.”<sup>3</sup>*

- 4.5 If progress is to be made towards achieving net zero goals, then we believe we need an appropriate level of freedom to invest even where there is uncertainty on shorter term need in RP7. However, NIE Networks is concerned that many of uncertainty mechanisms proposed in the DD include the ability to claw back allowances if certain conditions are not met – which in turn creates a degree of uncertainty regarding cost recovery for NIE Networks that creates a financial hazard even if the investment is efficient and based on prudent forecasts.
- 4.6 This creates a risk that investments which could be efficiently advanced today to prepare the network for future needs will be delayed or deferred, which may in turn result in higher ultimate costs to customers when the investments are made.
- 4.7 We have specific concerns regarding the DD proposals for primary and secondary network reinforcement works, and for major projects on the transmission system under the so-called “D5 mechanism”.
- **Primary network reinforcement.** The DD proposals include a reduction in allowances of around 10% and the UR wants to include re-openers that could result in clawbacks if forecasts change. These proposals create a disincentive to invest where there is any degree of uncertainty despite the fact that the investment will improve overall network capacity (including for LCT connections). Full details are set out in Chapter 12.
  - **Secondary network reinforcement.** Whereas we had sought the bulk of the allowances on an ex-ante basis, the DD proposals are for allowances to be determined almost entirely through a volume driver which will include potential annual checks and a review which could result in disallowances. Again, these proposals create a disincentive to invest where there is uncertainty despite the fact that the investment will improve overall network capacity (including for LCT connections). Full details are set out in Chapter 12.
  - **D5 projects.** To improve the efficacy of the D5 mechanism, we proposed some changes to the arrangements for project pre-construction approvals. In its DD the UR accepts the need for reform in principle, but the UR introduces additional criteria which are overly onerous and will reduce the extent to which improvements can be realised.

In addition to having concerns with the specific proposals put forward by the UR in its DD, NIE Networks believes it would be in the interests of Northern Ireland to carry out a full review of the transmission infrastructure approval process, to ensure the significant increase in projects can be progressed to delivery stage without delay, helping to ensure the achievement of 2030 targets and beyond. This follows the UK Government having published an independent

<sup>3</sup> DD Executive Summary, 1.8-1.9.

report from the UK's Electricity Networks Commissioner on how to accelerate the deployment of electricity transmission infrastructure.

Full details of our views on the D5 process are set out in Chapter 12.

- 4.8 A price control with mechanisms that potentially deter NIE Networks making investment to the extent we believe is necessary to meet Northern Ireland's longer-term net zero ambitions, will lead to a sub-optimal investment approach. Such mechanisms create a disincentive to invest efficiently where there is any degree of uncertainty despite the fact that the investment will improve overall network capacity (including for LCT connections) to meet longer term net zero ambitions. Indeed, the UR agrees with this sentiment:

*“The increased investment planned for RP7 is expected to continue for at least two further price controls. The increasing level of investment necessary to upgrade electricity networks at local, national and international, levels will place significant demands on supply chains. Delaying making a start on this investment can only increase the peak in future investment, making it difficult and possibly more expensive to deliver. It would also miss the opportunity to increase capacity in parallel with on-going maintenance programmes and increase the marginal cost of future capacity upgrades. Therefore, we have concluded that, despite the uncertainty over future load projections, there is a need to begin this long-term investment in strengthening our electricity networks now, accepting that some of this investment may be in advance of need.”<sup>4</sup>*

Other areas of concerns with price control design

- 4.9 Other areas where we consider the UR's price control design proposals could be improved to the further achievement of our shared objectives are –

- **Network performance incentive (the “CML incentive”).** The UR's DD proposes a CML target which is much too penal (2% year-on-year reductions compared to the target we proposed in our Business Plan of 0.5%). The UR's rationale for proposing 2% is flawed as it fails to recognise that the Ofgem methodology (on which the UR has based its target) sets annual reduction targets based on historic CML improvements acknowledging the law of diminishing returns, and not the absolute CML performance of the company. On this measure NIE Networks should be regarded as one of the best performing among the GB DNOs – having delivered significant CML improvements during RP6 and thus, significant value to customers. Based on this, the UR should set a target 0.5% year-on-year reduction rather than the 2% target reserved by Ofgem for the worst performing DNOs.

Such an approach is much too penal and is not consistent with the precedent set by Ofgem. Furthermore, due to the penal nature of the mechanism design, it could impact on the delivery of critical net zero investment workstreams as

<sup>4</sup> DD Executive Summary, 1.8-1.10.

significant resources will be required to limit losses associated with the proposed target.

Full details are set out in Chapter 8.

- **The Evaluative Performance Framework (EPF) incentive.** NIE Networks has concerns with the proposed design of the EPF, a new mechanism proposed for RP7 to incentivise improvements beyond the proposed business plan. Such an incentive mechanism should drive NIE Networks to be as ambitious as possible at this critical juncture of the energy transition. Therefore, we consider the design of the EPF should offer more upside reward – similar to the EPF in SONI's current price control, and the ESO in GB – which in turn would better help achieve this and unlock significant customer value. By contrast, the design of the EPF as proposed in the DD falls short of achieving this. Full details are set out in Chapter 10.

### **Concerns with aspects of totex allowances**

#### *Allowances for indirects and Inspections Maintenance Faults and Tree Cutting (IMF&T)*

- 4.10 Whilst there are a number of areas where we have concerns, by far the main area of concern is in respect of allowances for indirects and IMF&T. In this particular area, the UR has disallowed costs that are critical to the delivery of the plan. This poses a very significant risk to building the organisational capability to carry out the work to deliver the significantly increased scale of the overall programme as set out in the business plan, safely and efficiently.
- 4.11 Having granted allowances for a significant majority of the network investment programme ("**NIP**"), the UR's allowances for indirect and IMF&T costs fall significantly short of what we need to deliver the NIP. Put another way, whilst the DD offers significant allowances for the necessary capital equipment etc., allowances for the people who will plan, manage and support the necessary work are just not enough. This is particularly problematic when set against a benchmark assessment by the UR that NIE Networks is already amongst the most efficient network operators in the UK which means that NIE Networks has already long since eliminated any spare capacity in the business to take on additional activities.
- 4.12 A full explanation of where the UR has erred in its proposals in this regard is set out in Chapter 3.

#### *Other allowance concerns*

- 4.13 Other areas where we consider the UR's DD allowances fall short of what we actually need to deliver the plan include:
- **Unit cost allowances.** In its DD proposals, the UR has applied an inconsistent approach to setting unit costs for capex items, and has not recognised the cost challenges currently facing the utilities market. In particular, the UR has recognised that the costs to provide utility services have increased substantially in the recent past but it does not appear to have recognised that these recent increases will have an impact right through RP7 and will not easily be addressed.

As part of this response we are providing the UR with new evidence to demonstrate it has set some unit costs at a level that is too low. Full details are set out in Chapter 4.

- **Allowances for RPEs and productivity.** The UR's approach to RPE's is broadly comparable to what we proposed in the RP7 Business Plan, except: (1) the UR does not include specialist labour indices for assessing labour cost RPEs; and (2) the UR does not propose to introduce an ex-post adjustment mechanism. We consider there are errors in the UR's reasoning for these proposals. Full details are set out in Chapter 5.

The UR has also proposed a productivity target of 1.0% per annum, compared to our proposal of 0.8%. We consider a target of 0.8% remains appropriate given the benchmarking assessment by the UR is that NIE Networks is already amongst the most efficient network operators in the UK. Further details are also set out in Chapter 5.

- **Allowances for innovation.** The UR has granted just over half of the ex-ante allowances requested for innovation projects (£4.7m granted versus our request of £8.8m). We also sought an annual re-opener for releasing funds for innovation, which would enable an agile and responsive approach to changing circumstances regarding innovation projects we might wish to undertake. However, the DD contains only one mid-point re-opener, which is much too inflexible a mechanism for innovation. Full details are set out in Chapter 8.
- **Allowances for market operations and metering activities.** The UR has made a number of errors when determining allowances in this area which, if not remedied, will result in NIE Networks being inadequately funded. In particular, the UR has recognised that the costs to provide metering services have increased substantially in the recent past but it does not appear to have recognised that these recent increases will have an impact right through RP7 and will not easily be addressed. Full details are set out in Chapter 7.

### **Concerns with aspects of the Weighted Average Cost of Capital (WACC) and financeability proposals**

4.14 Driven by the necessity to decarbonise, the RP7 plan represents a step-change in the level of investment in the network with a requirement to fund approximately £2.5 billion. Financing RP7 will require NIE Networks to retain its A- stand-alone credit rating and equity returns comparable with GB networks in order to compete for ongoing access to debt markets and equity at competitive market cost to fund significant levels of investment. NIE Networks' significant concern is that the proposed WACC and financeability assessments undertaken by the UR are not sufficiently robust and do not take account of significant downside risks to financeability and investability. In particular there are four main areas of concern:

- The UR's DD financeability assessment does not take account of significant downside risks and is improved by artificially low gearing assumptions which are not consistent with an efficient capital structure and is inconsistent with GB regulators' approach.

- The proposed inflation adjustment mechanism to the cost of debt in the WACC is a significant departure from the current RP6 regulatory model and the arrangements that currently apply in GB. If implemented it poses a significant risk to NIE Networks' credit rating, funding capacity, investability and its cost of capital relative to GB networks.

NIE Networks requests that the UR does not include the inflation adjustment mechanism as part of its Final Determination for RP7, but instead retains the existing RP6 approach for now. The UR could then revisit its approach at RP8 including its appropriateness for NI consumers and investors in light of Ofgem's decision on the treatment of inflation in RII0-3 (as part of an overall determination package that is financeable and investable for GB networks).

- The proposed cost of equity of 5.15% post tax real is significantly lower than the RP7 business plan of 5.95%. This is not reflective of a rational investor's expectations of investing in electricity networks in the current higher interest rate environment as it does not have sufficient headroom over the proposed cost of debt of 4.49% pre-tax real to appropriately reflect the higher risks faced by equity holders over debt providers and, as highlighted by Moody's in its recent outlook for ESB, has no proposed uplift to NIE Networks' allowed equity returns for the cash flow volatility arising from the proposed inflation adjustment mechanism to the cost of debt.
- There are a number of other aspects of the proposed WACC parameters which are of concern, including the level of additional borrowing costs not being reflective of actual costs and regulatory precedents.

4.15 NIE Networks requests the UR to review its approach to the WACC and financeability assessment at the Final Determination and set a WACC that is more in line with the proposals by NIE Networks to enable it to efficiently secure the necessary finance at competitive market rates to deliver the £2.5 billion RP7 plan.

4.16 A full explanation of these significant areas of concern in relation to WACC and financeability is set out in Chapter 13.

## 5. **TAKEN TOGETHER, THE ABOVE CONCERNS INCREASE THE RISK OF NEGATIVE OUTCOMES FOR NORTHERN IRELAND**

5.1 The above issues, if not remedied as part of the UR's Final Determination, will compound to lead to an outcome which is harmful, not only to the interests of NIE Networks but also to the interests of all of Northern Ireland's stakeholders.

5.2 Why is this? Because:

- **There is a high risk that NIE Networks will be unable to deliver the full RP7 plan.** Our ability to invest even where there is uncertainty on shorter term need is too restrictive, leading to a less-than-optimal investment approach that prevents us keeping the network "ahead of the curve". This is compounded by a risk that the level of funding is insufficient to deliver the level of investment needed.

- **There is a high risk that NIE Networks is unable to earn a fair and reasonable return.** The downside risks inherent in the DD proposals mean there is a greater probability of NIE Networks suffering a financial underperformance. This matters to customers because it will limit our ability to make investments that we know are necessary for Northern Ireland to achieve its net zero ambitions, but where we do not know if approval of cost recovery at a fair and reasonable level can be realised. This is an issue that will have to be addressed, not just in RP7, but also in future price controls that will also see increasing levels of investment.

5.3 Again, the outcome could be a less-than-optimal investment approach; and if we do not get it right in this initial period of the investment ramp-up during RP7, then we may put at risk the ability to deliver the increasing investment needed in the future RP8 and RP9 programmes.

## 6. WHAT WE BELIEVE THE UR SHOULD DO DIFFERENTLY IN THE FINAL DETERMINATION

6.1 The UR has stated in its DD – and indeed, in every engagement we have had with it over the course of the price control process – that it is open to being persuaded to a different position if we can demonstrate where it needs to change its position and provide evidence to support this where necessary. This willingness to engage openly on key issues is very welcome and this response document is framed to be the start of a discussion process which will conclude at the Final Determination rather than an end in itself.

6.2 Accordingly, in this response to the UR's DD we have proposed suggested amendments where necessary, to:

- Correct those aspects of price control design that could otherwise hold us back. This means ensuring the mechanism for funding network reinforcement does not disincentivise anticipatory investment which is important to deliver a better network. It also means reviewing the D5 process for transmission investments, and making changes to ensure it does not become a bottleneck.

See Chapters 4 and 12 for a more detailed description.

- Ensure appropriate allowances are granted for all expenditure, and in particular for indirect and IMF&T expenditure. See Chapter 3 for a more detailed description.
- Review the approach to allowed returns (WACC) and financeability in line with the proposals by NIE Networks to set a fair and reasonable return to enable us to efficiently secure the necessary finance at competitive market rates to deliver the significantly increased investment in the £2.5 billion RP7 plan to facilitate decarbonisation and maintain a safe, reliable and resilient network. See Chapter 13 for a more detailed description.

**7. IMPACT FOR CUSTOMERS IF THE UR ACCEPTS ALL OF OUR SUGGESTED REMEDIES**

- 7.1 NIE Networks' position is that it is in the interest of all stakeholders in Northern Ireland for UR to amend the Final Determination in accordance with our suggested remedies in this response. In doing so, the UR will ensure we have the best chance of delivering on the commitments we made in our RP7 Business Plan, and moving Northern Ireland in the right direction in the energy transition and towards decarbonisation.
- 7.2 The bill impact for customers, should the UR accept all of our remedies, is marginally lower than the original Business Plan submission where we projected that network charges in the last year of RP7 would be around £10 higher than in the last year of RP6 for an average household, excluding inflation. If the UR accepts all of our remedies, we estimate annual network charges for an average household would be around £6 higher at the end of RP7.
- 7.3 However, it is worth noting that the increase occurs in a more gradual manner compared to the original RP7 Business Plan. This is due to a re-profiling of major transmission works (D5 projects), with a greater volume of the work now occurring in the latter years of RP7 compared to when we submitted our plan. As a result, we would see lower customer bills in those early years of the RP7 Price Control as we would expect to receive lower transmission-related revenues in the early years of the price control period.

**8. CLOSING REMARKS**

- 8.1 We would like to thank the UR for the considerable time and effort it has put into the RP7 process.
- 8.2 We hope this Response is received in the constructive manner in which it is intended; and we look forward to engaging further with the UR as it works towards its Final Determination for RP7.



## CHAPTER 3

### NETWORK COSTS

#### **SUMMARY**

This Chapter relates to the UR's provisional determination on network costs which are subject to efficiency benchmarking, as well as other unmodelled costs.

The UR's proposals with respect to network costs contribute to one of NIE Networks' three main concerns with the DD – namely, that aspects of totex allowances are insufficient.

Having granted allowances for a significant majority of the network investment programme ("**NIP**"), the UR's allowances for Indirect costs and Inspections, Maintenance, Faults and Tree Cutting costs (together "**I&IMFT**" costs) fall significantly short of what NIE Networks needs to deliver the NIP. Whilst the DD offers significant allowances, such as for the necessary capital equipment, allowances for the people who will plan, manage and support the necessary work are insufficient.

This is particularly problematic when set against the UR's provisional benchmark assessment, which sets NIE Networks amongst the most efficient network operators in the UK. This means that, as an efficient network operator, NIE Networks does not hold spare capacity in its business to take on additional activities. If the UR's proposals are carried over in its Final Determination, the shortfall in allowances will undermine NIE Networks' ability to deliver the full RP7 plan. This, in turn, will hinder NIE Networks' plans to fully facilitate the decarbonisation of society, and to maintain a safe, reliable and resilient network.

NIE Networks' concerns, in summary, are that:

- The UR has made two errors in its benchmarking methodology of the company's I&IMFT in the DD. In particular the UR has (i) erroneously included indirect costs for connection activity and (ii) applied an inappropriate regional wage adjustment;
- In setting the company's allowance for I&IMFT costs, the UR has (i) erroneously weighted the cost models in its benchmarking methodology and (ii) failed to provide reasons for applying a 50% cap on the company's efficiency uplift;
- The UR has misapplied the indirect scalar adopted by Ofgem at RIIO-ED2 to account for additional indirect costs associated with higher capex expenditure; and
- In its top-down assessment of I&IMFT costs, the UR has failed properly to take into account allowances for (i) IT-related indirect costs that it has separately assessed and approved and (ii) network access and commissioning costs.

NIE Networks also responds to the UR's request for additional information to support the company's bottom-up assessment of I&IMFT and other unmodelled costs provided in its RP7 Business Plan.

## 1. INTRODUCTION

1.1 This Chapter addresses the key concerns that NIE Networks has with the UR's provisional determination with respect to network costs subject to efficiency benchmarking, as well as other unmodelled costs.<sup>1</sup> These concerns relate to:

- the UR's approach to benchmarking, including its use of benchmarking models which understate NIE Networks' efficiency;
- the UR's 'triangulation' of the benchmarking models and subsequent application of an arbitrary 50% cap to determine NIE Networks' overall efficiency uplift for RP7;
- the UR's misapplication of the indirect scalar adopted by Ofgem at RIIO-ED2 to account for additional indirect costs associated with higher capex expenditure; and
- the UR's failure to properly include allowances for (i) IT-related indirect costs that it has separately assessed and approved, and (ii) network access and commissioning.

1.2 NIE Networks also requests in this chapter that the UR includes a mechanism in its Final Determination that will provide for additional allowances for indirect costs incurred as a result of capex relating to D5 projects and other capex reopeners.

1.3 This chapter of NIE Network's response to the DD is supported by a report from NIE Networks' advisers, NERA (the "**NERA DD Report**"), included as Annex A3.1 to this Response.<sup>2</sup> The NERA DD Report forms an integral part of NIE Networks' responses to Sections 2 to 4 of this chapter and should read in conjunction with this chapter.

1.4 In addition, NIE Networks has undertaken additional work to produce a dossier of evidence (included as Annex A3.2 to this Response) which provides a detailed justification of NIE Networks' Indirects and Inspections, Maintenance, Faults and Tree Cutting ("**IMFT**", together "**I&IMFT**") I&IMFT expenditure forecast, based a "bottom-up" assessment. Additional supplementary evidence is provided at Annex A3.3, which supports Section 3.2 of Annex A3.2. Annexes A3.2 and A3.3 form an integral part of, and should be read in conjunction with, NIE Networks' response at Section 6 of this chapter.

1.5 This Chapter is structured as follows:

- Section 2 sets out NIE Networks' concerns with respect to the UR's approach to benchmarking, including:
  - the erroneous inclusion of indirect costs for connection activity in the benchmarking assessment; and
  - the inappropriate application of the regional wage adjustment;

<sup>1</sup> See DD, Chapter 3 and Annex D.

<sup>2</sup> NERA, 'Response to the UR RP7 Draft Determinations' (4 March 2024) ("**NERA DD Report**").

- Section 3 sets out NIE Networks' concerns with respect to the UR's 'triangulation' approach to the benchmarking models and setting of NIE Networks' I&IMFT allowance, including:
  - the inappropriate weighting of the selected benchmarking models, which understates NIE Networks' efficient costs; and
  - the application of an arbitrary 50% cap to the overall efficiency uplift of NIE Networks' I&IMFT allowance;
- Section 4 sets out NIE Networks' concerns with respect to the UR's application of an indirect scalar to account for additional indirect costs associated with higher capex expenditure expected at RP7, including:
  - the misapplication of Ofgem's indirect scalar for RIIO-ED2; and
  - a request for a mechanism that will provide for an allowance for indirect costs incurred as a result of capex expenditure relating to D5 projects and other capex reopeners;
- Section 5 sets out NIE Networks' concerns with respect to the UR's failure to provide adequate allowances for (1) IT-related indirect costs that it has separately assessed and approved, and (2) network access and commissioning costs; and
- Section 6 responds to the UR's request for NIE Networks to provide additional information to support its "bottom-up" assessment of I&IMFT costs for RP7, which is provided at Annexes A3.2 and A3.3.

## 2. THE UR'S APPROACH TO BENCHMARKING

2.1 In its RP7 Final Approach Document,<sup>3</sup> the UR set out its expectation to use benchmarking to determine the relative efficiency of NIE Networks:

*"We expect NIE Networks to have carried out sufficient benchmarking to inform its decision on the scope for improving efficiency that it has included in its RP7 Business Plan. We will expect to see justification together with information and evidence for us to be able to carry out benchmarking checks against peer enterprises operating elsewhere in UK/Europe."*

2.2 NIE Networks submitted its detailed business plan for RP7 in March 2023. That plan included a report prepared by NERA which detailed the analysis undertaken to compare NIE Networks' costs with those of the 14 GB DNOs ("**NERA Benchmarking Report**").

2.3 The NERA Benchmarking Report contained a comparative benchmarking analysis of NIE Networks indirect and IMFT ("**I&IMFT**") costs against that of the GB DNOs. The purpose of this report was to evidence the extent to which NIE Network's current

<sup>3</sup> UR, 'NIE Networks RP7 Price Control: Our Approach', 6 July 2022, ("**RP7 Final Approach Document**") (<https://www.uregni.gov.uk/files/uregni/documents/2022-07/2022-07-06%20RP7%20final%20Approach%20Document%20final.pdf>).

expenditure was efficient. As such, it informed the scope for efficiency improvements to be factored into NIE Networks' RP7 business plan.

- 2.4 In preparing its report, NERA adopted the methodology used by Ofgem for the RIIO-ED1 and RIIO-ED2 price control reviews in GB, and by the UR for RP6. The evidence shows that:
- NIE Networks performs as the most efficient network among all UK DNOs, and
  - NIE Networks' I&IMFT costs were 24% below the 'upper quartile' level of efficient costs identified through a comparison to the GB DNOs (i.e. 24% more efficient than the upper quartile level).<sup>4</sup>

### **The UR's approach**

- 2.5 In its overall approach to the assessment of NIE Networks' I&IMFT allowances, the UR has conducted a top-down analysis to provisionally set the company's allowance for I&IMFT costs. The UR has also conducted a bottom-up cost-analysis of the I&IMFT costs in order to fully justify such costs.
- 2.6 NIE Networks agrees with and welcomes the UR's approach in the DD to determine I&IMFT allowances by considering costs on a top-down basis and then sense-checking the outcome of this assessment on bottom-up basis, where possible. NIE Networks considers that the UR should follow this approach in its Final Determination.
- 2.7 The remainder of this Section 2 concerns the UR's approach to the top-down analysis. NIE Networks provides its responses on the UR's bottom-up analysis in Section 6.
- 2.8 In its top-down analysis for RP7, the UR undertook a benchmarking exercise to compare the efficiency of NIE Networks' I&IMFT expenditure with that of the GB DNOs. The UR engaged economic consultants, Cambridge Economic Policy Associates Limited ("**CEPA**"), to assist it with this exercise. CEPA's report is included with the DD at Annex B (the "**CEPA DD Report**").
- 2.9 In its DD, the UR has provisionally selected a set of top-down I&IMFT models that it developed in conjunction with CEPA.
- 2.10 In the CEPA DD Report, CEPA recommends six models based on its model assessment criteria for statistical robustness and regulatory consistency. These models vary according to the choice of drivers used to explain variation in costs across companies and over time, the choices as to which categories of costs are included or excluded from the models, and the level of granularity. The UR has accepted CEPA's recommendations in its DD, as summarised in Table 3.1 below.

<sup>4</sup> NERA Benchmarking Report, p.60.

**Table 3.1: UR RP7 DD Benchmarking Models**

Model number	Cost	Cost drivers
1	I&IMFT	<ul style="list-style-type: none"> <li>• Network length (kilometres)</li> <li>• Network density = customer numbers, per kilometre of network length</li> <li>• OHL% = overhead line length (kilometres) as a share of total network length</li> </ul>
2	I&IMFT	<ul style="list-style-type: none"> <li>• Middle-up CSV (MU CSV) = <ul style="list-style-type: none"> <li>– 50% weight on network length</li> <li>– 25% weight on customer numbers</li> <li>– 25% weight on units distributed (kilowatt-hours)</li> </ul> </li> <li>• Network density</li> <li>• OHL%</li> </ul>
3	I&IMFT	<ul style="list-style-type: none"> <li>• Network length</li> <li>• Network density</li> </ul>
4	NOCs <sup>5</sup>	<ul style="list-style-type: none"> <li>• Network length</li> <li>• Network density</li> <li>• OHL%</li> </ul>
5	NOCs	<ul style="list-style-type: none"> <li>• MU CSV</li> <li>• Network density</li> <li>• OHL%</li> </ul>
6	NOCs	<ul style="list-style-type: none"> <li>• Network length</li> <li>• Network density</li> </ul>

2.11 Following its approach for RP6 and in line with CEPA's recommendations, the UR adopted two distinct approaches to the allocation of connections-related indirect costs for each of the three I&IMFT models (i.e. the models numbered 1 to 3 above):

- One approach (“**pre-allocation**”) includes all connections-related indirect costs in the modelling; and
- The other approach (“**post-allocation**”) excludes all connections-related indirect costs from the modelling.

<sup>5</sup> Network Operating Costs.

- 2.12 The UR proposes to place equal weights on the results of CEPA's regressions that use both pre- and post-allocation approaches. The UR therefore relies on nine benchmarking models to assess the overall efficiency of the company's I&MFT costs at RP7 – i.e., models 1 to 3 in Table 1 above on both a pre-allocation and post-allocation basis, plus models 4 to 6.
- 2.13 In terms of controlling for variation in labour costs due to wage differentials across the country, the UR applies a regional labour adjustment at the pre-modelling normalisation stage that seeks to bring the companies to a more comparable level. At RP7, it assumes DNOs need to co-locate all labour with their network assets.
- 2.14 CEPA and the UR estimate NIE Network's efficient cost at the upper quartile level of modelled efficiency scores across NIE Networks and the GB DNOs. The gap between the company's historical costs and the estimated upper quartile level of costs defines the size of the "efficiency gap" for the company. The UR calculates a "triangulated" uplift by taking a simple average of the nine selected models noted above at paragraph 2.10.
- 2.15 According to CEPA's results for the UR, NIE Networks is more efficient than the upper quartile level efficiency of the industry across all its models, whereby the applicable uplift (i.e. the percentage difference between the company's efficiency score and the industry upper quartile efficiency score) as an average of all nine alternative models is 13.7%.

#### **Concerns with the UR's approach**

- 2.16 For the reasons summarised below and set out in further detail in the NERA DD Report, NIE Networks considers that the UR has made two errors in its approach, which understate the company's efficiency:
- The UR's approach does not control for important differences between NIE Networks and the GB DNOs in relation to connections; and
  - The UR fails properly to account for the impact of regional labour cost differences.
- 2.17 NIE Networks notes that the UR has been unable to provide the company and NERA with access to CEPA's RP7 modelling suite. NERA was therefore unable to conduct a comprehensive assessment of the cost benchmarking results and conclusions. As such, its assessment of the UR's approach is based entirely on the descriptions provided in the UR's DD.

#### Indirect costs related to connections activities

- 2.18 In comparing indirect costs incurred by NIE Networks and the GB DNOs, it is necessary to account for differences in their connections-related activities.
- 2.19 NIE Networks faces proportionately higher connections costs compared with the GB DNOs. The connections market in NI has been fully contestable since 2018 and Independent Connections Providers ("ICPs") are able to compete with NIE Networks to offer connections to customers. However, interest from ICPs has been limited and as a result NIE Networks has continued to retain a market share of around 99%.

- 2.20 By contrast, the GB connections market is more established with greater participation by ICPs and is therefore more competitive. GB DNOs have therefore retained a significantly smaller share of their connections markets.
- 2.21 In light of the differences between NIE Networks and GB DNOs as regards connection-related costs, NIE Networks' proposed in its business plan for RP7 that benchmarking for connections costs should be carried out on a post-allocation model (i.e. excluding all indirect cost allocated to connections).<sup>6</sup> This approach was supported by the NERA Benchmarking Report.
- 2.22 As noted at paragraphs 2.11 to 2.12 above, in its treatment of connection costs in the benchmarking exercise, with respect to the three I&IMFT models, the UR proposes to place:
- a 50% weight on post-allocation models (i.e. all indirect costs allocated to connection are excluded from the benchmarking analysis); and
  - a 50% weight on pre-allocation models (i.e. including all indirect costs related to connections).<sup>7</sup>
- 2.23 NIE Networks considers that placing 50% weight on pre-allocation I&IMFT models is erroneous as it fails to address the different scope of connection activities between GB DNOs and NIE Networks, as described above.
- 2.24 NIE Networks' concerns with the UR's use of pre-allocation I&IMFT models are set out below and supported in further detail at Section 2.2 of the NERA DD Report. In short, however, the use of pre-allocation models causes the UR to understate the efficiency of NIE Networks' indirect costs.
- 2.25 At RP5, the Competition Commission ("**CC**") tested both post-allocation models and pre-allocation models, but ultimately decided to rely solely on models that exclude all indirect costs allocated to connections (i.e., post-allocation models). In taking this decision the CC noted the following:
- Excluding indirect costs allocated to connections allows "*a better alignment*" between the costs used for the benchmarking analysis and the costs for which a revenue allowance is made.
  - Excluding indirect costs allocated to connections helps to address a possible limitation of the econometric benchmarking models in accounting for the different scope of connection activities between GB and NI. Specifically, the CC noted that whilst capturing differences in companies' scale, the chosen explanatory variables did not capture "*differences in the amount of new connection activity*". The latter point, according to the CC, is of particular importance since "*there is greater scope for competitive*

<sup>6</sup> NERA Benchmarking Report, p.13.

<sup>7</sup> DD, 5.71.

*third parties to carry out connections in GB than Northern Ireland, which will tend to reduce the role of GB DNOs in connection work".*<sup>8</sup>

- 2.26 At RP6, the UR contended that both the pre- and post-allocation approaches have advantages and disadvantages and that by running both models, the UR had *"effectively managed the trade-off between using both approaches."*<sup>9</sup>
- 2.27 At RP7, CEPA contends that the RP6 approach remains appropriate. In justifying this approach, CEPA contends that there are advantages and disadvantages for both models:
- Pre-allocation models *"[do] not allocate costs between activities which reduces the risk of distortions in the modelling" and "[do] not create any perverse incentive to efficiently allocate indirect costs to connections", but they require a "post-modelling adjustment, increasing the number of regulatory decisions".*

Conversely, post-allocation models *"[focus] the analysis on regulated costs" but "[require] allocation of costs between connections and other activities, which could introduce distortions in the modelling" and "[require] policing of the costs allocated between activities."*<sup>10</sup>

- 2.28 In adopting this approach, CEPA and the UR ignores the principal economic case for using post-allocation models as identified by the CC, namely that the post-allocation approach ensures that comparative efficiency modelling is not distorted by the fact NIE Networks undertakes more connections work than GB DNOs.
- 2.29 By relying on pre-allocation models, CEPA and the UR understate NIE Networks' cost efficiency, since they fail to account for the higher share of connections work undertaken by NIE Networks compared to GB DNOs. None of CEPA's cost drivers capture NIE Networks' higher level of connections workload and, as a consequence, CEPA's results are directionally biased against NIE Networks.
- 2.30 Indeed, NERA's analysis estimates that CEPA's current approach understates NIE Networks' overall efficiency uplift factor by 4%.<sup>11</sup>
- 2.31 CEPA's analysis has also failed to show any evidence to support its concern with post-allocation modelling, specifically that it requires *"allocation of costs between connections and other activities, which could introduce distortions in the modelling."*<sup>12</sup>
- 2.32 In fact, NIE Networks' indirect cost allocation between connections and other activities have been performed in accordance with the UR's Regulatory Instructions and Guidance. Indeed, NIE Networks has devoted great efforts to improving its data since RP6 to be in line with the UR's RP7 requirements, which mitigates any possible

<sup>8</sup> Competition Commission, 'Northern Ireland Electricity Limited price determination – A reference under Article 15 of the Electricity (Northern Ireland) Order 1992 – Final determination', 26 March 2014 ([https://assets.digital.cabinet-office.gov.uk/media/535a5768ed915d0fdb000003/NIE\\_Final\\_determination.pdf](https://assets.digital.cabinet-office.gov.uk/media/535a5768ed915d0fdb000003/NIE_Final_determination.pdf)), 8.172(a)-(b).

<sup>9</sup> RP6 Final Determination, 5.93.

<sup>10</sup> CEPA DD Report, Table 2.3.

<sup>11</sup> NERA DD Report, p.19.

<sup>12</sup> CEPA DD Report, Table 2.3.



concerns about cost allocation accuracy. These efforts are set out in further detail in NERA's DD Report.<sup>13</sup>

*Conclusion*

- 2.33 Failing to account for the limitations associated with pre-allocation I&IMFT models means the UR's approach in its DD, which places a 50% weight on such models, understates NIE Networks' overall efficiency uplift factor by 4%.
- 2.34 NIE Networks requests that in its Final Determination, the UR places a 100% weight on post-allocation models, which would address the higher share of connections work carried out by NIE Networks relative to GB DNOs. This 100% weight should apply to any of the models the UR decides to use in its RP7 Final Determination.

Misapplication of the regional wage adjustment

- 2.35 When conducting cost assessment analysis, regulators generally apply a regional labour adjustment, aiming to bring costs of different DNOs to a more comparable level.
- 2.36 The regional labour adjustment applied by Ofgem at RIIO-ED1 and ED2 has typically included the following three elements:
- A 'regional labour index' based on statistical data on wages by area and by profession to account for wage differentials across the UK regions;
  - A 'proportion of labour costs' which represents the share of costs due to labour for each cost category, i.e. as opposed to other factor inputs like materials or plant and equipment; and
  - A 'proportion of labour performed locally' per cost category to account for the fact that some work can be performed outside the DNO's operating area, so companies operating in relatively high or low wage regions do not receive a cost advantage / disadvantage when compared to other companies in respect of these labour costs.
- 2.37 In its RP7 Business Plan, NIE Networks accepted that NI is a lower cost area in terms of labour in comparison to GB and, therefore, an adjustment was required to the benchmarking models to address this issue.
- 2.38 The NERA DD Report drew upon the work undertaken by Ofgem for RIIO-ED1 and RIIO-ED2 and took a balanced approach that contained an appropriate adjustment for this effect. One key component of this analysis was the 'local share of labour adjustment'. NERA revised the weights used by Ofgem which determine what percentage of the costs for the various activities undertaken by DNOs needed to be incurred within the geographical location of the network. The weights used were:
- Tree Cutting – ■%;
  - Trouble Call – ■%;
  - Occurrences Not Incentivised – ■%;

<sup>13</sup> See NERA DD Report, Section 2.2.6.

- Inspection & Maintenance – █%;
- Closely Associated Indirect – █%;
- Non-operational Capex – █%; and
- Business Support – █%.

2.39



*The UR's approach*

- 2.40 In its benchmarking exercise CEPA adjusted NIE Networks' and GB DNOs' labour costs using a regional labour cost (wage) adjustment ("**RWA**"),<sup>14</sup> to reflect different labour costs around the country.<sup>15</sup>
- 2.41 However, CEPA has applied a RWA to 100% of the labour costs for all DNOs, assuming that DNOs incur all their labour costs locally.<sup>16</sup> This is inconsistent with Ofgem's approach at RIIO-ED1 and ED2, as well as RIIO-GD1 and GD2.
- 2.42 CEPA argues that companies would have asymmetric incentives to procure labour outside of its region, with DNOs in operating areas with higher wages being more likely to source labour from other lower-cost areas. NIE operates in a low-wage area and therefore – CEPA argues – has limited incentives to locate its labour elsewhere.<sup>17</sup>
- 2.43 Additionally, CEPA notes the source of Ofgem's assumptions for the co-located labour proportion of each cost category are unclear, and comments that it cannot assess the suitability of the adjustment for NI.<sup>18</sup>

*Concerns with the UR/CEPA approach*

- 2.44 NIE Networks' concerns with the approach adopted by UR and CEPA are summarised below and are supported in further detail in Section 2.3 of the NERA DD Report.
- 2.45 In adopting CEPA's benchmarking, the UR has failed to fully reflect differences in the labour costs NIE Networks faces relative to DNOs in other parts of the country. This error is material and causes the benefit that NIE Networks receives from being in a relatively low-wage region of the UK to be materially exaggerated in the UR's modelling.
- 2.46 Ofgem precedent demonstrates that such adjustments are necessary to "*reflect the fact that some work does not need to be carried out locally*"<sup>19</sup> to ensure a like-for-like comparison of DNOs' costs. In applying the RWA to DNOs' entire labour share, CEPA unfairly penalises those DNOs operating in relatively low wage areas of the

<sup>14</sup> Note that the terms 'Regional Wage Adjustment' ("**RWA**") and 'Regional Labour Adjustment' ("**RLA**") are used interchangeably in this Response and the NERA reports.

<sup>15</sup> DD, Annex D, 2.25(f).

<sup>16</sup> DD, CEPA Report, p.4.

<sup>17</sup> DD, CEPA DD Report, p.16.

<sup>18</sup> DD, CEPA DD Report, p.16.

<sup>19</sup> Ofgem, RIIO-ED2 Draft Determinations – Core Methodology Document, 6 June 2022, Table 87.

country (which appear less than efficient than they are in reality). Conversely, DNOs in high wage areas appear more efficient than they really are. Therefore, where such DNOs influence the upper quartile efficiency target, CEPA's failure to apply a local labour adjustment sets an unrealistically low-cost upper quartile target for the industry. As a result, CEPA understates the efficiency of NIE Networks' costs. The assumption that NIE Networks and all other DNOs cannot source some categories of labour from a national labour market is demonstrably and materially wrong.

- 2.47 Indeed, NIE Networks notes that at RP6 CEPA did acknowledge that *“some labour costs do not necessarily have to be sourced locally... as the role being performed can be conducted remotely”*.<sup>20</sup> It also noted that *“if a proportion of a DNO's labour costs are not sourced locally, an approach that assumes that all costs are regional would ‘over-adjust’ the costs of the company.”*<sup>21</sup> It also provided a worked example to demonstrate that *“when the regulator applies the adjustment to all costs,”* companies operating in a relatively low-wage area *“will seem to be less efficient (i.e. relatively higher cost)”*.<sup>22</sup>
- 2.48 Despite locating its staff in NI, NIE Networks hires professional advisors from GB and globally including legal advisors (such as ██████████ and ██████████), economic advisors (such as ██████████ and ██████████) and IT providers (such as ██████████ and ██████████). The company also has arrangements in place to draw on GB-based resources in urgent cases. For example, NIE Networks was assisted by ██████████ in the aftermath of Storm Isha. The company notes that the costs for using a GB-based contractor are higher than using a third-party contractor based in NI.
- 2.49 In its reasoning for rejecting local labour adjustments, CEPA argues that there are likely asymmetric incentives between companies located in high-wage areas and those located in low-wage areas, and *“it is difficult to pinpoint the total proportion of labour that can realistically be procured outside of the operating areas by DNOs”*.<sup>23</sup> This argument does not justify the UR's case for not making an adjustment. On the contrary, it supports the economic case for making an adjustment to reflect the ability of some companies to relocate labour from relatively high-wage to relatively low-wage regions (as reflected in RIIO-ED1 and RIIO-ED2). Failing to control for this causes the UR's benchmarking to understate NIE Networks' relative efficiency compared to companies in higher wage regions.
- 2.50 In its reasoning for not replicating the local labour adjustments undertaken by Ofgem for RIIO-ED1 and RIIO-ED2, CEPA states that it was *“unable to find the exact source of Ofgem's assumptions with regards to its local labour adjustment.”*<sup>24</sup> NIE Networks questions this reasoning, given that CEPA stated in RP6 that the local labour shares were *“informed by submissions from the DNOs regulated by Ofgem”*.<sup>25</sup> Regardless, the evidence stated above at paragraph 2.48 above and at section 2.3.5 of the NERA DD Report demonstrate that CEPA's assumption that 100% of labour can be co-

<sup>20</sup> RP6 Final Determination, Annex A – CEPA Regional Wage Adjustment, p.17.

<sup>21</sup> DD, CEPA DD Report, p.16.

<sup>22</sup> RP6 Final Determination, Annex A – CEPA Regional Wage Adjustment, p.18.

<sup>23</sup> DD, CEPA DD Report, p.16.

<sup>24</sup> DD, CEPA DD Report, p.16.

<sup>25</sup> UR, RP6 Final Price Control Determination, Annex A – CEPA Regional Wage Adjustment, p.17.

located with the network is incorrect. Assuming all DNOs' labour needs to be co-located with the network exaggerates substantially the benefit NIE Networks derives from operating in a relatively low wage region in the comparative cost modelling, and so materially understates NIE Networks' efficient costs.

### *Conclusion*

- 2.51 Based on the above, the UR's decision to disregard the local labour adjustment constitutes a material error in its approach to benchmarking. Supported by CEPA's assessment, the UR's approach fails to take account of relevant evidence provided by NIE Networks and has ignored regulatory precedent.
- 2.52 Not applying a local labour adjustment will create bias in the efficiency assessment of DNOs to NIE Networks' detriment by ignoring that DNOs have the ability to source some categories of labour from a national labour market. This causes the UR to understate NIE Networks' efficiency by overstating the benefit NIE Networks realises relative to other companies by being in a low-wage region of the UK. NERA's analysis estimates CEPA's current approach to understate NIE Networks' overall efficiency uplift factor by 3.7%.<sup>26</sup>
- 2.53 For the reasons set out above, NIE Networks requests that in its Final Determination the UR should either:
- rely on Ofgem's local labour adjustment factor and apply it to all models that form part of its 'triangulation'; or
  - perform its own independent assessment to compute a local labour adjustment factor and apply it to all models that form part of its 'triangulation'.

## 3. THE UR'S APPROACH TO SETTING THE I&IMFT ALLOWANCE

- 3.1 As part of NIE Networks' RP7 Business Plan, NERA benchmarked the company's I&IMFT costs between 2012/13 and 2021/22 against the GB DNOs, using comparative data based on Ofgem's approach in RIIO-ED1 and RIIO-ED2.
- 3.2 NERA's analysis, as set out in the NERA Benchmarking Report, identified that:
- NIE Networks consistently appears to be the most efficient network operator overall across all the modelling suites used by NERA.<sup>27</sup>
  - NIE Networks' I&IMFT costs could have been up to 24% higher and still be confirmed as efficient, meaning that the company had a negative efficiency gap of up to 24%.<sup>28</sup>
  - By applying the 24% base uplift to the company's actual I&IMFT expenditure in 2021/22 of £76 million, the starting point for NIE Networks' I&IMFT allowances is £94 million per annum across RP7<sup>29</sup> (increasing to

<sup>26</sup> NERA DD Report, p.23.

<sup>27</sup> NIE Networks, RP7 Business Plan, 7.275.

<sup>28</sup> NIE Networks, RP7 Business Plan, 7.282.

<sup>29</sup> NIE Networks, RP7 Business Plan, 7.283.

£110 million per annum following the application of the indirects scalar, which is covered in more detail at Section 4 below).<sup>30</sup>

- 3.3 NIE Networks highlighted that the undertaking of new and/or additional activities in the RP7 period would contribute to the increase in its cost base, citing examples such as:
- the development of the company's Distributor System Operator ("**DSO**") capabilities, whereby GB DNOs are further ahead in developing this function;
  - updates to the NI Guaranteed Standards of Service ("**GSS**") which will bring the company's GSS more in line with the GSS for GB DNOs and drive a different level of spend to meet more onerous standards; and
  - NIE Networks' programme to address Electricity, Safety, Quality and Continuity Regulations ("**ESQCR**") requirements, which currently lags GB DNOs' programmes.<sup>31</sup>
- 3.4 NIE Networks also explained that it is facing an increase in input prices as a result of older contracts coming to an end (the company's contracting cycle differs to that of the GB DNOs) and the outputs from competitive processes indicating an upward pressure on expenditure over RP7.<sup>32</sup>

#### **The UR's approach**

- 3.5 As noted above at paragraphs 2.5 to 2.15, the UR relied upon the nine benchmarking models to estimate how NIE Networks' efficient cost at the upper quartile level of modelled efficiency scores across NIE Networks and the GB DNOs. The UR calculated a "triangulated" base uplift by taking a simple average of the nine selected models.
- 3.6 On that basis, the UR calculated NIE Networks' base uplift (i.e. the percentage difference between the company's efficiency score and the industry upper quartile efficiency score) to be 13.7%. This compares unfavourably with the base uplift of 24% calculated by NERA.
- 3.7 However, in setting the company's I&IMFT allowance for RP7 the UR has rejected both NERA's cost forecasts and its own modelled estimate of the company's equivalent uplift based on CEPA's benchmarking analysis. Instead, the UR has set an I&IMFT allowance which is half-way between the modelled upper quartile and NIE Networks' 2021/2022 historical expenditure (i.e. the base year).
- 3.8 In its DD, the UR explains that NIE Networks' approach to forecasting opex "*has assumed [its efficiency performance beyond the upper quartile] is not efficiency but due to scope differences*",<sup>33</sup> of which the regulator explains it does "*not have any certainty*".<sup>34</sup> As a result, the UR bases the proposed allowance on the assumption

<sup>30</sup> NERA Benchmarking Report, p.60.

<sup>31</sup> NIE Networks, RP7 Business Plan, 7.289.

<sup>32</sup> NIE Networks, RP7 Business Plan, 7.290.

<sup>33</sup> DD, Annex D, 2.15.

<sup>34</sup> DD, Annex D, 2.36.

that 50% of NIE Networks' outperformance of the upper quartile can be attributed to scope differences.<sup>35</sup> By applying the 50% "cap" to the overall uplift factor, the uplift is reduced from 13.7% to 6.8%.

### Concerns with the UR's approach

- 3.9 NIE Networks has the following concerns with the UR's approach:
- The UR's 'triangulation' approach erroneously assigns the same weight to I&IMFT and NOCs models, which underestimates NIE Networks' overall efficiency;
  - The UR fails to provide reasons for its assumption that 50% of NIE Networks' outperformance of the upper quartile can be attributed to scope differences therefore for applying a 50% cap to the overall uplift factor; and
  - The UR's approach fails to provide NIE Networks with incentives for future efficiency improvements.
- 3.10 These three concerns are outlined below and explained in further detail in section 3 of the NERA DD Report.
- The UR's weighting of models underestimates NIE Networks' overall efficiency
- 3.11 The UR is wrong to attach equal weight to each of CEPA's nine models (i.e. three pre-allocation I&IMFT models, three post-allocation I&IMFT models, and three NOCs models) in order to assess NIE Networks' overall efficiency. NOCs models only compare a subset of I&IFMT costs and should therefore be assigned a lower weight than the I&IMFT models when assessing the company's overall efficiency. As a result, the UR understates NIE's overall efficiency.
- 3.12 The UR's RP7 triangulation approach is also inconsistent with its RP6 approach (which NIE Networks followed in its RP7 Business Plan). In its RP6 Final Determination, the UR noted that "*it is not appropriate to simply take the arithmetic average of the different efficiency gaps [of the selected models]*".<sup>36</sup> As set out in the NERA DD Report, the UR's approach in RP6 used different weighted models between I&IMFT costs and NOCs. The UR obtained the overall RP6 efficiency score for NIE Networks by equally weighting three top-down I&IMFT models and one middle-up I&IMFT model, which was based on separate models for NOCs, CAI and Business Support.
- 3.13 The RP6 precedent provides a clear illustration of the UR's error in placing the same weight on NOCs models and I&IMFT models. By including NOCs models alone in the overall efficiency category without combining modelling results for other components of total costs (i.e. indirect costs), the UR introduces statistical bias to the overall cost efficiency.
- 3.14 NIE Networks submits that it is not appropriate to include NOCs models in the overall efficiency calculation, unless CEPA also develops separate models for CAI and

<sup>35</sup> DD, Annex D, 2.37.

<sup>36</sup> UR, RP6 Final Determination, 5.266.

Business Support such that the UR can use the same method of triangulation to combine middle-up models for all cost categories as at RP6.

- 3.15 By averaging only the three I&IMFT models in the UR's top-down assessment based on the post-allocation models, NERA estimates that NIE Networks' overall efficiency uplift factor increases to 21.7% (or 25.4% if the modelling sensitivities account for the local labour adjustment covered above at paragraph 2.52).
- 3.16 To rectify the bias the UR has introduced to NIE Networks' overall cost efficiency in its equal weighting of benchmarking models, NIE Networks requests that in its Final Determination, the UR should:
- Follow its approach at RP6 and use the combined results of a separate middle-up models for indirect costs and NOCs; or, alternatively
  - Use only top-down I&IMFT models to set NIE Networks' I&IMFT allowances.

The UR's 50% cap on the efficiency uplift factor is arbitrary

- 3.17 As set out at paragraph 3.3 above, NIE Networks expects its costs to rise compared to the company's historical 2021/22 expenditure. This is partly due to expected new and/or additional activities that the company will undertake in the future due to changes in the NI regulatory framework to align it more closely with the GB regulatory framework. The company also expects to face an upward correction in input prices which have already been incurred by GB DNOs due to differences between the NI and GB regulatory and contracting cycles.<sup>37</sup>
- 3.18 In its DD, the UR rejects NIE Networks' evidence and rationale for expecting an increase in I&IMFT costs for RP7, and instead sets the allowance at the mid-point between the upper quartile and the company's historical 2021/22 expenditure. The UR states that for the purposes of its top-down assessment, it has assumed that 50% of the gap between NIE Networks' historical 2021/22 expenditure and the upper quartile "*can be attributed to scope differences*", resulting in a 6.8% efficiency uplift factor.
- 3.19 Based on the evidence provided by in the DD, the UR fails to provide any justification for applying the 50% cap to the efficiency uplift factor.
- 3.20 NIE Networks notes that the UR has agreed to review further detail on identified scope differences for consideration in the Final Determination.<sup>38</sup> As part of its Response, NIE Networks has provided at Annex A3.2 additional evidence to support its case that new and/or additional activities identified by the company should be taken into account by the UR.

<sup>37</sup> Contracting cycles tend to align with regulatory cycles as DNOs procure service providers to assist with business plan delivery.

<sup>38</sup> DD, Annex D, 2.47.

NIE Networks' proposed approach is consistent with the UR's statutory duties and regulatory precedent

- 3.21 As noted above, NIE Networks has provided additional evidence to the UR to support its case for an increase in I&IMFT costs as compared to the company's historical 2021/22 expenditure. However, this additional evidence is not required to justify an increase in the company's allowance. Rather, it would be consistent with the UR's statutory duties to set an allowance based exclusively on the upper quartile level of performance derived from benchmarking against the GB DNOs.
- 3.22 Setting allowances based on the upper quartile level of efficiency modelled through its comparison of NIE Networks to the GB DNOs is more sustainable and better meets customers long-term interests. Such an approach would provide NIE Networks with ongoing incentives to reduce its costs throughout the control period, which the UR's approach in the DD does not achieve.
- 3.23 Such an approach is not unprecedented: as set out in NERA's DD Report, Ofgem and Ofwat regulatory precedent demonstrates that a determination of overall allowances above modelled efficient costs is common for the most efficient companies.
- 3.24 The UR's approach to setting allowances at RP7 does not reflect the trend of increasing costs faced by electricity network companies in the UK, due to rising input costs and an expanding scope of activities linked to renewable energy integration, building DSO capability, and electrifying load. It is unrealistic to assume that DNOs will be able to keep their costs to those incurred in a historical base year. This is illustrated by the fact NIE Networks has underperformed against its RP6 I&IMFT allowances, despite NERA's and CEPA's modelling showing NIE Networks to be amongst the most efficient DNOs. As set out in the NERA DD Report, for the period from October 2017 to FY2022/23 (inclusive), NIE Networks has spent £11.5 million more in total on I&IMFT than its RP6 allowances.

**Conclusion**

- 3.25 For the reasons set out above and explained in further detail in the NERA DD Report, NIE Networks requests that in its Final Determination, the UR:
- Rectifies the bias introduced to NIE Networks' overall cost efficiency in the UR's equal weighting of benchmarking models, either by
    - using combined results of separate middle-up models for indirect costs and NOCs (as it did for RP6); or
    - using only top-down I&IMFT models to set allowances; and
  - Sets NIE Networks' starting allowance based on the upper quartile benchmark level of efficiency, after addressing the concerns relating to the UR's approach to benchmarking modelling as set out at Section 2 above.



#### 4. **INDIRECT SCALAR**

##### **The UR has misapplied the indirect scalar adopted by Ofgem for RIIO-ED2**

- 4.1 In its RP7 Business Plan, NIE Networks proposed that the UR adopt a similar 'indirect scalar' to that adopted by Ofgem for RIIO-ED2, under which GB DNOs' indirect costs allowances can be adjusted to align with changes in the capex funded through uncertainty mechanisms.
- 4.2 Using NERA's modelling, NIE Networks proposed that it would be reasonable to assume that a 10% increase in capex would lead to a c.1.5% increase in gross I&IMFT costs.<sup>39</sup>
- 4.3 NIE Networks estimated that during RP7 capex will increase by £545 million compared to RP6, which suggests an increase in gross I&IMFT costs of £82 million over RP7, or £14 million per annum.<sup>40</sup> Adding the £14 million annual increase to NIE Networks' starting point annual I&IMFT allowance of £94 million (based on the company's 24% base uplift), the company's total top-down assessment for I&IMFT allowances is estimated at £108 million per annum.<sup>41</sup>

##### The UR's approach

- 4.4 In its DD, the UR accepted the principle that NIE Networks will incur higher indirect costs in order to deliver its larger capex programme. However, the UR's approach differed from NIE Networks' approach in the following areas:
- The UR assessed that a lower level of direct capital increase will be required, which results in a proportionally lower increase in indirect spend;
  - The UR adopted Ofgem's indirect scalar of 0.108 as used in RIIO-ED2. This compares to a scalar of 0.15 as proposed by NIE Networks; and
  - The UR adopted Ofgem's approach in RIIO-ED2 to apply the uplift only to closely associated indirect ("**CAI**") costs (excluding D5 projects), rather than to gross indirect costs as proposed by NIE Networks.<sup>42</sup>

##### Concerns with the UR's approach

- 4.5 NIE Networks welcomes the UR's provisional decision to adopt an indirect scalar to the company's I&IMFT allowances. However, NIE Networks considers that the UR has made errors in its application of Ofgem's indirect scalar for RIIO-ED2. NIE Networks sets out its concerns below, which are supported in more detail by NERA's DD Report.<sup>43</sup>
- 4.6 In its DD, the UR assessed that NIE Networks' direct capex (excluding D5 projects) will increase by 128% on average across RP7. The UR applied Ofgem's indirect scalar of 0.108 to the direct capex increase in percentage terms, which suggests

<sup>39</sup> NIE Networks, RP7 Business Plan, 7.276 and NERA Benchmarking Report, p. 92

<sup>40</sup> NIE Networks, RP7 Business Plan, 7.284.

<sup>41</sup> NIE Networks, RP7 Business Plan, 7.285.

<sup>42</sup> DD, 3.12.

<sup>43</sup> NERA DD Report, Section 4.

growth of 13.8% in CAI costs. The UR calculates a £4.5 million increase in NIE Networks' annual CAI allowance for RP7.<sup>44</sup>

- 4.7 NIE Networks considers that this approach is a misapplication of Ofgem's indirect scalar that understates the additional allowance required by NIE Networks for CAI costs.
- 4.8 As set out in NERA's DD Report,<sup>45</sup> Ofgem's indirect scalar for RIIO-ED2 was estimated by regressing the GB DNOs' historical CAI costs on as a function of capex and Modern Equivalent Asset Value ("MEAV"). The approach adopted by Ofgem meant that the indirect scalar used a linear relationship between CAI and capex, not a proportional relationship as adopted by the UR in its DD.
- 4.9 Applying a linear relationship between CAI and capex in line with Ofgem's approach, would result in NIE Networks being granted an additional allowance of £50.5 million across RP7 or £8.4 million per annum.<sup>46</sup>

#### Conclusion

- 4.10 NIE Networks requests that the UR, in its Final Determination, corrects its misapplication of Ofgem's indirect scalar from RIIO-ED2 and adopts a linear relationship between CAI costs and capex within the indirect scalar, rather than a proportional relationship.

#### **NIE Networks' request for additional allowances for D5 capex (and other additional capex granted through RP7 reopeners)**

- 4.11 D5 projects are construction projects for which SONI determines the scope of works and which seek to increase the capacity and/or capability of the transmission network.
- 4.12 As noted above at paragraph 4.6, the UR's proposed allowances driven by the capex scalar do not take account of D5 projects (or indeed, any other additional capex allowances NIE Networks may receive through other reopeners). In its DD, the UR states the following:

*"We intend to apply the scalar to additional direct capex excluding D5 projects. We include an allowance for additional CAI in the determination of D5 projects and there is no need to make provision for this in the ex-ante determined costs."<sup>47</sup>*

- 4.13 The above extract from the DD suggests that the UR is minded to continue with the approach adopted during RP6. Under the current approach, NIE Networks seeks additional allowances for indirects expenditure on a project-by-project basis, which are in turn considered and granted by the UR. NIE Networks is now proposing an alternative approach, which is set out below.

<sup>44</sup> DD, Annex D, Table 2.7.

<sup>45</sup> NERA DD Report, Section 4.

<sup>46</sup> NERA DD Report, p.39.

<sup>47</sup> DD, Annex D, 2.40.

#### Request for an additional reopener allowance

- 4.14 The UR has used the capex scalar to determine an additional but fixed level of ex-ante allowances for indirect costs.
- 4.15 NIE Networks notes the UR's statement above that an allowance for additional CAI is included in the determination of D5 projects. However, NIE Networks' licence conditions do not clearly provide for such an allowance. NIE Networks considers that additional explicit indirects allowances are required if or when D5 projects are approved during RP7, or there are other significant capex allowances granted through other reopeners, and that this would be better facilitated by way of a mechanism that is specific for this purpose.
- 4.16 NIE Networks considers that the scale of potential D5 capex over the RP7 period is significant. NIE Networks' forecast D5 capex for RP7 (c. £500 million) is c. five times larger than the D5 capex to date for RP6 (c. £91 million). As such, NIE Networks considers that the initiation of any D5 projects during RP7 will trigger the need for additional allowances for indirect costs arising from such projects. The same could hold true for other capex reopeners linked to uncertainties such as the rate of LCT-uptake.
- 4.17 NIE Networks therefore considers that an additional mechanism is required at RP7 for additional allowances for indirect costs in circumstances where capex relating to D5 projects or other reopeners, is approved over the RP7 period. NIE Networks notes that further responses on the UR's proposed uncertainty mechanisms for RP7 are provided at Section 11 of Chapter 12 of this Response.
- 4.18 Such an approach would be in line with regulatory precedent. The GB DNOs' Special Licence Conditions that implement RIIO-ED2<sup>48</sup> provide for an additional allowance for closely associated indirect costs which are incurred as a result of increases in capex beyond the ex-ante allowances for load-related expenditures.<sup>49</sup>
- 4.19 The UR has already accepted the principle of Ofgem's indirect scalar for RIIO-ED2 for the purposes of allowing an additional fixed ex-ante allowance for indirect costs over the RP7 period. NIE Networks considers that it would be appropriate to align the drafting the Licence modification to include an equivalent Licence condition to that of the GB DNOs, which grants for additional allowances for indirect costs incurred as a result of additional capex that may be granted by the UR during the course of RP7, including for D5 projects and other capex reopeners.

#### Conclusion

- 4.20 NIE Networks considers that the UR's provisional fixed ex-ante allowance for indirect costs will not be sufficient to cover the indirect costs that will arise, should any capex relating to D5 projects or other capex reopeners be approved by the UR during the RP7 period.

<sup>48</sup> Ofgem, RIIO-ED2 Final Determinations – Core Methodology Document (30 November 2022), 7.525 and 7.527.

<sup>49</sup> See Ofgem, RIIO-ED2 Electricity Distribution Licence Special Conditions, 3 February 2023, SpC, 3.12.3-3.12.4 and Ofgem, RIIO-ED2 Statutory Licence Modification Notice: Error identified in Special Licence Condition 3.12 Indirects Scaler, 14 February 2023.

4.21 NIE Networks therefore requests that the UR aligns the drafting of NIE Networks' Licence conditions to either:

- Insert a new standalone licence condition that aligns with the drafting of Special Condition 3.12 of the GB DNO's Electricity Distribution Licence Special Conditions; or
- Modify NIE Networks' Licence conditions which concern additional capex allowances (Annex 2, conditions 4.36-4.38) to align with the drafting of Special Condition 3.12 of the GB DNO's Electricity Distribution Licence Special Conditions.

## 5. IT-RELATED INDIRECT COSTS AND NETWORK ACCESS AND COMMISSIONING

5.1 The UR has failed properly to include allowances for (1) IT-related indirect costs that it has separately assessed and approved, and (2) Network Access and Commissioning.

### **IT-related indirect costs**

5.2 At the time of preparing its RP7 Business Plan, it was NIE Networks' understanding that the UR would assess IT-related costs for RP7 in a separate exercise, supported by IT advisers as required.

5.3 Accordingly, in its RP7 Business Plan NIE Networks separated out IT-related indirect costs in relation to "new" activities before carrying out its benchmarking exercise. This approach was conducted on the assumption that "new" IT-related allowances would be assessed on a case-by-case basis. NIE Networks then added back in the separated-out costs, to arrive at its total ask for I&IMFT costs for RP7 (which included business-as-usual (or "**BAU**") and new IT-related costs).

### The UR's approach

5.4 The UR's review of the RP7 Business Plan included a bottom-up assessment of all IT-related costs, supported by its advisers, Gemserv. Following this review, the UR has provisionally allowed for the vast majority of NIE Networks' requested IT-related indirect costs.<sup>50</sup>

5.5 In its top-down assessment of total I&IMFT allowances:

- The UR and CEPA included NIE Networks' BAU IT-related indirect costs in its benchmarking exercise of NIE Networks' overall I&IMFT costs (detailed at Section 2 above).
- Following the application of its proposed efficiency gap uplift and indirect scalar (detailed at Sections 3 and 4 above, respectively) the UR made "*separate provision*" for network access and IT expenses (i.e. new IT-related indirect costs) in the form of a £2.9 million uplift for the overall RP7 period.<sup>51</sup>

<sup>50</sup> See DD, Annex W.

<sup>51</sup> DD, Annex D, 2.42.

Concerns with the UR's approach

- 5.6 NIE Networks considers that the UR's approach to granting allowances for IT-related indirect costs results in errors in the setting of the company's overall I&IMFT allowances.
- 5.7 NIE Networks considers that the UR has erred in two ways:
- The BAU IT-related indirect costs included within the UR's proposed top-down allowance for overall I&IMFT costs are lower than those requested by NIE Networks. This is despite the fact that the UR's bottom-up assessment of overall IT-related costs (set out in Annex W) provides for the vast majority of the requested IT-related indirect costs. As a result, the UR has incorrectly understated BAU IT-related indirect costs through its benchmarking exercise, as it has made no adjustments to reflect its bottom-up assessment of, and the allowance granted for, all IT-related costs.
  - For "new" IT-related indirect costs, NIE Networks acknowledges that the UR has taken into account a proportion of such costs in its top-down allowance for I&IMFT.<sup>52</sup> However, this amount falls significantly short of the amount requested by NIE Networks and provisionally granted by the UR through its bottom-up assessment of overall IT-related costs. NIE Networks considers that this misalignment is erroneous.

**Network Access and Commissioning**

- 5.8 In its RP7 Business Plan, NIE Networks included its network access and commission expenditure in its assessment of the required network capex expenditure for the company's network investment programme in RP7.<sup>53</sup>
- 5.9 On the basis that network access and commissioning expenditure is also required to support IMFT activities on the network, NIE Networks also included allowances for such expenditure in its proposed IMFT allowances.<sup>54</sup>

The UR's approach

- 5.10 As noted at paragraph 5.5, in setting its top-down allowance for I&IMFT costs, the UR makes a separate provision for network access and IT expenses in the form of a £2.9 million uplift for the overall RP7 period.<sup>55</sup>

Concerns with the UR's approach

- 5.11 NIE Networks assumes that in its statement noted at paragraph 5.10 above, the UR's separate provision of network access and IT expenses form part of the UR's capex assessment.
- 5.12 By adopting such an approach, the UR essentially overwrites the top-down allowance for I&IMFT (determined from the benchmarking exercise) with a separate

<sup>52</sup> DD, Annex D, 2.42.

<sup>53</sup> NIE Networks, RP7 Business Plan, 8.4.

<sup>54</sup> NIE Networks, RP7 Business Plan, 8.38.

<sup>55</sup> DD, Annex D, 2.42.

allowance determined separately for capex costs. NIE Networks considers that such an approach is erroneous and understates the company's expenditure for network access and commissioning.

- 5.13 NIE Networks notes that network access and commissioning costs were determined in its RP7 Business Plan as part of its capex assessment, as a category within the company's network investment programme. However, the allowance that the UR should include in respect of IMF&T is for an entirely separate activity. NIE Networks therefore considers that it is wrong for the UR to overwrite the allowance determined from the benchmarking exercise.

#### Conclusion

- 5.14 NIE Networks considers that its expenditure with respect to IT-related indirect costs, and for network access and commissioning, have not been correctly determined in the UR's allowances.
- 5.15 NIE Networks therefore requests that the UR:
- Ensures its allowances for BAU and “new” IT-related indirect costs align with those set out in Annex W of the DD; and
  - Grants allowances for network access and commissioning in respect of IMF&T activities, based on the results from the benchmarking exercise.

## 6. **BOTTOM-UP ANALYSIS**

- 6.1 In its RP7 Business Plan, NIE Networks also assessed its forecast I&IMFT expenditure for RP7 using a bottom-up approach.
- 6.2 NIE Networks' bottom-up assessment concluded an overall I&IMFT cost requirement (excluding new RP7 IT expenditure and including severe weather costs) of £658 million across RP7, or £110 million per annum on average. This represents a 45% increase in I&IMFT costs as compared to the actual I&IMFT expenditure of £76 million per annum in the base year 2021/22.<sup>56</sup>

### **I&IMFT costs**

#### The UR's approach

- 6.3 As stated above at paragraph 2.5, the UR has provisionally conducted a top-down analysis of NIE Networks' allowance for I&IMFT costs and sense-checked this using a bottom-up cost analysis in order to fully justify such costs. NIE Networks agrees with and welcomes the UR's provisional decision to conduct a top-down analysis, sense-checked using its bottom-up analysis where possible, and considers that the UR should follow this approach in its Final Determination.
- 6.4 Under a bottom-up assessment, the UR proposes that NIE Networks' overall I&IMFT cost requirement amounts to £86.4 million per annum.
- 6.5 In its DD, the UR considered that, in terms of the base uplift, NIE Networks had “*identified factors that will increase spend*” but had “*not provided bottom-up*”

<sup>56</sup> NIE Networks, RP7 Business Plan, 7.278.

*justification for the additional costs.*" The UR concluded that there was "*further work to do*" in this area between the DD and the Final Determination.<sup>57</sup>

Additional information provided by NIE Networks

- 6.6 NIE Networks notes the UR's comment that the company has "*not provided bottom-up justification for the additional costs*" for I&IMFT as part of its RP7 Business Plan.
- 6.7 NIE Networks has provided a dossier of evidence at Annex A3.2 which provides a detailed justification for NIE Networks' forecast increase in I&IMFT expenditure in RP7 on a bottom-up basis. Annex A3.2 should be read in conjunction with Section 6 of this chapter.
- 6.8 As noted above at paragraph 6.2, NIE Networks' bottom-up assessment revealed a total I&IMFT cost requirement (excluding new RP7 IT expenditure and including severe weather costs) of £658 million over RP7, or £110 million per annum on average. NIE Networks recognises that this is a significant increase on its current levels of I&IMFT expenditure. However, the company considers that this increase is reasonable, justifiable and efficient, and is supported by the company's use of standard methods of top-down benchmarking analysis that follow regulatory precedent.
- 6.9 As NIE Networks explains in detail at Section 2 of Annex A3.2 the main drivers for the increase in indirect costs concern (i) staff costs; (ii) fleet and fuel costs; and (iii) property costs.
- 6.10 NIE Networks also notes that in its DD, the UR stated that:
- "[T]here would be merit in NIE Networks explaining in detail the following:*
- 1) Why it considers efficiency performance has improved over RP6;*
  - 2) How it undertakes allocating indirect costs to both connections and metering work.*
  - 3) Approach to capitalisation as it would appear the proportion of these costs allocated to capital expenditure is set to increase in RP7."*
- 6.11 NIE Networks has provided detailed responses to each of the three requests above at Sections 2.5 to 2.7 of Annex A3.2 to this Response.<sup>58</sup>
- 6.12 In terms of IMFT costs, NIE Networks has focussed (at Section 3 of Annex A3.2 and at Annex A3.3) on responding to the UR's comments concerning specific IMFT costs covered under NIE Networks' bottom-up assessment in its RP7 Business Plan.<sup>59</sup> NIE Networks notes that it would welcome further engagement with the UR to discuss its bottom-up forecasting approach for IMFT costs, should the UR consider this appropriate.

<sup>57</sup> DD, Annex D, 2.79.

<sup>58</sup> DD, Annex D, 2.82.

<sup>59</sup> DD, Annex D, 2.48-2.52.

## Unmodelled costs

### The UR's approach

- 6.13 The UR has also undertaken a bottom-up analysis in relation to unmodelled costs that are not subject to benchmarking.<sup>60</sup> As part of this analysis, the UR has provisionally adopted the following approach:
- For severe weather costs, the UR proposes to retain an ex-ante allowance of £3.84 million over the RP7 period, with 50:50 risk sharing;<sup>61</sup>
  - For business rates, the UR proposes to allow a pass-through for business rates, subject to the company demonstrating that it has taken appropriate actions to minimise valuations;<sup>62</sup>
  - For licence fees, the UR proposes to maintain a pass-through mechanism for RP7;<sup>63</sup>
  - For income lines, the UR has accepted<sup>64</sup> NIE Networks' forecast that income will rise from £5.5 million per year in RP6 to an average of £5.6 million in RP7. However, it has requested "*further detail on why income is not expected to rise in real terms for certain areas*" and considers that "*[e]xplanation would also be appreciated where income is expected to fall, e.g. tort and scrap distribution income*";<sup>65</sup> and
  - For staffing levels, the UR considers<sup>66</sup> that the increase in staff proposed by NIE Networks is "*proportionally much larger than the increase proposed by the GB DNOs over a similar period*" and that "*the company has not provided detailed or compelling explanations as to why this may be the case.*" The UR has taken this into account when determining property cost allowances.<sup>67</sup>

### NIE Networks' responses to the UR's approach

- 6.14 NIE Networks responds to each of the points listed above at paragraph 6.13 above in turn:
- Severe weather costs: NIE Networks has set out its concerns with the UR's proposed allowance for severe weather at Section 12 of Chapter 12 of this Response.
  - Business rates: NIE Networks has set out its concerns with the UR's proposed pass-through mechanism for business rates at Section 8 of Chapter 12 of this Response.

<sup>60</sup> DD, Annex D, 3.1.

<sup>61</sup> DD, Annex D, 3.2-3.21 and Annex S, 4.155-4.165.

<sup>62</sup> DD, Annex D, 3.22-3.25 and Annex S, 4.228-4.236.

<sup>63</sup> DD, Annex D, 3.26-3.28 and Annex S, 4.243-4.246.

<sup>64</sup> DD, Annex D, 3.29-3.32.

<sup>65</sup> DD, Annex D, 3.31.

<sup>66</sup> DD, Annex D, 3.33-3.57.

<sup>67</sup> DD, Annex D, 3.56.



- Licence fees: NIE Networks welcomes and agrees with the UR's proposal to maintain a pass-through mechanism for licence fees in RP7 and requests that the UR maintains this approach in its Final Determination.
- Income lines: NIE Networks has provided a detailed response to the UR's request for further information at Section 4.1 of Annex A3.2.
- For staffing levels: NIE Networks notes that the UR views that the company did not provide sufficient information to support its proposed increases in staffing levels. This is despite NIE Networks providing a Workforce Resilience strategy<sup>68</sup> and a detailed deliverability assessment<sup>69</sup> as part of its RP7 Business Plan. These highlighted the importance of the increase in staff numbers as a cost-effective solution to the significant increase in the scale of delivery required during RP7 and beyond. Nonetheless, NIE Networks has provided further information to support its position at Sections 2.1 and 4.2 of Annex A3.2. NIE Networks further acknowledges that the UR has taken staffing levels into account when determining property cost allowances. NIE Networks' property plan has been further developed since the submission of the RP7 Business Plan and its value has increased by £12.8 million. Further information to support this revised position has been provided at Section 2.3 of Annex A3.2.

### Conclusion

- 6.15 NIE Networks recognises that its forecast I&IMFT expenditure for RP7 is a significant increase on current levels.
- 6.16 However, the company believes that this increase is reasonable, justifiable and efficient, and has demonstrated this further:
- with the supporting information provided at Annexes A3.2 and A3.3; and
  - by benchmarking its I&IMFT costs against the GB DNOs using standard methods and in accordance with good regulatory practice, as set out above in this Chapter 3 and supported by the NERA DD Report.

<sup>68</sup> NIE Networks, RP7 Business Plan, 'RP7 Workforce Resilience Strategy'.

<sup>69</sup> NIE Networks, RP7 Business Plan, 'RP7 Deliverability Strategy'.

## CHAPTER 4

### DIRECT NETWORK INVESTMENT

#### **SUMMARY**

This Chapter relates to the UR's provisional determination of allowances for direct network investment. The allowances addressed in this Chapter 4 are closely linked to the uncertainty mechanisms addressed in Chapter 12: both are critical to enabling efficient delivery of long-term 2050 Net Zero ambitions even if this investment is ahead of the shorter-term need of RP7.

NIE Networks' concerns, in summary, are that:

- the UR's approach to determining unit costs fails to reflect the significant price increases affecting materials and services that are driven by macro-economic conditions completely outside of the control of NIE Networks. A mid-point reopener is needed to assess these price increases and NIE Networks welcomes further engagement with the UR on the design of this mechanism;
- the UR has incorrectly applied reductions to unit costs to address concerns which, even if correct, should be reflected either in the scope of the allowed work or in the allowed volume of such work;
- the UR has applied disproportionate reductions to allowances in response to minor data errors; and
- the UR has misunderstood information provided to it in respect of certain cost categories, with the result that it allows no allowance or an allowance that is too low.

The UR's proposals with respect to direct network investment contribute to one of NIE Networks' three main concerns with the DD – namely, that aspects of totex allowances are deficient. The cumulative effect of the UR's proposals is that allowances for direct network investment will not appropriately reflect NIE Networks' costs during RP7, leading to a shortfall of approximately £80.8m.

If the UR's proposals are carried over in its Final Determination, these features will undermine NIE Networks' ability to deliver its plan for RP7 – including in particular its ability to maintain a safe, reliable and resilient network.

#### **1. INTRODUCTION**

- 1.1 NIE Networks submitted its plans for direct network investment alongside its RP7 Business Plan. NIE Networks' submission for direct network investment in RP7 totalled £894.8m (in 2021/22 prices and prior to the application of any frontier shift).<sup>1</sup>

<sup>1</sup> NIE Networks has separately planned for an estimated £493.4m to address major transmission projects in RP7. These are expected to be addressed through the D5 mechanism and are therefore not addressed in this Chapter.

- 1.2 In its DD, the UR provided a proposed allowance of £814.0m for planned direct network investment (and prior to the application of any frontier shift). This represents a shortfall of £80.8m compared to NIE Networks' submission – i.e., a reduction of 9%.
- 1.3 Whilst NIE Networks welcomes that the UR has provided for allowances that cover the majority of NIE Networks' direct network investment plan, NIE Networks considers that the proposed shortfall may give rise to issues around its ability to deliver the required network capacity for customers as well as managing risk on the network.<sup>2</sup>
- 1.4 This Chapter addresses the key concerns that NIE Networks has with the UR's proposals for direct network investment in the DD. It also provides further evidence in support of the requested allowance, which it considers must be addressed in the Final Determination to ensure that the correct allowances are set for RP7.
- 1.5 Section 2 sets out a high-level summary of the issues addressed in this Chapter 4. Section 3 addresses recurring issues affecting the calculation of unit costs, which are of general application across the network investment plan. Section 4 addresses the UR's request for feedback on the reasonableness of the Low Carbon Technologies ("**LCT**") forecasting scenarios. Thereafter, Sections 5 to 42 of this Chapter address issues relating to the following investment programmes:
5. D57 –Primary Network Reinforcement
  6. D06, D07, D08, D43 – Distribution Overhead Line Asset Replacement
  7. D08i – Bird Fouling
  8. D11 – Cut-outs
  9. D13j / D15x / T11v – Substation Legalities
  10. D13m – Rewire primary substations
  11. D13n – Primary plant painting
  12. D13o – Replace earth fault indicator
  13. D14g – Transformer coolers
  14. D14h – Transformer cooler controls
  15. D14i, T12y and T11w – Sump pumps
  16. D14l – 33/11kV Transformer oil regeneration
  17. D15o – Secondary civils
  18. D39c – Control Centre SCADA
  19. D41ab – OTN capacity growth
  20. D41j – Mast Assets

<sup>2</sup> This concern is exacerbated by the design of uncertainty mechanisms which inhibit the company's ability to invest prospectively e.g., by introducing scope for clawbacks which places too much risk on NIE Networks, thereby encouraging the company to delay investment to mitigate that risk. See Chapter 12 to this Response for further details.

21. D43c – Very high risk/high risk sites
22. D50 – Flooding resilience
23. D57m – High impact low probability events
24. D603 – 33kV protection / 11kV protection
25. D603w – Pilot protection
26. D603w – Switchboard VT (voltage transformers)
27. D605a – Network access & commissioning
28. D701a and T701a – Earthing surveys
29. T10d – Refurbish 110kV switchgear / T10e Replace 110kV circuit breaker
30. T11g – Security systems
31. T11x and T12z – Earthing spigots
32. T12ac – 110/33kV transformer oil regeneration
33. T13f / T14c – Associated cables
34. T17 – 275kV Overhead Line Asset Replacement
35. T19 – 110kV Overhead line asset replacement (multiple sub-programmes)
36. T19a – 110kV Overhead line asset replacement (replace conductor)
37. T19 – Strabane-Omagh ADSS (D5 consideration)
38. T19ah – 110kV clearances
39. T17j, T17t, T19n, T19t, D06l, D06m – Muff repair
40. T20 – Transmission Underground Cables
41. T602ai – 61850 Hardware replacement / T602aj – Protection studies
42. Minor corrections

## 2. **SUMMARY**

### **Unit costs**

- 2.1 The determination of unit costs is a core issue that is of general application across the network investment plan. NIE Networks has identified a number of concerns which occur at various points in the DD. In broad terms, these concerns stem from the regard had (or not had) to the effect of external factors driving cost increases at above-inflation rates.<sup>3</sup> In particular, the UR has applied an inconsistent approach to determining unit costs and failed to recognise the cost challenges currently facing the utilities market over and above the level of inflation.
- 2.2 NIE Networks would welcome further engagement with the UR on these concerns. In any event:

<sup>3</sup> This is clearly illustrated by the Figure 4.1 in Section 3 below.

- the UR should adopt a consistent approach to the time period used to determine base unit costs; and
- NIE Networks proposes a unit cost midpoint reopener in respect of materials costs.

### **LCT Forecasted Uptake Scenarios**

- 2.3 The UR requested feedback from stakeholders on the reasonableness of the LCT forecast scenarios used by NIE Networks in the development of the RP7 business plan. In this Response, NIE Networks provides additional detail on the development of these forecasts, in comparison to the Climate Change Committee ("**CCC**") Advice Report for Northern Ireland (noting in particular that the CCC suggests that in fact NI will experience even higher levels of uptake for electric vehicles and heat pumps). This reinforces the importance of ensuring that the company has the ability to invest sufficiently in RP7 to enable delivery of long-term 2050 net-zero ambitions.

### **D57 – Primary network reinforcement**

- 2.4 NIE Networks' requested allowances to fund forward and reverse power flow reinforcement works on its primary network. The UR provisionally reduced the allowed costs on the basis that outturn costs for RP6 had been much lower. NIE Networks provides evidence that the outturn costs in RP6 are not as low as they may appear, such that it is not appropriate to base allowances for RP7 on any perceived underspend in RP6.

### **D06, D07, D08, D43 – Distribution Overhead Line Asset Replacement**

- 2.5 NIE Networks requested allowances incorporating an uplift to reflect significant increases in costs for contracted-out elements of these activities. The UR provisionally applied a significantly lower uplift than was requested, based on a mistaken understanding of how inflation is reflected in the underlying data. Once this error is corrected, it will be apparent that the allowance requested by NIE Networks should be allowed by the UR in its Final Determination.

### **D08i – Bird Fouling**

- 2.6 NIE Networks has requested an allowance to fund the installation of bird rollers at selected sites, for the purpose of reducing instances of bird fouling. The UR's proposed basis for calculating this allowance adopts an unsuitable metric based on the number of customers affected. NIE Networks demonstrates in this Response that the UR should instead base its calculation on the number of spans for which bird rollers are required multiplied by the average cost per span.

### **D11 –Cut-outs**

- 2.7 NIE Networks proposed to update the minimum specification when replacing cut-outs on low-voltage service cables to certain consumer premises. The UR has provisionally determined not to include any distinct allowance for this, instead proposing a new sub-category split with an inadequate cost allowance. NIE Networks provides in this Response additional information and commentary on the UR's proposal and identifies necessary changes.

**D13j / D15x / T11v – Substation Legalities**

- 2.8 In relation to Substation Legalities, the UR has provisionally reduced the allowances requested by NIE Networks on the basis that NIE Networks' justifications for cost increases as compared to RP6 were inadequate and also questioned the volume of sites proposed by the company as requiring substation legalities. The UR has failed to take account of regulatory precedent and has failed to consider the potential legal implications for NIE Networks as a result of the inadequate allowances. The company provides in this Response additional information to support its requests.

**D13m – Rewire primary substations**

- 2.9 NIE Networks requested allowances to fund rewiring work in order to resolve condition, safety and network reliability issues. The UR provisionally reduced the proposed volume on the basis that there was a lack of evidence to support the requested volume. NIE Networks has collated additional evidence to support its request.

**D13n – Primary plant painting**

- 2.10 NIE Networks requested an allowance to renew the protective paint coatings on 150 33/11kV and 33/6.6kV transformers. The UR provisionally determined that the requested volume of 150 transformers identified for painting be reduced by 50% to 75. NIE Networks provides in this Response additional information and evidence to support its request.

**D13o – Replace earth fault indicator**

- 2.11 NIE Networks requested an allowance to replace 559 earth fault indicators with "smart" replacements. The UR provisionally reduced the allowed volume on the basis that NIE Networks' request was not adequately supported by appropriate optioneering and cost benefit analysis. NIE Networks provides in this Response additional information to address the shortcomings identified by the UR.

**D14g – Transformer coolers**

- 2.12 With respect to transformer cooler equipment, NIE Networks requested allowances to enable the refurbishment of cooler equipment at 12 transformer sites. The UR provisionally rejected this request on the basis that it was not adequately supported with clear details of the nature of the intervention required. NIE Networks provides in this Response additional information in support of its request.

**D14h – Transformer cooler controls**

- 2.13 Similarly, the UR has provisionally rejected NIE Networks request for allowances to fund replacement of transformer cooler controls due to NIE Networks having not supplied a supporting condition model. NIE Networks provides in this Response additional information in support of its request.

**D14i, T12y and T11w – Sump pumps**

- 2.14 NIE Networks requested allowances to replace 250 sump pumps with known defects across three categories of transformer. The UR, based on the recommendation of Gutteridge Haskins & Davey Limited ("**GHD**"), reduced the volume of sump pump

replacements based on their age and in order to enable a more manageable delivery programme. NIE Networks has taken the GHD's approach and OEM guidance into account and proposed new volumes.

#### **D14I – 33/11kV Transformer oil regeneration**

- 2.15 Similarly, NIE Networks requested allowances to fund oil regeneration activities at certain primary 33kV/11kV transformers. This request was rejected on the basis that the condition assessment spreadsheet submitted by NIE Networks did not identify any basis for carrying out this work. NIE Networks has identified that incorrect information was provided and, in this Response, is providing updated information in support of its request.

#### **D15o – Secondary civils**

- 2.16 NIE Networks requested an allowance to address a prioritised list of civil defects across its secondary substation asset portfolio. The UR has provisionally reduced the proposed unit costs/requested allowance by 10%, on the basis that a similar adjustment had been made to the various sub-categories relating to secondary plant. NIE Networks explains why this proposed decision is not supported by the evidence.

#### **D39c – Control Centre SCADA**

- 2.17 NIE Networks requested an allowance to enable it to replace and upgrade its existing SCADA infrastructure, which is essential for the maintenance of safe and reliable monitoring and control of the distribution network in line with regulatory and legislative measures. The UR provisionally applied a reduction to the requested allowance, part of which reflects the UR's concerns regarding optioneering and the procurement process. In this regard:

- the UR's provisional decision is disproportionate and unjustified insofar as it has applied the reduction to parts of the requested allowance not affected by its concerns; and
- NIE Networks provides in this Response additional evidence demonstrating that its approach to optioneering and procurement was appropriate.

#### **D41ab – OTN capacity growth**

- 2.18 NIE Networks requested allowances to finance investment aimed at increasing communications capacity in anticipation of significant societal change expected during RP7, primarily in connection with the transition to net zero and adoption of LCTs. The UR's provisional decision to disallow this investment appears to be based on the misconception that the costs incurred are duplicative of other activities, whereas in fact they cover distinct activities that require separate funding.

#### **D41j – Mast assets**

- 2.19 NIE Networks requested an allowance for the replacement of three communications masts within its original submission. The UR provisionally reduced the allowance to reflect the volume of work identified within a query response, which failed to detail one of the three mast replacements. NIE Networks has identified this error and

provides evidence to support the replacement of all three masts detailed within the original submission.

#### **D43c – Very high risk/high risk sites**

- 2.20 In relation to very high risk/high risk sites for which work is required in RP7 pursuant to the Electricity Safety, Quality and Continuity Regulations, the UR has provisionally reduced the requested allowance by 7% based on NIE Networks' costs currently incurred in relation to this sub-category in RP6. However, NIE Networks has not yet completed its programme of works for RP6 and anticipates that it will overspend the RP6 allowance for this aspect (rather than achieve an efficiency saving) by the end of the RP6 extension year.

#### **D50 – Flooding resilience**

- 2.21 NIE Networks requested allowances to fund flooding protection works at certain primary and secondary sites to ensure that plant and apparatus are protected from the risk posed by water ingress into substation buildings. The UR has indicated that it is minded to explore the possibility of deferring some of the investments to a later price control period. In this Response NIE Networks explains that this 'minded to' position is based on a misunderstanding of the data provided by NIE Networks, and accordingly investment at these sites should not be deferred.

#### **D57m – High impact low probability events**

- 2.22 NIE Networks requested allowances to fund works to improve resilience against high impact low probability ("HILP") events. The UR accepted in principle the need for this work but substituted its own assessment of costs based on other existing cost categories. NIE Networks provides information in this Response demonstrating that the basis of costs proposed by the UR is inappropriate for determining costs for HILP reinforcement.

#### **D603 – 33kV protection and 11kV protection**

- 2.23 In relation to the 33kV and 11kV protection sub-categories, the UR has provisionally applied a 50% reduction to the allowances requested by NIE Networks, reflecting a perceived lack of clarity in the evidence provided by NIE Networks in support of that request. NIE Networks provides additional information to demonstrate the appropriateness of the requested allowance.

#### **D603w – Pilot protection**

- 2.24 Similarly, the UR applied the blanket 50% reduction to NIE Networks' requested allowances for D603w, which relates to work to relocate and replace certain pilot boxes. NIE Networks provides in this Response additional information to demonstrate the appropriateness of the requested allowance.

#### **D603w – Switchboard VTs**

- 2.25 In relation to switchboard voltage transformers ("VTs"), NIE Networks requested allowances to replace the last remaining oil-filled component on a number of recently retrofitted switchboards to reduce fire risk and improve reliability. The UR provisionally reduced the allowance on the basis that NIE Networks had not provided



detailed analysis to support its request. In this Response, NIE Networks provides additional evidence to support its request.

#### **D605a – Network access & commissioning**

- 2.26 NIE Networks has identified an error in the calculation of its requested allowances for network access and commissioning submitted with its RP7 Business Plan. Corrected information is provided with this Response and NIE Networks requests that the allowance is amended to reflect this.

#### **D701a and T701a – Earthing surveys**

- 2.27 NIE Networks requested allowances for earthing surveys and remediation to locate and repair any defects in the earthing systems at its substations. The UR provisionally rejected NIE Networks' funding request for earthing surveys on the basis that there are already allowances in place to carry out substation inspections under IMF&T funding. NIE Networks in this Response explains why those existing inspections do not cover off earthing surveys.

#### **T10d Refurbish 110kV switchgear / T10e Replace 110kV circuit breaker**

- 2.28 The UR has provisionally rejected NIE Networks' proposal to replace six circuit breakers, instead providing allowances for refurbishment of these assets only. NIE Networks provides evidence that refurbishment is not appropriate for these assets and therefore the UR should provide allowances for their replacement.

#### **T11g – Security systems**

- 2.29 In relation to security systems at transmission substations, the UR has reduced the allowance requested by NIE Networks on the basis that a similar approach was taken in relation to proposed assumptions/allowances for secondary substation security (sub-category D15ac). NIE Networks does not consider that this is a legitimate basis for reducing the allowance as: (i) the requested allowance was not based on the same assumptions applied in respect of secondary substation security; and (ii) NIE Networks supplied itemised site-specific costs and proposed works in support of its request.

#### **T11x and T12z – Earthing spigots**

- 2.30 NIE Networks requested allowances for the installation of earthing spigots/parking bays at substations following an inquiry into a fatal event at one of NIE Networks' substations. The UR provisionally approved only 50% of the requested allowance on the basis of the finding by GHD that no basis was provided by NIE Networks for installing earthing spigots in addition to the separate allowance for installation of earthing switches. NIE Networks provides further information in this Response regarding the differences between the programmes for the installation of earthing spigots and earth switches.

#### **T12ac –110/33kV transformer oil regeneration**

- 2.31 NIE Networks requested allowances to fund the regeneration/reprocessing of insulating oil within 30 110/33kV transformers. The UR provisionally reduced the requested allowance by half, on the basis that NIE Networks did not put forward

sufficient evidence to support the request. NIE Networks has identified an error in the information previously provided and, in this Response, provides updated information in support of its original request.

#### **T13f / T14c – Associated cables**

- 2.32 In relation to replacements of associated cables within substations, the UR has incorrectly reduced costs under the T13f and T14c sub-categories to align with costs under the T20 categories. The UR has failed to take account of key cost differences between the replacement of associated cables within and outside of substations. The UR should remove the deductions to the allowances in the Final Determination.

#### **T17 – 275kV Overhead Line Asset Replacement**

- 2.33 NIE Networks proposed allowances for a number of separate sub-programmes relating to 275kV overhead lines. The UR has provisionally decided to apply a blanket 10% reduction to the allowances for a number of these activities due to a small number of errors in the data provided by NIE Networks. These deductions should be removed or, at a minimum, reduced to a proportionate level, given that:

- NIE Networks has addressed the shortcomings in the data provided to the UR;
- the percentage reduction applied is disproportionate to the rate of error; and
- the UR has applied reductions to categories for which the data is not relevant.

#### **T19 – 110kV Overhead line asset replacement (multiple sub-programmes)**

- 2.34 NIE Networks proposed allowances for a number of separate sub-category relating to 110kV overhead lines. The UR has, again, applied a 10% blanket deduction to certain requested allowances due to errors in the NIE Networks submissions, despite (i) NIE Networks having addressed the errors; (ii) the error rate being far lower than the percentage reduction applied, and (iii) some sub-programmes having been included in the deduction despite not being affected by the errors. Again, in the Final Determination these deductions should be removed or, at a minimum, reduced to a proportionate level.

#### **T19a – 110kV Overhead line asset replacement (replace conductor)**

- 2.35 In its DD, the UR accepted in principle the need to replace a conductor circuit but applied a 20% reduction to the requested allowance on the basis that it lacked confidence in the robustness of the investment appraisal.
- NIE Networks disagrees in principle with the UR's approach of applying reductions to unit costs where its concerns do not relate to costs.
  - In any event, NIE Networks is providing additional information with this submission demonstrating that the circuit selected is the most appropriate to take forward for replacement at this time.

#### **T19 – Strabane-Omagh ADSS (D5 consideration)**

- 2.36 In its Business Plan, NIE Networks did not request any allowance for the replacement of the all dielectric self-supporting cable (ADSS) on the Strabane-

Omagh A circuit during RP7 on the basis that the removal of the ADSS and retrofitting of an optical ground wire (OPGW) would be included as part of SONI's overall scheme. SONI has since notified NIE Networks that these circuits will no longer be upgraded in the near future, and therefore NIE Networks intends to bring forward this removal and retrofitting work as an additional D5 project in due course.

#### **T19ah – 110kV clearances**

- 2.37 In relation to the 110kV Clearances sub-programme, the UR has provisionally reduced the allowance requested by NIE Networks on the basis that NIE Networks' justification for the investment was inadequate. NIE Networks provides in this Response additional information to support its request.

#### **T17j, T17t, T19n, T19t, D06l, D06m – Muff repair and painting**

- 2.38 In relation to muff repair, NIE Networks took a more granular approach to the unit cost requests for this work activity, basing its Business Plan proposal on contracted rates to provide clarity amid significant price rises. The UR declined to allow the unit cost allowance requested, and instead based the allowances on outturn costs. NIE Networks provides in this report further data to support and update its requested allowances.

#### **T20 – Transmission Underground Cables**

- 2.39 NIE Networks requested allowances aimed at enhancing its strategy for the replacement and decommissioning of Fluid Filled Cables ("FFC") and to invest in new leak management technologies. The UR provisionally reduced the allowance on the basis that NIE Networks provided insufficient evidence to support its proposed allowance. In this Response, NIE Networks provides additional evidence to demonstrate the robust approach taken to its costing.

#### **T602ai – 61850 Hardware replacement / T602aj – Protection studies**

- 2.40 In relation to the 61850 hardware and protection studies sub-categories, the UR has disallowed the requested allowances on the basis that NIE Networks did not provide sufficient evidence to support the requests. NIE Networks provides in this Response additional information to support its request.

#### **Minor corrections**

- 2.41 NIE Networks has identified a number of contextual labels in Annex Q to the DD that could be misleading and has suggested small textual changes to address these.

### **3. UNIT COSTS**

- 3.1 In the wake of Brexit, COVID-19 and the war in Ukraine, NIE Networks has faced significant increases in costs above the level of inflation. This experience is not unique to NIE Networks and is being seen across energy utilities, with cost issues being further exacerbated by increasing global demand for specialist network materials, from both existing network operators and new technology companies, as electricity networks worldwide are upgraded to facilitate the transition to net zero carbon.

- 3.2 A large proportion of these cost increases are not taken into account in the UR's provisional determination of unit rates. This is because, for a particular cost category, the UR has determined unit costs for RP7 in effect by dividing the total outturn cost in the earlier years of RP6 by the corresponding total outturn volume.
- 3.3 The data which the UR used for this purpose was generally the outturn costs and unit volumes for the 4.5 year period 1 October 2017 to 31 March 2022. This was the most recent set of finalised data available at the point at which NIE Networks made its business plan submission. Whereas this is an effective approach to setting cost allowance in times of cost stability, rigid adherence to this approach in circumstances of rising costs does not reflect the real impact of these increases and would impose a disproportionate cost burden on NIE Networks.
- 3.4 NIE Networks is experiencing continued cost pressure through the outturn unit rates for the network investment plan and the award of contracts for material items following competitive procurement. These cost increases are in excess of the RPE awards forecast by the UR. As such, the model of taking current unit costs plus RPE and inflation is not indicative of the future cost of doing business.
- 3.5 In order to mitigate this effect, a number of targeted cost areas in NIE Networks' RP7 Business Plan were prepared on the basis of the most recent pricing, rather than being strictly based on pricing in the period prior to 31 March 2022. In this regard:
- In some instances, the unit cost uplift is necessary as cost increases have been experienced at the end of (but within) the reference period used for outturn costs. In such cases, because unit costs are averaged over the reference period, higher costs experienced at the end of the period are outweighed by lower costs experienced in the rest of that 4.5 year period. Therefore, the average unit cost does not reflect actual costs experienced at the end of the period and those expected to be incurred moving forward. Examples of this include materials costs for Ring Main Units (RMUs).
  - In other instances, increased prices were agreed in the period between March 2022 and January 2023 that were significantly higher than would be generated from merely applying the combined impact of inflation and RPEs for the 2022/23 year. The increased price in such cases reflects, in particular, (i) the long-term nature of the previous procurement contract, and (ii) increases in worldwide or regional demand. Examples of this include the material costs for secondary network ground mounted transformers and the renegotiated rates for overhead line contractor services.
- 3.6 In addition to the targeted cost increases addressed above, in its RP7 Business Plan, NIE Networks has already adjusted average unit costs for significant skews in outturn unit costs arising from:
- a large element of work in progress creating large increases in average unit cost (because the cost from such work is taken into account but the unit volume is not);

- items procured in RP5 creating large reductions in average unit cost (due to the materials cost having already been accounted for in RP5 outturn costs, but the unit volume being recorded within RP6 outturn volumes); and
- the mix of work in RP6 being in part unrepresentative of the mix of work to be undertaken in RP7.

3.7 It should be noted that these skews led to both artificially high and artificially low individual unit costs.

#### **NIE Networks' concerns with the UR's provisional decision**

- 3.8 Unit costs are addressed in detail in Annexes Q and R of the DD. The UR has applied an inconsistent approach to unit costs and has failed to recognise the cost challenges currently facing the utilities market over and above the level of inflation.
- 3.9 NIE Networks has identified below recurring areas of concern with the methods adopted by the UR for the purpose of determining unit costs.
- 3.10 Further information is set out in the spreadsheet, "Unit Costs - Detail by Cat" (provided as Annex A4.1), which lists the categories of costs to which this Section is relevant and states, for each of them, which of the concerns below applies.

#### Use of data updated to March 2023

- 3.11 By updating only some unit costs to take account of outturn cost data up to March 2023, the UR has applied an inconsistent unit cost base. Across each work sub-category there are fluctuations in average unit cost across each year. These can be balanced out when the network investment plan is taken as a whole, as the internal and external resources are managed across the entire plan (for example, resources used to deliver distribution plant work programmes may also deliver transmission plant work programmes). By selecting a mix of unit costs produced on the basis of different time periods the UR has removed this balancing effect. The effect of this is that the overall unit costs used in the DD are artificially lower than they should be.
- 3.12 Outturn data for the period to March 2023 was finalised and submitted to the UR in July 2023 but was not available at the time of Business Plan submission.

#### Material and contractor cost increases

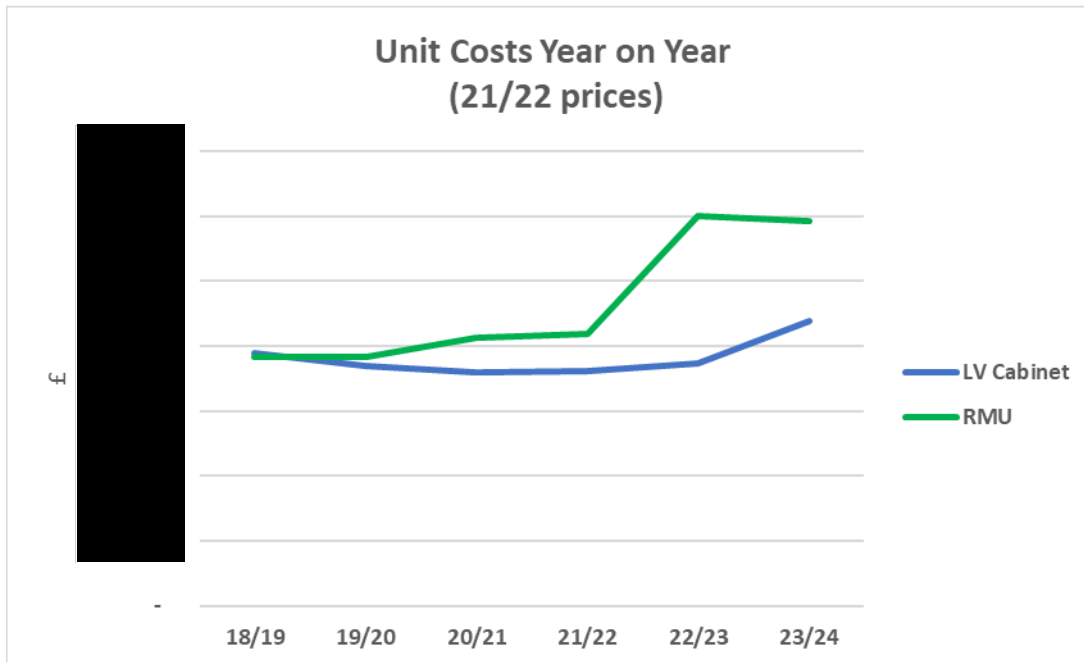
- 3.13 With the exception of Distribution Overhead Line unit costs, the UR has provisionally dismissed the uplifts proposed by NIE Networks to take account of already-experienced material and contractor cost increases.<sup>4</sup> Its rationale for dismissing these uplifts is that it assumes such increases should be covered by the RPE settlement or elsewhere in the RP7 allowances.<sup>5</sup> NIE Networks does not consider that this is the case, and would welcome further engagement with the UR to understand its rationale.

<sup>4</sup> NIE Networks notes that the UR has largely accepted NIE Networks' proposed unit costs where its approach has led to lower unit costs.

<sup>5</sup> DD, Annex R, p.iv.

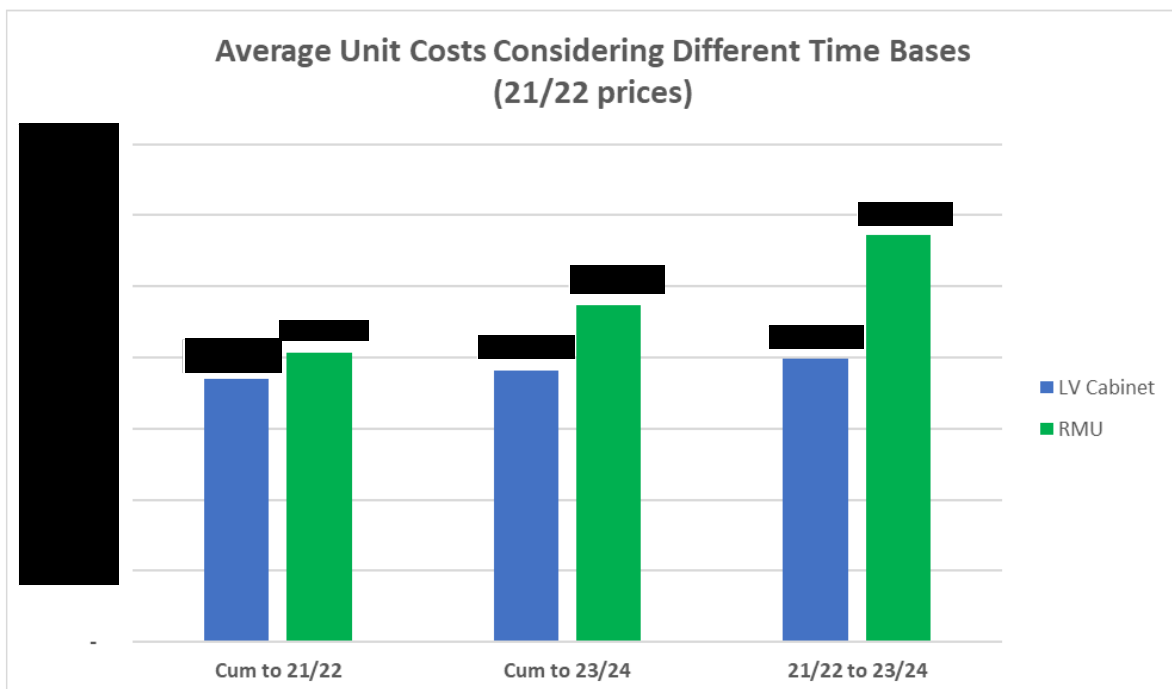
- 3.14 Where NIE Networks has uplifted unit costs to account for material and contractor cost increases it is because the company considers that these will not be captured within the RPE settlement.
- 3.15 In some cases, the contract rates were agreed prior to March 2022 but, due to the timing of material orders or contractor mobilisation and the nature of the outturn rate as an average rather than a spot figure, these cost increases are not evident in the outturn data by March 2022. An example of this is Ring Main Unit (RMU) material costs for which a new contract was agreed [REDACTED] but the increased material costs are not booked into the unit rate [REDACTED]. Moreover, due to the small number of jobs to which this increased rate has applied between [REDACTED] March 2022, the average rate is not increased sufficiently to reflect the true increased cost of the materials.
- 3.16 In other cases the rates were negotiated between March 2022 and January 2023 but due to the long-term nature of procurement contracts (generally agreed for 5-8 years) the cost increase experienced is reflective of real price effects incurred across this longer period and therefore exceeds the real price effect experienced in one year. These rates will also not be reflected in the outturn data as they relate to the period after March 2022. LV cabinet unit prices are a good example of this.
- 3.17 Figure 4.1, below, illustrates the material unit cost across all network investment plan categories for RMU's and LV cabinets by regulatory year in RP6 to date. All prices are in 2021/22 prices to remove any inflationary impact. The unit costs are based solely on the cost and number of each material booked to the network investment plan and so cannot be skewed by the timing of outputs accounted for.
- 3.18 As can be seen in Figure 4.1, the unit prices for RMUs booked to the network investment plan increased substantially following the 2021/22 regulatory year. The year on year increase is [REDACTED] which is substantially higher than the RPE proposed for the 2022/2023 year. LV cabinet unit costs have increased by [REDACTED] from 2022/2023 to 2023/2024, again significantly in excess of the RPE forecast for that period.

**Figure 4.1: Unit costs year on year**



3.19 The dilution of the unit rate is illustrated in the graph below which shows how the unit rates for both LV cabinets and RMUs would change if viewed cumulatively from October 2017 to March 2022, cumulatively from October 2017 to December 2023 and when only considering costs from April 2021 to December 2023.

**Figure 4.2: Average unit costs considering different time bases**



3.20 As can be seen from the graph, the average RMU unit cost is [redacted] higher for the period from October 2017 to December 2023 compared the period from October 2017 to March 2022. The unit cost would increase by a further [redacted] if the reference

period was April 2021 to December 2023. Note that each of these unit costs are still lower than the [REDACTED] unit cost actually experienced in the April 2023 – December 2023 period.

- 3.21 Similarly, the LV cabinet unit cost would be [REDACTED] higher if the reference period for unit costs was April 2021 to December 2023 rather than October 2017 to March 2022. The average outturn cost for that period of [REDACTED] is still lower than the unit cost for the April 2023 to December 2023 period of [REDACTED].
- 3.22 This clearly demonstrates that an inflation plus RPE settlement would not sufficiently address the increasing costs that NIE Networks is currently facing. The above examples have been chosen as these are known significant cost issues for which NIE Networks made adjustments in its RP7 Business Plan submission.
- 3.23 Unfortunately the cost challenges resulting from COVID, the war in Ukraine and the increasing global demand for specialist network equipment and resources as worldwide electricity networks are upgraded to facilitate net zero carbon are ongoing.
- 3.24 This is evident in recent procurements undertaken by NIE Networks whereby contract rates have increased substantially over and above inflation. An example of this is the contract for 33kV switchboards. This contract was awarded in [REDACTED] for a [REDACTED] year period on a fixed cost basis. On renegotiation of the contract, rates have increased by an average of [REDACTED]. This is [REDACTED] above RPI inflation for the same period. Similarly, NIE Networks is currently in negotiations to extend its contract for 110/33kV transformers. The proposed increase in rates for these transformers is [REDACTED]. Neither of these price increases will be evident in the current average unit rates. These price effects could not have been forecast by either NIE Networks or its suppliers and are not included within any previous RPE settlement within RP6.
- 3.25 The UR's approach implicitly assumes that work that is fully contracted out could be delivered at a price lower than the contracted rate: this is not the case. Contractor rate increases in the period are the result of macro-economic circumstances that NIE Networks cannot control. Moreover, the impact of these rate increases has not already been seen in the outturn unit rates nor have they been taken into account by any RPE settlement, and therefore it is necessary to update unit costs to reflect the new contracted prices.

#### Use of RP5 data

- 3.26 For some unit costs within primary and transmission plant work programmes, the UR has used an average unit cost outturn across RP5 and RP6 combined, rather than RP6 alone. This is primarily to address cases where NIE Networks had needed to adjust upwards the average unit cost for RP6 to take account of skews in the underlying data (e.g. where equipment used in RP6 was procured in RP5).
- 3.27 Whilst applying an average cost taken over a longer timeframe (i.e. to include RP5) will help to resolve issues arising from the timing of equipment procurement or one-off adjustments causing skews in average unit costs, doing so ignores the reality that changes in legislation or macro-economic circumstances have occurred and have therefore caused increases in prices above and beyond inflation within the RP6 period.



- 3.28 The RPE award (which is anticipated to address such increases) covers increases only for the period after March 2022, whereas RPEs experienced during RP6 are reflected only in the outturn costs figures produced for that period. As the outturn costs are in effect an average across the period, by extending the reference period to include both RP5 and RP6, the UR risks diluting the outturn cost and thereby unjustifiably lowering the unit cost used in its determination.

Reduction in unit costs due to data concerns

- 3.29 In some instances where the UR has queried volume-related data or the business need justification for a cost, a reduction has been applied to the unit cost value and not the planned volume, despite the UR's concern being with respect to the latter. This is the case, for example, for the D06 33kV Overhead Line Tower programme.
- 3.30 NIE Networks believes it is generally wrong in principle to apply a reduction in unit costs due to concerns with data not relating to unit costs. This approach carries the risk that NIE Networks would have to choose between delivering the required volume of outputs but overspending to do so, or delivering a lower volume within the allowed expenditure. To the extent that any reduction at all might be justified by concerns with non-cost data, any such reductions should be applied to volumes.
- 3.31 Moreover the UR's approach to this has been inconsistent: for example, for transmission overhead lines programme a reduction has been applied to the planned volumes but for the 33kV overhead line tower programme the reductions have been applied to unit costs.
- 3.32 NIE Networks understands that the UR has accepted that this approach is inappropriate and will address this concern in its Final Determination.

**Conclusion**

- 3.33 Overall, the UR has applied unit cost reductions across the Network Investment Programme totalling £33.4m. After excluding the c.£23m that relate to distribution OHL unit costs (as to which please see further Section 6 below) the total unit cost reductions affected by the factors described above is c.£10m. This level of reduction fails to have regard to the unprecedented cost increases currently being experienced in the utilities sector. This would impose an unfair cost risk burden on NIE Networks which, ultimately, is likely to disincentivise investment in the network.
- 3.34 NIE Networks considers that the specific cost uplifts included within the RP7 plan are targeted and justified and that the evidence outlined above demonstrates that these are not addressed by the RPE settlement.
- 3.35 During engagement with the UR in February 2024, the UR queried whether NIE Networks could produce data indicating that the RPE settlement would not be sufficient to address unit cost challenges for the network investment plan as a whole. NIE Networks considers that a comparison could be performed between the material prices agreed in recent contracts and the movement in RPEs and inflation over the same time period. Such a comparison will take considerable time and NIE Networks welcomes the opportunity to engage with the UR over the next few months to present this analysis.

- 3.36 NIE Networks accepts that evidence of these increased unit rates is necessary before UR can consider allowing any such increases. Additional evidence has been provided above and as such NIE Networks requests that the UR reviews the unit cost uplifts already included within the RP7 Business Plan in light of this evidence.

Unit cost reopener

- 3.37 Recognising the challenges for the UR in determining appropriate ex-ante unit cost allowances due to current market conditions, NIE Networks is proposing the introduction of a specific unit cost midpoint re-opener for the network investment plan. Whilst NIE Networks accepts that it has primary responsibility for the efficient delivery of work and effective procurement, the reality of the materials market is that it has limited control over cost increases that are driven by international markets.
- 3.38 For this reason, and despite NIE Networks' concerns regarding contractor cost increases, the proposed mid-point reopener would apply only to the material cost element of the network investment plan. NIE Networks proposes the effect of the reopener should be that if the material cost element of the network investment plan increases or decreases by 10% more than the combined effect of inflation plus net capex RPEs, the material price would be trued up by the differential for the remainder of the price control. In advance of any true-up mechanism being applied, material cost analysis would be supplied to the UR to enable it to review efficiently incurred expenditure. The company considers that this level of materiality together with the ongoing productivity challenge set by the UR would operate to ensure that NIE Networks continues to be subject to an appropriate efficiency incentive.
- 3.39 The proposed midpoint re-opener would share the cost risk burden resulting from the unprecedented changes in the materials market, thereby ensuring that this volatility does not disincentivise NIE Networks from investing in the network, nor undermine its capability to do so. This will also help to ensure that NIE Networks continues to efficiently procure these materials.
- 3.40 NIE Networks would welcome further UR engagement on unit costs and with respect to the design of the proposed mid-point unit cost reopener mechanism.

**4. LCT FORECASTED UPTAKE SCENARIOS**

- 4.1 When preparing the RP7 Business Plan, NIE Networks undertook a series of steps to develop the LCT forecasted uptake scenarios. In summary the steps included:
- commissioning energy consultants WSP to identify LCT uptake scenarios for the period up to 2050 having regard to the NI Department for the Economy's ("DfE") Path to Net Zero Energy strategy. A report produced by WSP as part of the forecasting, "*Forecasting of Low Carbon Technology Deployment in Northern Ireland*" was provided as a supporting paper to the RP7 Business Plan submission;
  - testing the forecast volumes with stakeholders in the RP7 Consultation;
  - commissioning Ernst & Young ("EY") Consultancy to review the WSP forecasts in light of recent market developments and responses to NIE Networks' RP7 Consultation. EY produced a report, "*EY Commentary on NIE*

*LCT Forecasts*", which was provided as a supporting paper to the RP7 Business Plan submission; and

- updating NIE Networks' high and low forecast to reflect EY Conclusions for 2030.
- 4.2 From this range of pathways, having regard to the recommendations of consultants and stakeholder feedback, NIE Networks selected the 'best-view' forecast i.e. the scenario that appeared most representative of the likely change in customer behaviour during the RP7 period. This scenario forecasts the connection of 300,000 electric vehicles ("**EVs**") and 120,000 heat pumps ("**HPs**") by 2030. This scenario was then modelled on the NI distribution network to project future uptake at both a regional and local level and identify 'demand hotspots' which would lead to future network constraints and therefore require network investment.
- 4.3 The UR has stated in its DD that they would welcome feedback from consumers and stakeholders on whether they consider that this best-view scenario is reasonable, or think that higher or lower connection assumptions should be accounted for within the final determination.
- 4.4 In this Section 4, NIE Networks:
- provides additional detail on the development of these forecasts;
  - addresses a comparison of these forecasts against the Climate Change Committee ("**CCC**") Advice Report for Northern Ireland; and
  - reiterates the importance of having the ability to invest sufficiently to enable delivery of long-term 2050 Net Zero ambitions.

#### **Developing WSP forecast scenarios**

- 4.5 WSP reviewed a range of existing studies to inform the NI LCT forecast update, and where relevant studies or data were not available specifically for NI then data was translated to NI from existing GB forecasts, such as National Grid's GB Future Energy Scenario (FES) forecasts.

##### *Electric vehicles*

- 4.6 An EV study and forecast was prepared by Steer in August 2021 for the Northern Ireland Department for Infrastructure. That report, "*Development of Electric Vehicles in Northern Ireland*" (the "**Steer Report**"), has been identified as the most informed and up to date study available on the deployment on EVs in Northern Ireland.
- 4.7 The report provides scenario-based forecasts for five-year intervals from 2025 to 2050. A comparison was undertaken against (i) previous Element Energy/NIE Networks forecasts, (ii) the SONI forecasts, and (iii) a translation of GB FES EV forecasts to NI (the translation being based on taking the proportion of cars that are EVs in GB, for each FES scenario, and mapping this onto the NI vehicle base).
- 4.8 Based on the available information and comparison of different forecasts, including the translation of GB FES to NI EV volumes, WSP considered that the central scenario in the Steer report (the "**Steer ACC scenario**") should be adopted for the

'best view' NIE Networks LCT forecasts. This represents a volume of 300,000 EVs by 2030.

#### *Heat pumps*

- 4.9 The Path to Net Zero Energy strategy identified phasing out fossil fuel home heating oil as a key requirement to achieve net zero as more than two thirds of homes still use fossil fuel oil fired central heating.
- 4.10 Specific goals identified in the Path to Net Zero Energy strategy include:
- phasing out fossil fuel heating oil; and
  - introducing support for low carbon heat technologies including **HPs**,
- 4.11 In addition, the Path to Net Zero Energy strategy set a target to reduce average building energy consumption by 25% by 2030. This equates to an average reduction of c. 3% per year on 2021 rates of consumption. WSP considered this to be an ambitious target when compared to existing LCT forecasts undertaken by other organisations and it is probable that a significant proportion of this target will need to be achieved via the roll out of HPs (which inherently reduce building energy consumption due to their effective energy conversion efficiencies being 3 to 4 times greater than for conventional boilers).
- 4.12 WSP developed three HP uptake scenarios based on the potential for how HPs can contribute to the NI Government 2030 Building Energy Reduction targets. As with EVs, WSP compared the NI Scenarios to translated GB FES forecasts and concluded that 120,000 HPs represented the 'best view' forecast to 2023. This figure corresponded to the installation of 30,000 HPs in new build homes and the installation of 90,000 retrofitted HPs in existing homes.

#### **EY Review**

- 4.13 EY produced a paper for NIE Networks to provide insight and analysis on the LCT forecasts for Northern Ireland. This was to support NIE Networks in determining the most reasonable projections to underpin its investment needs. EY reviewed the forecasts for EVs, HPs and Solar PV (focusing on micro-PV). Specifically, EY considered how reasonable the WSP forecasts were having regard to:
- the current macroeconomic scenario, in particular the persistence of high inflation rates and supply chain constraints, and;
  - the responses received from NIE Networks' stakeholders during the consultation period to the WSP forecast scenarios, specifically to the following question: *We are interested in your views on our scenarios of future consumer behaviour. Do you think they are realistic? Do you think our 'best view' scenario reflects the likely changes in the RP7 period?*
- 4.14 In relation to EVs the EY paper explored the market share of EVs, policy environment, and market factors and current market challenges. The conclusion of the EY analysis was that the 2030 best view forecast was reasonable but that the low and high scenarios were too low and too high respectively.

- 4.15 In relation to HPs, EY compared the HP forecasts to neighbouring regions, i.e. RoI and GB, identifying that the forecasts for NI are reasonably conservative in comparison. They also reviewed the policy environment for HPs against that of the RoI, noting that NI lags behind but that this has been recognised in the NI Energy Strategy and policy is expected to promote uptake. Similar to its views on the EV forecast, EY's analysis was that the 2030 best view forecast of 120,000 HPs was reasonable but that the WSP low and high scenarios were too low and too high respectively.
- 4.16 Further detail of the EY analysis was provided as a supporting paper to the RP7 Business Plan submission, titled '*EY Commentary on NIE LCT Forecasts.*'
- 4.17 NIE Networks updated the high and low forecast to reflect EY recommendations for 2030 as shown in Table 4.1, below.

**Table 4.1: High and low forecast EV and HP volumes by 2030**

LCT	Scenario	Original (By 2030)	Assessment	Revised (By 2030)
Electric Vehicles	Low	200k EVs	Too Low	250k EVs
	Best-view	300k EVs	Reasonable	300k EVs
	High	400k EVs	Too High	320k EVs
Heat Pumps	Low	60k HPs	Too Low	80k HPs
	Best-view	120k HPs	Reasonable	120k HPs
	High	180k HPs	Too High	140k HPs

#### CCC Advice Report for NI

- 4.18 In March 2022, the Northern Ireland Assembly passed the Climate Change Act (NI) 2022 ("**CCA 2022**"), committing to an ambitious target of Net Zero emissions by 2050.
- 4.19 After the CCA 2022 was passed, the Department of Agriculture, Environment and Rural Affairs ("**DAERA**") sought advice from the CCC on a path to Net Zero. In March 2023 the CCC published its Advice Report, "*The Path to a Net Zero Northern Ireland*"<sup>6</sup> (the "**CCC Advice Report**") setting out deployment rates for LCTs at key milestones to 2050. The deployment rates advised within the CCC Advice Report exceeded NIE Networks' RP7 high uptake scenario. DAERA consulted on the CCC Advice Reports recommendations in June 2023 with respect to their inclusion within the Northern Ireland's first three carbon budgets.<sup>7</sup>
- 4.20 Prior to 2022, advice reports issued by the CCC had reflected a 'balanced pathway' intended to achieve, by 2050, an 82% reduction in Northern Ireland's emissions compared to levels in 1990. In contrast, the target set out in the CCA 2022 of achieving net-zero greenhouse gas emissions by 2050 is intended as an 'extremely

<sup>6</sup> Climate Change Committee, '*Advice report: The path to a Net Zero Northern Ireland*', 2 March 2023, (<https://www.theccc.org.uk/publication/advice-report-the-path-to-a-net-zero-northern-ireland/>).

<sup>7</sup> Department of Agriculture, Environment and Rural Affairs '*Consultation on: Northern Ireland's 2030 & 2040 Emissions Reduction Targets & First Three Carbon Budgets & Seeking views on CCC Advice Report: The path to a Net Zero Northern Ireland*', 2023 (<https://www.daera-ni.gov.uk/sites/default/files/consultations/daera/Carbon%20Budget%20Consultation%20Document%20FINAL.pdf>).

stretching legal target'. The CCC has developed a new 'Stretch Ambition' pathway to reflect this legislative ambition of the NI Government. This pathway, however, would only achieve a 93% reduction in emissions on 1990 levels by 2050, with the intention that further 'speculative' options will close the gap to Net Zero.

- 4.21 The CCC 'Stretch Ambition' pathway outlines deployment rates for EVs and HPs as set out in table 4.2 below:

**Table 4.2: EV and HP deployment rates per the 'Stretch Ambition' pathway**

	2025	2030	2035	2040	2045	2050
Proportion of cars on the road that are battery electric vehicles	9%	34%	64%	87%	97%	100%
Proportion of vans on the road that are battery electric vehicles	12%	39%	68%	87%	97%	100%
Annual Heat Pump Installations (including hybrids)	15,857	33,000	38,000	36,500	4,903	1,327

- 4.22 These deployment rates indicate 2030 deployment rates of c.350k EVs and c.160k HPs. These figures, which were published following the development and publication of the RP7 Business Plan, significantly exceed the 'best view' RP7 scenario for HP and EVs, as outlined in Table 4.3 below. This raises the valid question as to whether NIE Networks' requested ex-ante allowances are sufficient. However, NIE Networks considers that the proposed uncertainty mechanisms, if approved by the UR, will enable NIE Networks to flex its reinforcement works to accommodate these higher LCT volumes recommended by the CCC in order to meet its legislative ambition.

**Table 4.3: Best view EV and HP volumes by 2030**

	RP7 'Best View' scenario	RP7 'High' scenario	CCC 'Stretch Ambition' Pathway (achieves 93% reduction in emissions)
EV Volumes at 2030	300k	320k	350k
HP Volumes at 2030	120k	140k	160k

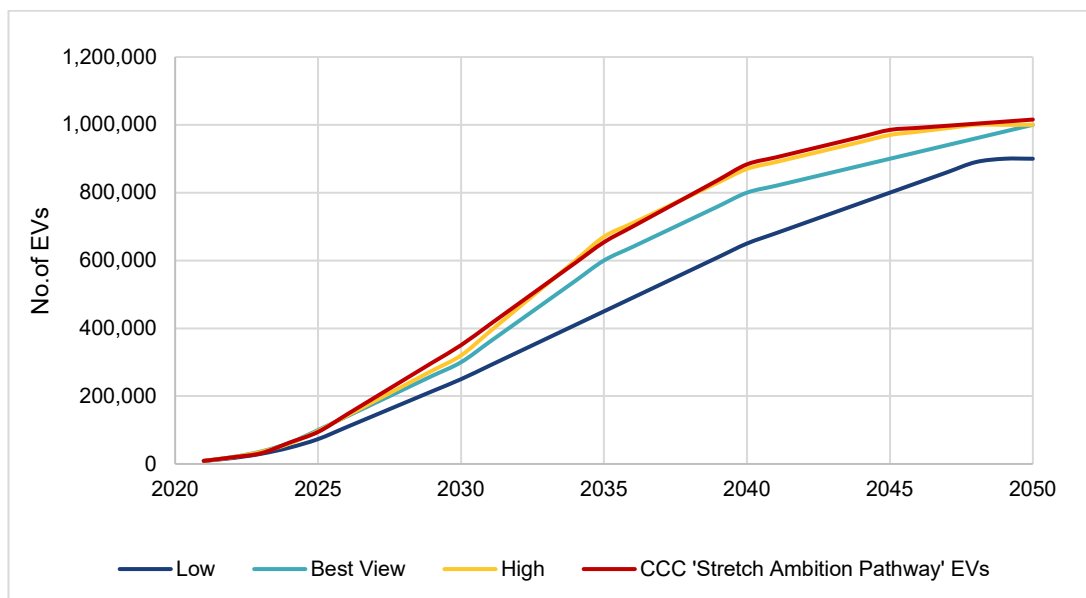
**Ability to invest sufficiently to enable delivery of long-term 2050 Net Zero ambitions**

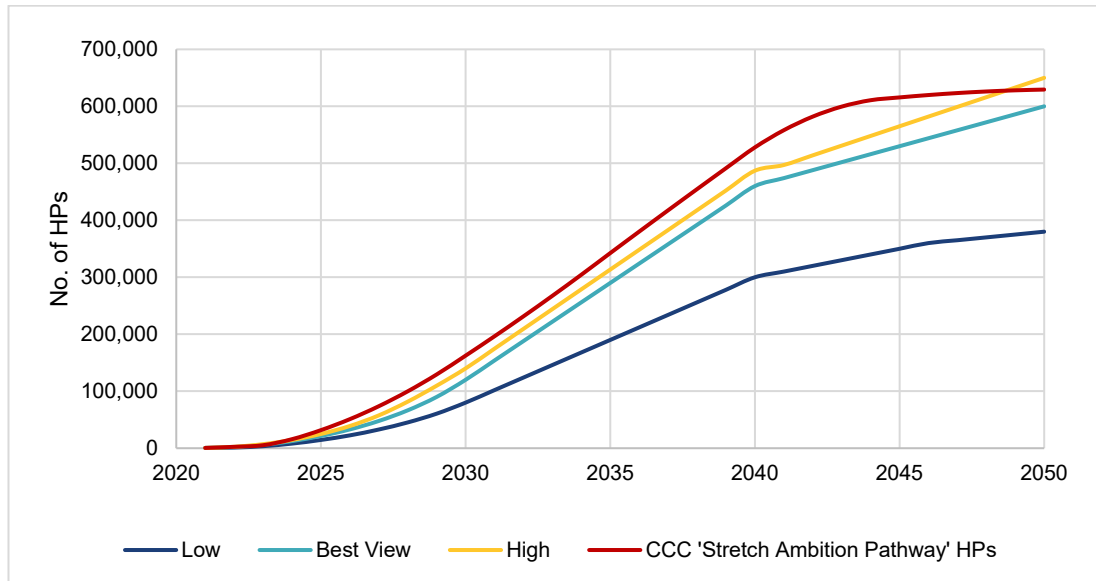
- 4.23 Significant uncertainty exists regarding the role of electrification in the journey to net zero. This will inevitably drive increased levels of demand and generation connecting to the electricity network; however, uncertainty exists regarding the exact timing and location of this uptake.
- 4.24 NIE Networks has carefully considered the trade-offs between how much expenditure is included within ex-ante plans and how much is funded through

uncertainty mechanisms. This is particularly pertinent in the context of investments needed to facilitate the transition to net zero, where ex-ante plans have been put forward which are based on the ‘best view’ scenario forecasts.

- 4.25 However, in a ‘slow-start’ scenario, where LCT load growth is slower in the short term than the company's 'best view' scenario, it is important that NIE Networks is able to invest sufficiently to avoid the significant risk that the company would be unable to ramp-up network investment in RP8 and beyond should a faster uptake of LCTs materialise. NIE Networks is concerned that in that scenario the electricity distribution network would become an obstacle to people transitioning to EVs and HPs, and, ultimately, Northern Ireland’s net zero legislative target.
- 4.26 Even if it was possible for NIE Networks to build additional network capacity at an accelerated pace in RP8 and beyond, securing the volume of additional labour and material resources required in such short time horizons would carry cost premiums. This would ultimately give rise to higher overall costs and likely drive price inflation within the markets for materials and labour, which would be reflected in customers' electricity bills.
- 4.27 When viewing the 2030 forecasts in light of the longer-term forecasts required for 2050 net zero ambitions (shown in Figures 4.3 and 4.4, below) it is apparent that delaying investment, or creating uncertainty in the recovery of the cost of the investment, which could be efficiently advanced today to prepare the network for the future creates a risk that the company would be unable to ramp-up network investment sufficiently.

**Figure 4.3: EV volume forecast to net-zero**



**Figure 4.4: HP volume forecast to net-zero**

- 4.28 Therefore, when considering the reasonableness of the LCT forecasted scenarios for RP7, whilst it is necessary to test the robustness of the forecasting methodology used and to consider all available evidence and feedback, NIE Networks believes that it is crucial that a longer-term view is adopted to ensure that the company will have the ability to invest sufficiently in RP7 to enable delivery of long-term 2050 Net Zero ambitions.

### Conclusion

- 4.29 By commissioning WSP and EY, and through extensive stakeholder engagement, NIE Networks has implemented a robust methodology in developing the forecasted uptake scenarios for NI. However as with any forecast there is inherent uncertainty regarding how the uptake will actually materialise.
- 4.30 NIE Networks believes it is vital that the company invests significantly during RP7 to facilitate net zero through a flexible and integrated energy system, avoiding a scenario where investment cannot be accelerated sufficiently to prevent the distribution network becoming a blocker to people transitioning to EVs and HPs, and, ultimately, Northern Ireland's net zero legislative target.
- 4.31 The LCT forecast scenarios, along with the suite of uncertainty mechanisms, proposed in the NIE Networks RP7 Business Plan provide the ability to invest sufficiently in RP7 to enable the delivery of long-term 2050 Net Zero ambitions.

## 5. D57 - PRIMARY NETWORK REINFORCEMENT

### Introduction

- 5.1 The primary network in NI consists of approximately 4,200km of 33kV overhead lines/underground cables and 217 primary substations (33/11kV and 33/6.6kV). In connection with facilitating net zero, in particular the growth of LCTs and Small-Scale Generation ("**SSG**"), constant development of the primary network is required to match network capacity with increasing demand and generation.



- 5.2 NIE Networks' Primary Network Forward Power Flow investment plan builds on the plan previously approved for RP6 to create capacity at fully utilised 33kV substations and networks. The current investment plan is made up of 32 targeted schemes, including 10 flexibility solutions and 22 traditional reinforcements. It requires c.£30m of investment in total. This investment is vital to ensure that the network does not constrain the energy transition and the adoption of LCTs.
- 5.3 NIE Networks' Primary Network Reverse Power Flow investment plan is new (i.e. there was no such plan for RP6) but the scope of reinforcement works involved is comparable to that of the Forward Power Flow programme. The plan requires investment of c.£20m to remove known reverse power flow constraints from the 33kV network and to facilitate the connection of additional micro scale generation and SSG. This investment will be vital for the achievement of the renewables target set out in the CCA 2022 of having 80% of energy generated from renewable sources, as well as facilitating homes, farms and business to decarbonise.

#### **The UR's provisional decision**

- 5.4 The UR has stated that it is in broad agreement with the need for forward power flow reinforcement, but identified factors that might limit the allowance for such activity as follows:

*"Whilst NIE Networks has identified a list of discrete sites, we do not propose to class these as nominated projects. This affords the company as much flexibility as possible if reprioritisation of the works is required during RP7."*

*"The works carried out during RP6 in this cost category are currently outturning at 10% below the expected yearly expenditure, therefore we have applied this saving to the RP7 allowance."<sup>8</sup>*

- 5.5 The UR also stated that it was in broad agreement with the need for reverse power flow reinforcement, but with similar caveats as to the allowance for this activity:

*"As with forward power flow reinforcement, NIE Networks has identified a list of discrete sites requiring intervention, however, we do not propose to class these as nominated projects. This affords the company as much flexibility as possible if reprioritisation of the works is required during RP7."*

*"Similar to forward power flow reinforcement we are applying a 10% saving to the RP7 proposed allowance."<sup>9</sup>*

- 5.6 When NIE Networks queried the rationale for the 10% reduction in the requested allowance,<sup>10</sup> the UR confirmed that:

<sup>8</sup> DD, Annex P, 2.52-3.

<sup>9</sup> DD, Annex P, 2.58-9.

<sup>10</sup> Query NIEN-016.

*"RP6 allowances equate to £2.4m pa but RIGs shows current outturn spend = £2.1m pa which is ~10% below allowance. We have applied this saving to RP7 submission."*

- 5.7 The application of a 10% reduction to allowances in respect of both forward and reverse power flow implies a reduction by £3m of the Forward Power Flow allowance, and a reduction by £2m of the Reverse Power Flow allowance, giving a total shortfall of £5m.

#### **Concerns with the UR's provisional decision**

- 5.8 NIE Networks welcomes the UR's broad acceptance of the need for both investment plans. Furthermore, NIE Networks recognises the benefit of the UR treating the sites as a flexible grouping rather than nominated projects to allow greater flexibility. However, NIE Networks does not agree with the UR that a 10% reduction should be applied to these investment plans on the basis of current expenditure in RP6.
- 5.9 The RP6 primary network load related investment programme involved sizable projects that required a large volume of consents from both a landowner and planning perspective. As these projects take longer, the delivery of a number of large value projects is expected to be "back-ended" in RP6.<sup>11</sup> As a result of this timing, a large amount of work will take place towards the end of the price control (between March and October 2023) and RP6 D57b expenditure will increase accordingly. This is shown in the fact that there has been an increase in the average D57b expenditure in RP6 from the £2.1m average applied by the UR in the DD to £2.2m in October 2023 (all amounts in 2021/22 prices). This growth in expenditure is expected to continue between now and the end of RP6 delivering the £2.4m year average by the end of the period. Therefore NIE Networks is confident that the entirety of its network load related allowance for RP6 will be utilised, and it is therefore not appropriate to base allowances for RP7 on a perceived underspend in RP6.
- 5.10 In order to avoid similar back-ending of work in RP7, NIE Networks has commenced pre-construction work on various primary network projects that, based on its experience in RP6, will require longer to complete. This approach will position NIE Networks to expedite the construction phase of the related primary network load investment projects (for both forward and reverse power flow) in RP7, thus ensuring the delivery of all critical projects that have been identified for the RP7 Business Plan.
- 5.11 Additionally, the reverse power flow allowance requested by NIE Networks represents the minimum investment required during the early part of RP7 to resolve existing reverse power flow constraints on the network. As additional micro-generation and SSG continue to connect in NI, it is expected that other areas of the Primary network, which are not currently fully utilised, will become constrained during RP7. As there is significant uncertainty with respect to the number and location of these connections, NIE Networks proposed an agile uncertainty

<sup>11</sup> In particular, there have been delays to the work on the circuit between Cloghills Central and Cushendall Central and the circuit between Ballyclare Central and Larne Main.

mechanism to increase allowances as the investment need arises to ensure that the network does not become a blockage. In light of this, a 10% reduction to an allowance which already represents the minimum level of investment required for the early part of RP7 is not appropriate.

### **Conclusion**

- 5.12 As set out above, the provisional allowance approved by the UR in the DD would leave a shortfall of £5m and therefore would not be sufficient to fund the programme of work that is necessary to resolve forward and reverse powerflow network constraints in RP7. If this is not corrected, there is a risk that parts of the primary network could inhibit the connection of LCTs, micro-scale generation and SSG, subsequently becoming a blocker to energy transition and undermining efforts to achieve the 80% renewables target.
- 5.13 NIE Networks therefore requests that the UR provides in full the requested allowance for both the Primary Network Forward Power Flow and Primary Network Reverse Power Flow investment plans.

## **6. D06, D07, D08, D43 – DISTRIBUTION OVERHEAD LINE ASSET REPLACEMENT UNIT COSTS**

- 6.1 Electricity distribution involves the transfer of electricity from the high voltage transmission network and its delivery to consumers across a network of overhead lines and underground cables operating at 33kV, 11kV and lower voltages. There are approximately 47,000km of distribution network, to which there are over 910,000 connections.
- 6.2 In its Business Plan submission, NIE Networks submitted data with respect to unit costs that were largely based on outturn data up to March 2022. This data shows, in effect, the total costs and total work volumes completed for each sub-category of work. This was the most up to date set of finalised data available at the time of Business Plan submission.
- 6.3 In addition to this, areas of significant change were identified and targeted unit rate adjustments applied. In the case of Distribution Overhead Line ("OHL") unit costs, in its Business Plan submission, NIE Networks applied an uplift to the contractor element of each unit cost of [REDACTED]. This uplift reflected the significant increase in costs following the retendering of the OHL contractor services in October 2022.

### **The UR's provisional decision**

- 6.4 In the DD, the UR provisionally accepted the need to apply an uplift to the contractor element but has applied an uplift of only [REDACTED] rather than the [REDACTED] proposed by NIE Networks.
- 6.5 The [REDACTED] uplift figure derives from the award of [REDACTED] that was applied as part of the RP6 extension year negotiations, reduced by 3% to reflect the annual productivity challenge of 1% per annum from 2022 to 2025.
- 6.6 The difference between the [REDACTED] uplift proposed by NIE Networks and the [REDACTED] uplift initially agreed by the UR in the RP6 extension year negotiations is attributable to

movements in RPI across the time-period of the existing OHL contract. NIE Networks understands that the UR's reason for reverting to the [REDACTED] figure is that the full element of inflation across the contract period should be deducted to understand the increase in costs above inflation.

- 6.7 Should the UR not include the full uplift in its Final Determination, this would produce a shortfall for NIE Networks of approximately £23m.

**Concerns with the UR's provisional decision**

- 6.8 NIE Networks believes the approach taken by the UR in respect of inflation is flawed, and results in an uplift for contractor costs that is insufficient to address the required investment.
- 6.9 The inflation arrangement applied to the relevant OHL contract up to May 2022 was based on [REDACTED] applied annually in arrears. It is on this basis that the increase in contract rates should be compared as this is the basis for the outturn unit costs that were included in the network investment plan.
- 6.10 To exclude the full extent of actual inflation (as opposed to the rate of inflation as it applied under the contract) would be to assume that NIE Networks will be compensated for the full effects of inflation elsewhere in the determination of unit rates. This approach was acceptable for the purpose of setting allowances for the RP6 extension year, as these were subject to the same level of inflation (less efficiency and RPEs).
- 6.11 For its RP7 Business Plan, NIE Networks rebased the starting unit rates based on the outturn unit costs from the period October 2017-March 2022. These have been reported in 2021/22 prices, and therefore already remove any inflationary impact other than the inflation provided for in the contract. As such, there is no historic inflationary award added. Therefore, to properly identify the uplift in unit rates included within the outturn costs, the only inflation that should be deducted is that which was actually applied under the contract.
- 6.12 NIE Networks provides at Annex A4.2 a spreadsheet, "OHL Contract Rates Uplift from 2017 Contract Award", which shows that, even after taking into account the treatment of RPI under the contract, the average uplift in costs between the rate expected to be paid in May 2022 and the retendered contract rates is [REDACTED] (see the "OHL" tab, cell AD36).
- 6.13 NIE Networks agrees that the calculation of the appropriate uplift must have regard to the impact of RPI, but the correct outcome from that calculation is [REDACTED]. The UR's deduction of RPI is inappropriate, because the data on which its assessment is based has already been adjusted for RPI. The UR's approach therefore effectively deducts RPI twice.
- 6.14 The UR's approach has applied unit cost reductions across the Network Investment Programme totalling £33.4m. Of this, £23m relates to distribution OHL unit costs. This level of reduction fails to have regard to the unprecedented cost increases currently being experienced in the utilities sector. This would impose an unfair cost

risk burden on NIE Networks which, ultimately, is likely to disincentivise investment in the network as it will not be possible to deliver works at the allowed unit rates.

- 6.15 It is important to recognise that the distribution OHL work to which this allowance relates is essential to the delivery of a safe network that is fit for the future. The allowance proposed by the UR would not support delivery of that work during RP7 and thus risks undermining the delivery of a safe network.
- 6.16 The UR has indicated that it is willing to engage further on this issue and to take into consideration outturn data in respect of OHL costs. NIE Networks welcomes the opportunity for such further engagement.

### Conclusion

- 6.17 The UR's approach to the calculation of the distribution OHL uplift incorrectly adjusts the requested allowance to take account of RPI, despite RPI having already been reflected in the uplift proposed by NIE Networks. The UR should reverse this position in its Final Determination and allow in full the uplift requested by NIE Networks.

## 7. D08I – BIRD FOULING

- 7.1 NIE Networks has requested funding to install bird rollers in areas where existing developments have resulted in birds roosting on overhead lines oversailing customer properties. This is a new sub-category for RP7.
- 7.2 In its submission, NIE Networks provided the UR with a list of ■ trial projects it carried out across Northern Ireland in RP6 including the associated costs for each site. The average cost per site was ■.
- 7.3 NIE Networks calculated that it would require £7,814,250 in funding to install bird rollers across the network. This takes into account the current rate of 100+ bird fouling complaints and enquiries per year and NIE Networks' estimate that there will be 600+ new bird fouling complaints in RP7. NIE Networks requested this allowance to be made by way of a lump sum allowance.

### The UR's provisional decision

- 7.4 In the DD, the UR agreed that the bird fouling issue needs to be addressed and *"cannot be dealt with without the socialisation of costs"*.<sup>12</sup>
- 7.5 However, the UR has only approved a portion of NIE Networks' requested funding i.e. ■. This is £2,165,926 less than the requested allowance.
- 7.6 The UR calculated this number as follows:
- using the trial site costs provided by NIE Networks, the UR calculated an average cost per customer of ■<sup>13</sup> and an average number of customers per site as 10.5;<sup>14</sup>

<sup>12</sup> DD, Annex P, 3.55.

<sup>13</sup> Total cost for 12 sites (■) divided by total number of customers (126).

<sup>14</sup> Total number of customers (126) divided by 12 sites.

- the UR estimated the number of sites as 981;<sup>15</sup>
- the UR calculated that 981 sites with an average of 10.5 customers per site equates to 10,300 customers in total;
- the UR calculated that [REDACTED] per customer for 10,300 customers equates to an efficient allowance of [REDACTED] for RP7.

### **Concerns with the UR's provisional decision**

- 7.7 NIE Networks welcomes the UR's support for this new sub-category and is willing to work with the UR to ensure a reasonable allowance is agreed, so that this work can be carried out to the benefit of all customers affected by bird fouling.
- 7.8 However, NIE Networks does not agree with the methodology that the UR has used to calculate an allowance of [REDACTED]. In particular:
- the UR's estimate of 10,300 affected customers is arbitrary and does not take into account the characteristics of the data on which it is based;
  - in any event the number of affected customers is not an appropriate metric for estimating the total cost of installing bird rollers.

#### The UR's estimate of 10,300 affected customers is arbitrary

- 7.9 The number of customers at the 12 trial sites identified by NIE Networks is not necessarily representative of the number of customers at each site across the network. As such, customer numbers extrapolated from this data will not be correct. The number of customers at each site varies, and there is therefore no way accurately to calculate the average number of customers from this data.
- 7.10 In any event, the number of customers extrapolated by the UR (i.e., 10,300) is not reflective of the number of historical, current or expected customer complaints in respect of bird fouling. NIE Networks included the number of customers in its trial data merely for the sake of completeness and this was not intended as a means by which to measure the work required.

#### The number of affected customers is not a reliable metric for estimating the total cost of installing bird rollers

- 7.11 The cost of installing bird rollers is not directly linked to the number of customers that might be affected by bird fouling at any given site. The number of customers affected can be influenced by a number of factors, such as the size of the customer's property or the amount of customers in close proximity to each other, but those factors may have no bearing on the cost of installing bird rollers on a span basis.
- 7.12 By taking the number of customers as a reference point by which to extrapolate the total allowance for this activity, the UR has artificially reduced the allowance based on a metric that is unrelated to cost. This in turn will reduce the likelihood of NIE Networks being able to fund this activity.

<sup>15</sup> 700 sites (based on NIE Networks' expectation that it will receive 600+ complaints in RP7) plus 281 sites already identified by NIE Networks.

- 7.13 NIE Networks also has concerns as to how this would impact any use of the deferral mechanism. The deferral mechanism is used to ensure that NIE Networks does not request funding in a future price control period for work that it should have carried out in an earlier period. For this reason it is crucial that the output measure for any output-linked allowances is directly correlated to the work that NIE Networks is required to carry out. If it is not, then NIE Networks could deliver all of the required work and outcomes but not reach the output volumes specified; this could be the case under D08i if the number of customers affected is used as the measure.
- 7.14 Application of the deferral mechanism in such circumstances would arbitrarily penalise NIE Networks for not meeting an output measure that was never possible to achieve and in any event is not a relevant measure of the work required.

#### **NIE Networks' proposed approach**

- 7.15 NIE Networks' preferred approach is to keep this sub-category as a lump sum to enable flexibility on the number of sites we can address and the solution at each site. NIE Networks considers this is appropriate as this work is entirely customer and complaint focussed.
- 7.16 If this approach is not considered desirable by the UR an alternative methodology for calculating an efficient allowance would be based on the average number and cost of affected spans per site. NIE Networks sets out this data for the 12 sites in the table below:

**Table 4.4: Bird roller number of spans and cost/span**

Site Number	Site Location	Number of Spans Affected	Cost/Span (£)
1	Islandmagee	6	██████
2	Cogry, Doagh	3	██████
3	Glebe Park, Sion Mills	2	██████
4	Canvy Manor & Charnwood Court, Portadown	4	██████
5	4 Sandyhill Gardens, Dunmurry	4	██████
6	Caherty Hill, Broughshane	3	██████
7	Bridge Park, Templepatrick	5	██████
8	St. Patrick's Way	3	██████
9	Marie Villas, Newry	11	██████
10	Loughshore Manor, Enniskillen	2	██████
11	Cherrylands, Newtownabbey	3	██████
12	Ardmore, Holywood	6	██████

Total	52	£17,441
<b>Average</b>	<b>4.33</b>	<b>£1,453.40</b>

7.17 This approach provides an allowance of £6,173,651.<sup>66</sup> This represents a reduction of £1,640,599 from NIE Networks' original submission of £7,814,250, with an output unit of measure that NIE Networks considers to be appropriate.

## 8. D11 – CUT OUTS

8.1 The majority of low voltage ("LV") service cables to consumer premises are terminated in a service cut-out with a fuse which is located before both the meter and the subsequent customer's consumer unit/fuse board. The cut-out fuse provides protection against overload of the service and provides back-up fault protection to the meter and to the customer's installation.

8.2 NIE Networks categorises cut-out replacements into the following types:

- Simple: Equipment can be replaced in-situ with no other modifications required; and
- Complex: Replacement work often requires external excavation and reinstatement and internal modifications to property.

8.3 To create more reflective cost categories for this work based on the complexity of the job, NIE Networks proposed to split the replacement of service cut outs into two sub-categories: one for simple jobs and the other for complex jobs. NIE Networks calculated the difference in costs for these categories based on outturn data.

8.4 NIE Networks also proposed to uplift the cost of all complex jobs to provide for installation of a 3-phase cut-out service to future proof the property, as this work could be carried out at the same time as the replacement of the cut-out, making better use of time spent by NIE Networks on site and making better use of already having the ground open as part of the cut-out replacement work.

8.5 The replacement of 3-phase cut outs was not addressed under the D11a allowance for RP6, and as such this element of the allowance is new for RP7.

### The UR's provisional decision

8.6 The UR disagreed with NIE Networks' proposal to split this category according to job complexity.

8.7 The UR accepted that there may be variation in the tasks required for different cut-out replacement jobs, but considered that it would not be good regulatory practice to allow different unit rates for such variation, in effect taking the view that the different cost of these activities should already be accounted for within the overall RP6 run-rate.<sup>16</sup> Instead the UR has provisionally proposed to split the category based on the driver for the investment, i.e. either (i) condition-based replacement, or (ii) Low Carbon Technology ("LCT") based replacement.<sup>17</sup> This is primarily to

<sup>16</sup> DD, Annex P, 3.108.

<sup>17</sup> DD, Annex P, 3.114.



allow the capture of LCT driven replacements to support future analysis and adjustment during annual tariff determinations with the same unit cost regardless of the driver.<sup>18</sup>

- 8.8 The UR has also provisionally rejected the proposal to increase allowances to accommodate a change to the minimum specifications for complex jobs by way of upgrading single-phase cut-outs to a three-phase cut-out at this stage.<sup>19</sup> Instead, the UR indicated that this could be addressed within its consideration of the connection charging methodology review.<sup>20</sup>
- 8.9 However, the UR recognised that current three-phase cut-outs have not been addressed under a planned replacement programme previously<sup>21</sup> and are a driver of increased volumes of cut-out replacements.
- 8.10 The unit rate for cut-out replacement in RP7 was therefore set on the basis of the RP6 outturn rate to March 2023.<sup>22</sup>
- 8.11 In view of the conclusions above, the UR reconfigured NIE Networks' submission sub-categories to align with its DD.<sup>23</sup> Following the changes made in the DD, the allowance provisionally determined by the UR was set at £4.739m – i.e., less than half the allowance requested by NIE Networks (£9.586m).

#### **Response to the UR's provisional decision**

- 8.12 NIE Networks welcomes that the UR has acknowledged the volume of cut-out replacements needs to increase based on fault levels experienced in RP6, and that three-phase cut-out replacements have not previously been addressed directly as part of D11 and will need to be addressed in future.
- 8.13 NIE Networks is providing with this Response at Annex A4.3 a spreadsheet containing revised proposals for the D11 allowance. This shows a comparison of (i) NIE Networks' original proposal, (ii) the UR's DD proposal, and (iii) NIE Networks' revised proposal reflecting a revised approach to allowances for three-phase cut-out replacement, as explained below:
- NIE Networks is content to follow the UR's approach of addressing the upgrading of single-phase to three-phase cut-outs.
  - The UR has accepted that three-phase cut-outs are required and that they have not previously been carried out as part of D11a. This means the run rate is not reflective of this type of work and therefore a new proposed unit cost should be accepted for this new workstream. As a result, NIE Networks has calculated a new unit cost for this work based on contract prices and based on the proportion of single-phase to three-phase cut outs on the network, and updated the appropriate volume split across D11a and D11b.

<sup>18</sup> DD, Annex P, 3.114.

<sup>19</sup> DD, Annex P, 3.109.

<sup>20</sup> DD, Annex P, 3.109.

<sup>21</sup> DD, Annex P, 3.111.

<sup>22</sup> DD, Annex P, 3.110.

<sup>23</sup> DD, Annex P, 3.116.

- NIE Networks has no objection to the UR's proposal to identify condition-driven and LCT-driven replacements but suggests that the same approach should be taken with each of them insofar as concerns identifying appropriate unit rates for single and three-phase cut-outs.

### **NIE Networks' requested changes**

8.14 The spreadsheet provided at Annex A4.3 sets out a revised request for allowances totalling £5.491m in respect of both condition-driven and LCT-driven cut-out replacement. In view of the additional data provided with this Response in support of this request, NIE Networks requests the UR to approve this proposed allowance in its Final Determination.

### **9. D13J / D15X / T11V – SUBSTATION LEGALITIES**

9.1 The majority of NIE Networks' substations are secured by long lease (with a right of way for access and easements for underground cables), which provides certainty for these critical assets to ensure the safe, reliable and resilient operation of the electricity network.

9.2 In its RP7 Business Plan, NIE Networks set out its proposals<sup>24</sup> for lease renewals based on the site voltage level. For current primary substations this included the renewal of all leases due to expire in RP7 or those that required updates related to RP7 activities. Current secondary distribution substation leases would only be updated where investment is planned, or a request is received from the landowner if required. Where a new substation is required, or where it is intended to make a significant investment in the network, a freehold or long leasehold (at least 99 years) interest in the land would be sought. Generally, NIE Networks' strategy for RP7 with respect to substation legalities is the same as for RP6.

9.3 The company considers that this strategy will minimise both network and financial risks by:

- renewing the important primary substation leases (of which there are a lower number); and
- avoiding high expenditure associate with the renewal of a large number of secondary substations by limiting renewal to leases only where required.<sup>25</sup>

9.4 In terms of transmission substations, NIE Networks owns (or has long leases in respect of) these substations. There is no current requirement to renew leases for these assets. However, the company identified the need to acquire an additional access at Lisburn Main to facilitate the installation of transformers and new underground cables.<sup>26</sup>

9.5 NIE Networks' proposed substation legalities costs are set out in Table 4.5 below.

<sup>24</sup> NIE Networks, RP7 Business Plan, p.141 and EJP 1.807 'Substation Legalities', pp.1-2.

<sup>25</sup> NIE Networks, RP7 Business Plan, EJP 1.807 'Substation Legalities', pp.1-2.

<sup>26</sup> NIE Networks, RP7 Business Plan, EJP 1.807 'Substation Legalities', p.6.

**Table 4.5: NIEN Networks' proposed substation legalities costs**

Substation category	Legalities	RP7 Expenditure
D13j	Primary substation legalities	£4,300,800
D15x	Secondary substation legalities	£1,958,789
T11v	Transmission substation legalities	£250,669
<b>Total Substation Legalities costs</b>		<b>£6,510,258</b>

### The UR's provisional decision

#### Primary substation legalities

- 9.6 The UR has provisionally allowed costs of primary substation lease renewals (including site extensions) for sites at which NIE Networks will perform works during RP7.
- 9.7 The UR has however provisionally disallowed costs for the 12 primary substation leases that have expired or will expire during RP7 but where no works are planned during this period. The UR's provisional determination<sup>27</sup> is based on the following assessment by GHD:

*"NIE Networks has identified 22 sites with planned RP7 interventions that require land to be purchased or leased (including site extensions). We agree that it is prudent to obtain legal agreement for the land for these sites thereby establishing long term security of each site."*

*"NIE Networks has also identified a further 12 primary substation leases that have expired or will expire during the RP7 period where no works are planned. Within the RP7 plan, NIE Networks has included costs to purchase these or renew leases for all 12 sites. Within the EJP, NIE Networks did consider a do-nothing option (no lease renewals) and provided general comments on this option, but no risk assessment or supporting analysis was provided to assess the impact of allowing the leases to expire for these 12 additional sites. Given the uncertainty of the impact of deferring the lease renewal for these sites, we recommend RP7 allowances are provided only for the 22 sites identified where associated works are proposed during the RP7 period. Our recommended allowance is based on NIE Networks' RP7 submission with a pro-rata reduction for lower volumes."<sup>28</sup>*

#### Secondary substations legalities

- 9.8 The UR's provisional determination<sup>29</sup> for secondary substation legalities is also based on GHD's recommendations.

<sup>27</sup> DD, Annex P, 3.117.

<sup>28</sup> DD, Annex R, p.23.

<sup>29</sup> DD, Annex P, 3.119.

9.9 The UR has provisionally allowed costs of secondary substations lease renewals for sites at which NIE Networks will be performing works in RP7. The UR has however provisionally disallowed the 100 sites included by NIE Networks in its RP7 Business Plan where the company is not scheduled to perform works in RP7 but where landowners are likely to proactively request renewals.

9.10 GHD's recommendations to the UR are set out in Annex R to the DD ("**Annex R**" or the "**GHD Report**"). In the GHD Report it is stated that:

*"NIE Networks provided additional information to support their assumption that a further 100 sites may be subject to landowner request for lease renewal during RP7. In overall terms this assumption accounts for less than 2% of the expired assumption each year. It is not evident that similar experience was observed during RP6 period and we conclude that the assumption overstates RP7 volumes. We therefore recommend allowances based only on the proposed sites with planned intervention in RP7 – a total of 207 sites."*<sup>30</sup>

9.11 The UR has further proposed that allowances are based on the average RP6 lease cost (plus agent and legal cost), based on GHD's recommendations.<sup>31</sup> This approach rejects the company's proposed average cost per lease of [REDACTED], which took account of the expected increase in lease renewals on privately owned land, as opposed to primarily government-owned land as was the case during RP6.<sup>32</sup>

#### Transmission substation legalities

9.12 In its assessment of NIE Networks' proposals for the allowance for transmission substation legalities, the UR adopts<sup>33</sup> the recommendations in the GHD Report, which are to reduce the allowance from the requested £250,669 to £25,000.

9.13 In the GHD Report it is stated that:

*"NIE Networks has identified only one site with planned RP7 requirements that required additional land to facilitate access for replacement of transformers and underground cables. The area identified was 1000 m2, but this is not based on site inspections or measurements. Nor was the land valued professionally, but a valuation was estimated based on residential land. Of the proposed RP7 sum, [REDACTED] is for fees and the remainder to purchase the land."*

*"We agree that it is prudent to obtain legal agreement for the land access for these sites thereby establishing long term security of each site. However, the need to purchase land for transformer movements or accessing underground cables is not demonstrated."*

<sup>30</sup> DD, Annex R, p.49.

<sup>31</sup> DD, Annex R, p.49.

<sup>32</sup> NIE Networks, RP7 Business Plan, EJP 1.807 'Substation Legalities', p.11.

<sup>33</sup> DD, Annex P, 3.240.

"Our recommended approach is that £25k is allowed for additional legal fees to establish appropriate easements for transformer movements and cable access, if these have not been maintained for some reason."<sup>34</sup>

- 9.14 Conversely, at Annex Q the UR appears to have allowed the full allowance requested by NIE Networks.<sup>35</sup>
- 9.15 NIE Networks requests clarification on the UR's provisional determination as to the allowances.

### **Concerns with the UR's provisional decision**

#### Primary substation legalities

- 9.16 NIE Networks welcomes and supports the statement in the GHD Report that:
- "it is prudent to obtain legal agreements for the land for these sites, thereby establishing long term security of each site."*<sup>36</sup>
- 9.17 However, NIE Networks considers that the UR's provisional decision to disallow costs for legalities relating to primary substations for which no works are planned for RP7 is inconsistent with regulatory precedent. The UR has without adequate justification departed from its position at RP6 where it granted NIE Networks its full requested amount for primary substation lease renewals.<sup>37</sup>
- 9.18 In its RP7 Business Plan, NIE Networks noted that at RP6, the approach was to plan the acquisition or renewal of primary substation sites when the lease is approaching expiry. This is due to the strategic importance, size, cost, and the number of customers supplied by primary substations. There is little or no network contingency available at primary substation voltage levels and relocation is generally not an option due to the very significant cost.<sup>38</sup>
- 9.19 NIE Networks has not proposed any change in its approach from RP6. Rather, it is simply the case that the volume of leases due to expire in RP7 is higher than in RP6. This factor is entirely outside of NIE Networks' control. It is pre-determined by the date the lease was agreed (pre-privatisation) and the lease term length.
- 9.20 In addition, the GHD Report notes that:
- "NIE Networks did consider a do-nothing option (no lease renewals) and provided general comments on this option, but no risk assessment or supporting analysis was provided to assess the impact of allowing the leases to expire for these 12 additional sites."*
- 9.21 NIE Networks was unable to quantify the impact of a "do-nothing" approach in its RP7 Business Plan, due to difficulties in estimating the costs of varying factors outside of NIE Networks' control in the cost benefit analysis. However, the company

<sup>34</sup> DD, Annex R, p.79.

<sup>35</sup> DD, Annex Q, p.6.

<sup>36</sup> DD, Annex R, p.23.

<sup>37</sup> UR, RP6 Final Determination, Annex O, 2.23, Table 2.2.

<sup>38</sup> NIE Networks, RP7 Business Plan, EJP 1.807 'Substation Legalities', p.4.

has provided further information below on the reasons why it deemed such an option to be unacceptable.

*The strategic nature of primary substations*

- 9.22 These substations typically supply c. 4,000 customers and generally cover c.1/3 of an acre of land. However, they often require a large, sterilised area to allow for cables and access routes.
- 9.23 While there is network contingency for loss of individual circuits at primary substations, current planning standards do not allow for contingency for an entire primary substation. Therefore, these substations cannot be easily relocated. Based on NIE Networks experience, the costs of relocation would be well in excess of £1 million. This is significantly higher than the costs of renewal, which are typically within a range of [REDACTED] per site.

*Increasing demand for land and property*

- 9.24 Due to the increasing demand for development land, there is a higher likelihood that landowners seek to maximise their profits by seeking to develop the site. This in turn increases the risk of the company having to defend its right to retain the substation, for the reasons set out at paragraphs 9.25 to 9.28.

*Avoidable Costs*

- 9.25 Should NIE Networks continue in possession of a site under a "do nothing approach", the company will be 'holding over' after the expiration of the lease. Only when the lessor requires renewal or ejection, NIE Networks will seek to negotiate a voluntary agreement to avoid the costs and risks associated with a vesting application.
- 9.26 In the absence of reaching a voluntary agreement, the landowner may serve notice to seek to eject NIE Networks from the site. In this situation, NIE Networks must apply to the DfE to vest the substation site to (i) ensure its customers remain on supply and (ii) avoid very significant relocation costs and disruption to customers (including large businesses).
- 9.27 Where it seeks vesting of the substation site, the company must make an application to DfE within three months of receiving the notice from the landowner to remove the substation. NIE Networks estimates that this process may cost the company £5,000 per case.
- 9.28 A vesting order, if granted, will vest ownership of the land in NIE Networks. However, it will not resolve the issue of the appropriate level of consideration due to the landowner. In the absence of an agreement with the landowner, consideration will be determined by the Lands Tribunal. The Lands Tribunal's determination process could result in significant additional costs to the company in the event it is unsuccessful ([REDACTED]).
- 9.29 NIE Networks acknowledges that under a "do nothing" approach, the level of upfront costs is reduced, as compared to a proactive approach to renewing expired leases. However, under a "do nothing approach", the site remains susceptible to the landowner asserting ownership over the land, in light of the increasing value of land. As a result, there is an increased risk that NIE Networks must defend its right to

retain the substation, which in turn generates higher costs than the expected renewal costs.

Secondary substation legalities

- 9.30 NIE Networks considers that the UR's provisional decision to disallow costs for legalities relating to secondary substations for which no works are planned for RP7, or for which landowners proactively request the renewal, is inconsistent with the UR's regulatory precedent. The UR has without adequate justification departed from its position at RP6 where it granted NIE Networks its full requested amount for secondary substation lease renewals.<sup>39</sup>
- 9.31 In its RP7 Business Plan, NIE Networks noted that in RP6, the company's approach has been that if a secondary substation lease has expired and there is no investment planned, a renewal of the lease is not proactively sought unless required by the landowner. This approach ensures that costs are minimised and leases that may not be required when the existing equipment reaches the end of its life are not renewed.
- 9.32 NIE Networks has not proposed any change in its approach from RP6. As with primary substation legalities, it is simply the case that the volume of secondary substation leases due to expire during RP7 is higher than during RP6. This factor is entirely outside of NIE Networks' control. It is pre-determined by the date the lease was agreed (pre-privatisation) and the lease term length.
- 9.33 Further, NIE Networks has no option from a legal perspective but to deal with proactive requests from landowners and the DD makes no allowance for costs associated with such requests. NIE Networks does not have an option to simply refuse the renewal, based on the lack of UR allowances. If NIE Networks is unable to negotiate an agreement with the landowner, the landowner can trigger the process outlined at paragraphs 9.25 to 9.28 above.
- 9.34 In addition, in its report GHD states that:
- "NIE Networks provided additional information to support their assumption that a further 100 sites may be subject to landowner request for lease renewal during RP7. In overall terms this assumption accounts for less than 2% of the expired assumption each year. It is not evident that similar experience was observed during RP6 period and we conclude that the assumption overstates RP7 volumes."*
- 9.35 NIE Networks considers that it has already clearly documented to the UR (via the UR's query process)<sup>40</sup> how it determined the 100 reactive sites and explained why this is a prudent calculation. That figure is based on the company's workload during RP6, where c.20 landowners annually approach NIE Networks' Land & Property team seeking a secondary substation lease renewal. NIE Networks considers that this number is likely to increase during RP7 due to the volume of work to be undertaken on the network.

<sup>39</sup> UR, RP6 Final Determination, Annex O, 2.65, Table 2.6. NIE Networks' expenditure for substation legalities was covered in the sub-category for Minor Secondary Civil Works (D15o).

<sup>40</sup> UR query 190.

- 9.36 Further, GHD fails to explain its recommendation (adopted by the UR) that the allowances are based on the average RP6 lease cost (plus agent and legal costs). Moreover, this proposed approach fails to take into account the expected increases in such costs during RP7, as noted at paragraph 9.37 below.
- 9.37 The UR (and GHD) has failed to consider the fact that landowners' expectations of value have increased significantly throughout RP6. Rising property costs, the cost-of-living crisis and increased demand for new housing sites have made negotiations for new leases much more challenging.
- 9.38 The UR has also failed to consider the impact of high-cost renewals, such as sites with planning permission for development where the company must consider the least costly approach. Secondary substations cost upwards of [REDACTED] to relocate, and it is often less costly to pay for the market value of the land.
- 9.39 For example, in a recently concluded negotiation, NIE Networks paid [REDACTED] for a secondary substation with an expired lease (and no work planned). In an ongoing negotiation, the company has offered [REDACTED] for another secondary site with an expired lease (and no work planned). However, the landowner's position is that the market value of the land is [REDACTED]. Therefore, a single renewal could cost NIE Networks more than [REDACTED] times the UR's proposed allowance.
- 9.40 Based on the market value, the consideration payment due to each individual landowner is increasing, as evidenced in commercial, industrial and residential market reports. Based on its experience, NIE Networks considers that a conservative average lease cost will be [REDACTED] per site (excluding legal fees).<sup>41</sup>
- 9.41 Under the UR's proposed allowance, NIE Networks will not be able to offer a fair consideration payment for each site which NIE Networks considers that there is a significant risk that landowners will refuse which will delay investment in the network and push NIE Networks towards making vesting applications. This will ultimately impact the company's ability to maintain a safe and reliable network.
- 9.42 NIE Networks also notes that the UR has failed to take into account the analysis that NIE Networks has completed to create the best view of costs based on the land type of each expired list. In its assessment of the average cost per lease, NIE Networks considered that due to the volume of leases renewed on land owned by government bodies in RP6, the company expected to see a higher percentage renewed on privately owned land in RP7 (c.55%). On that basis, NIE Networks averaged the cost per lease at [REDACTED] as opposed to [REDACTED] if it were to maintain the current split of government to privately owned land use during RP7.<sup>42</sup> The UR has failed to take into account the ratio of lease renewals during RP7 between government to privately owned land during RP7.

<sup>41</sup> See NIE Networks, RP7 Business Plan, EJP 1.807 'Substation Legalities', p.12.

<sup>42</sup> NIE Networks, RP7 Business Plan, EJP 1.807 'Substation Legalities', p.11.



### Transmission substation legalities

- 9.43 As noted at paragraphs 9.12 to 9.15 above, the UR has not provided a consistent provisional determination as to the allowance for transmission substation legalities and NIE Networks therefore requests clarification on this.
- 9.44 In any event, NIE Networks has undertaken further assessments in relation to its requirements at the one transmission substation (Lisburn Main) for which it has requested this allowance.
- 9.45 NIE Networks has also provided further information to support its requested allowance in response to GHD's comment that "the need to purchase land for transformer movements or accessing underground cables is not demonstrated".<sup>43</sup> This information is now available, subsequent to a meeting between the company and the relevant developer.
- 9.46 The developer has provided further information to the company on the number of housing units that will be lost in order to provide NIE Networks with its minimum access requirements. The minimum amount of land that NIE Networks can purchase will result in the loss of [REDACTED], which at this stage had not yet been constructed. NIE Networks notes that further housing sites may be impacted. Confirmation of this is subject to the completion of civil engineering studies to determine the height differential in land.
- 9.47 NIE Networks has provided a site drawing for Lisburn Main substation at Annex A4.4. The green hashed area in the site drawing represents the proposed easement for additional 33kV access into the substation. The red hashed area represents the purchase of land to widen the main access to the substation for movement of main transformers.
- 9.48 Under GHD's recommended allowance, the company would have to seek a voluntary agreement with the developer. NIE Networks considers that if it is unable to secure a voluntary agreement with the developer, the company will have to consider making an application to vest the land. NIE Networks has already set out the issues and costs associated with this process at paragraphs 9.27 and 9.28 above. In addition, SONI may be forced to consider vesting [REDACTED] or relocating the substation at a later date. The relocation of the substation could cost more than [REDACTED]. This would be significantly more costly than acquiring these rights now.

### **NIE Networks' requested allowances**

#### Primary substation legalities

- 9.49 NIE Networks considers that the UR's proposed cost allowances for primary substation legalities is inconsistent with regulatory precedent and the company's licence conditions and fails to take into account the difficulties in defining and adopting a "do nothing" approach. It also fails to consider the potential legal implications for NIE Networks as a result of the provision of an insufficient allowance.

<sup>43</sup> DD, Annex R, p.79.

- 9.50 If a landowner seeks the renewal of an expired lease, NIE Networks has little option than to enter into negotiations. Refusing to enter into negotiations will create unnecessary costs for NIE Networks, the DfE and the Courts as a result of the mandatory process that the company must follow (outlined at paragraphs 9.25 to 9.28 above). The company is therefore simply, by default, unable to refuse to renew leases without the risk of breaching its licence or other legal requirements (such as in relation to trespass).
- 9.51 NIE Networks therefore requests that in the Final Determination, the UR provides the full allowance for primary substation legalities, as requested by the company in its RP7 Business Plan. This includes all the primary sites that have leases due to expire during RP7.

#### Secondary substation legalities

- 9.52 NIE Networks considers that the UR's proposed cost allowances for secondary substation legalities is inconsistent with regulatory precedent and the company's licence conditions and fails to consider the potential legal implications for NIE Networks as a result of the provision of an insufficient allowance. Under the UR's proposed allowance, the same issues will arise for secondary substation legalities as for primary substation legalities (as set out at paragraph 9.50).
- 9.53 Further, the lack of uplift to reflect the ratio of private to commercial land usage, will result in an overspend for NIE Networks, as NIE Networks is not in direct control of the costs for each site.
- 9.54 NIE Networks therefore requests that in the Final Determination, the UR provides the full allowance for secondary substation legalities, as requested by the company in its RP7 Business Plan, which includes the 100 reactive sites identified.
- 9.55 NIE Networks also requests that the UR modifies the run rate from the RP6 lease cost (plus agent and legal cost) and adopts the company's expected run rate used in its RP7 Business Plan.

#### Transmission substation legalities

- 9.56 For the reasons set out above at paragraphs 9.46 to 9.48, NIE Networks requests that in the Final Determination, the UR provides the full allowance for transmission substation legalities, as requested by the company in its RP7 Business Plan.

## **10. D13M – REWIRE PRIMARY SUBSTATIONS**

### **Introduction**

- 10.1 The distribution plant ancillaries work programme for RP7 comprises work that is required in order to replace and install specific ancillary equipment associated with AC equipment within 33/11kV substations. The works proposed for RP7 cover replacement of DC standby systems and AC rewire work, of which the latter is the subject of this Section.
- 10.2 Substation AC services include essential substation supplies, for example heating, lighting, building, distribution systems, supplies to circuit breakers and transformer tap-changer motors and all the associated wiring. At many substations, the building

AC services do not comply with current standards for lighting and heating, and with the latest version of the Wiring Regulations (BS 7671) whereas it is a requirement that, when changes are made to the AC system, all wiring being worked must comply with the requirements of BS 7671. Furthermore, the LV AC system is essential to ensure the safe and reliable operation of plant and equipment within distribution substations.

- 10.3 For these reasons, where a given site has been selected to be the subject of other works during RP7, if it is essential for those works that the site has a safe and secure AC system in order to function in all network configurations then NIE Networks has assessed the condition of the wiring at those sites. Where wiring at such sites has been identified as being in poor condition, the site has been selected for rewiring in RP7. Such works where this is relevant include transformer changes that would affect the AC equipment within the building, instances where equipment is being replaced in the building, or instances where protection equipment is being replaced.
- 10.4 NIE Networks identified 45 instances where AC rewire work is needed during RP7, and requested allowances accordingly.

#### **The UR's provisional decision**

- 10.5 The UR has accepted that this sub-category of work is required but has reduced the proposed allowance from 45 units to 27 units. The UR indicated that this was due to a lack of specific evidence to support the number of sites, such that it based the DD on the outturn volume from RP6, pro-rated to account for the difference in duration of the regulatory periods.

#### **Concerns with the UR's provisional decision**

- 10.6 The UR's approach of assuming that work required in RP7 will match that of RP6 (pro-rated) is not a suitable methodology in circumstances where there is data available to demonstrate the true scale of the work required.
- 10.7 In this context, NIE Networks has completed a data gathering exercise to allow for the creation of an individual assessment for each primary substation AC system for which it proposed rewire work – the results are set out in a spreadsheet provided at Annex A4.5.
- 10.8 In summary, the spreadsheet shows how sites have been prioritised based on the type of equipment present, the installation date group (aligned with BS 7671 revisions) and whether the site has been proposed to receive any related investments. Numerical scores have been allocated to each site based on the data for each criterion, and any site with a score above 2 has been proposed for replacement within RP7 along with other related works. This demonstrates that the 45 sites proposed by NIE Networks need AC rewire works during RP7 and therefore the allowance for these sites should be provided in the Final Determination.
- 10.9 The reduction in volumes proposed by the UR would reduce the allowance available to NIE Networks from the £882k requested to just £493k, a shortfall of £389k.
- 10.10 The reduction in volumes would also not allow NIE Networks to attain the synergies that could be achieved by carrying out other sub-categories of work alongside AC

system replacements. This would include replacing the HH Boards while on site that are known to have asbestos, or replacing AC systems with a rating of 32A that is not fit for purpose with modern DC charger and AC auxiliary requirements for switchgear.

### **Conclusion**

- 10.11 The unit volume for AC system replacements should be restored to the figure initially proposed by NIE Networks (i.e. 45 sites) in order to enable the recommended works to be fully implemented. This approach would be consistent with the UR's duty to secure the establishment and maintenance of machinery for promoting the health and safety of persons employed in the generation, transmission, distribution or supply of electricity.

### **11. D13N – PRIMARY PLANT PAINTING**

- 11.1 In RP6, NIE Networks began work to renew the protective paint coatings on 40 33/11kV and 33/6.6kV transformers.
- 11.2 In RP7 NIE Networks will continue this programme, with works extending to the painting of 150 33/11kV and 33/6.6kV transformers out of a total population of 411 units. The majority of the units identified are more than 15 years old. It is anticipated that a further 150 units will require painting during RP8.

#### **The UR's provisional decision**

- 11.3 The UR provisionally determined that the requested volume of ■■■ transformers identified for painting be reduced by 50% to ■■■ transformers. This corresponded to a 50% reduction in the requested allowance from £497k to £249k.
- 11.4 The UR's provisional decision is based on the following assessment by GHD:

*"Plant painting – primary (D13N) – requested volume of ■■■ recommended to be reduced by 50% (to ■■■) to enable a more manageable delivery programme. It is noted that NIE Networks states that the proposal is based on '10-years painting frequency [following initial 15 years without intervention] has been calculated to ensure all primary transformers are on a cycle to be painted in line with OEM recommendations and industry best practice'. However, insufficient evidence has been provided about the timing of painting interventions on each transformer (i.e. in RP6), and the management of this programme;"*

#### **Concerns with the UR's provisional decision**

- 11.5 NIE Networks is concerned that a 50% reduction in volume will not allow it to comply with the OEM recommendations referred to above. This risks deterioration of the primary transformer tanks and ancillary components, including pipe work and flanges, and will have a detrimental impact on the working life of each transformer.
- 11.6 In response to GHD's position that insufficient evidence has been provided by NIE Networks regarding the timing of painting interventions, NIE Networks provides at Annex A4.6 a spreadsheet containing details of each primary transformer's condition and a painting assessment that indicates the timing of painting interventions on each transformer (both past and planned).

- 11.7 With respect to the UR's concern that painting ■■■ transformers would not be manageable, NIE Networks has re-confirmed with its contractor that painting across this volume of units is achievable in RP7.

### **Conclusion**

- 11.8 For the reasons set out above, NIE Networks requests that, in its Final Determination, the UR provides in full the allowance requested by NIE Networks for painting – namely £497k.

## **12. D130 – REPLACE EARTH FAULT INDICATOR**

- 12.1 Earth Fault Indicators ("**EFIs**") provide visual or remote indications of the passage of fault current on underground cables on the 6.6kV and 11kV distribution networks. There are currently 3700 underground cable EFIs installed on the NIE Networks system.
- 12.2 For RP7, NIE Networks proposed that ■■■ EFIs should be replaced. These were selected having regard to the Ring Main Unit ("**RMU**") type, age, and defects recorded on NIE Networks' Asset Management system.
- 12.3 Of the ■■■ EFIs identified for replacement, the majority ■■■ will be replaced as part of regular maintenance and so no separate allowance was requested for these replacements. The remaining ■■■ units require a "Smart" replacement in order to provide remote indication functionality, due to their strategic location or location on a circuit, and so need to be replaced separately. This work requires a separate allowance, which NIE Networks calculated as £565k.

### **The UR's provisional decision**

- 12.4 The UR has provisionally reduced the allowed volume of EFI replacements on the basis that the optioneering carried out by NIE Networks was insufficient to support the volume proposed.
- 12.5 Specifically, the UR has provisionally reduced the D130 allowance from ■■■ units to ■■■ units. The rationale for this, as set out in the report prepared by GHD for the UR, is based on GHD's assessment that:

*"only limited details were provided relating to the optioneering and cost benefit analysis for the replacement of EFIs, relying on differences in costs between a limited range of options".<sup>44</sup>*

- 12.6 GHD concluded on this basis that it was reasonable to assume that a higher proportion of EFIs could be replaced with units providing only local indication (i.e. not "smart" replacements) as this would still represent an improvement as compared with the current non-operational condition of the existing unit, and that as this would enable the unit to be replaced as part of routine maintenance no allowance would be required for these units. On this basis GHD recommended a reduction of the requested volume to a value representing the mid-point between the requested

<sup>44</sup> DD, Annex R, p.24.

allowance [REDACTED] and the RP6 outturn volume [REDACTED]. This implied a volume of [REDACTED] units.

- 12.7 In view of the reduction to the allowed volume, the RP7 allowance for this activity was provisionally reduced to £384k.

**Additional evidence to support NIE Networks' requested allowance**

- 12.8 NIE Networks welcomes that the UR has acknowledged that the replacement of these EFIs is required but disagrees with its provisional decision to reduce the allowed volume.
- 12.9 The proposed reduction in volumes would reduce the benefit that could be achieved through EFI replacement with respect to a reduction in post-fault maintenance and engineering labour time. This in turn will inhibit attempts to achieve efficiency savings against indirect costs from these activities.
- 12.10 With this Response, NIE Networks provides at Annex A4.7 a spreadsheet setting out a cost-benefit analysis for different options for replacing the relevant EFIs. In summary, the CBA demonstrates a variety of different combinations of smart to standard EFI replacements. Ultimately, the greater number of smart EFIs, the greater the benefit, as long as these are placed at strategic locations. NIE Networks has identified the locations covered by its requested allowance as providing the best value for money from this expenditure. This spreadsheet addresses the shortcomings identified by GHD in its assessment of NIE Networks' original proposal, as set out in Annex R of the DD.

**NIE Networks' requested changes**

- 12.11 In view of the additional evidence provided with this Response in support of the requested allowance, NIE Networks requests that the UR in its Final Determination allow in full the D13o volume proposed by NIE Networks (i.e. [REDACTED] units, giving a total allowance of £565k).

**13. D14G – TRANSFORMER COOLERS**

- 13.1 The D14g – Transformer Refurbishment sub-category covers the replacement of cooler fins, cooler supporting structures, cooler fans and/or cooler pumps as required.
- 13.2 Transformer coolers are an integral part of the transformer required to meet the assigned rating through operation of the fans and pumps. There are 411 transformer coolers on NIE Networks' 33/11kV & 33/6.6kV transformer network.
- 13.3 NIE Networks' condition-based assessment has highlighted 12 transformer coolers in respect of which refurbishment is required during RP7. NIE Networks requested an allowance for these refurbishments from the UR under this sub-category as part of the RP7 price control.

**The UR's provisional decision**

- 13.4 The UR has provisionally not provided an allowance for cooler refurbishment at any of the 12 units requested. This reflects the provisional recommendation made by GHD, as advisers to the UR, in its report to the UR that the:

*“requested volume of 12 recommended to be reduced to zero in the absence of clear details of the nature of the intervention”.*

### **Concerns with the UR's provisional decision**

- 13.5 In response to the comments in GHD’s report to the UR and in order to further support its requested allowance, NIE Network provides at Annex A4.6 an updated 33kV Primary transformer condition scoring spreadsheet which demonstrates the basis on which NIE Networks identified these 12 cooler units for refurbishment.
- 13.6 In addition, a selection of photographs of some of these units is provided at Annex A4.8 which demonstrate their current condition. It can be seen that certain units are suffering from corrosion of fans, oil leaks from radiators and corrosion of supporting structures.
- 13.7 If the approach in the DD is carried over into the UR’s Final Determination, this would give rise to a higher risk of NIE Networks not meeting obligations under the Water (NI) Order 1999 SI 662 (& amendments to 2004). In particular, should a failure of a cooler occur, a risk of fire or oil contamination could result in environmental incident and subsequent breach of legislation.
- 13.8 Furthermore, the number of primary transformer replacements due in RP7 was originally calculated by NIE Networks on the premise that appropriate allowance for refurbishment activities would be available to extend the life of transformers where appropriate. If no allowance is provided for refurbishment of the coolers on these 12 units, NIE Networks would need to re-assess whether the number of primary transformer replacements need to increase to compensate for this. However, NIE Networks does not believe this to be the most efficient approach and would prefer to perform refurbishment activities for those primary transformers that fall within this requested allowance.

### **NIE Networks' requested changes**

- 13.9 NIE Network requests that UR provide in full the requested allowance for cooler refurbishment as part of its Final Determination.

### **14. D14H – TRANSFORMER COOLER CONTROLS**

- 14.1 The D14h – Cooler Controls Replacement sub-category covers replacement of the control unit for each transformer cooler.
- 14.2 Transformer coolers are an integral part of the transformer designed to ensure the safety and continued operation of the transformer in periods of high loading. There are 411 transformer coolers on NIE Networks’ 33/11kV & 33/6.6kV transformer network.
- 14.3 NIE Networks’ condition-based assessment has highlighted 12 transformer cooler controls for replacement during RP7 for which NIE Networks has sought an allowance from the UR under this sub-category as part of the RP7 price control.

### **The UR's provisional decision**

- 14.4 The UR has not included an allowance for any of the 12 volumes for which NIE Networks requested an allowance for cooler control replacements.

14.5 GHD, advisers to the UR, set out in Table 10 of its report to the UR<sup>45</sup> that:

*“we also conclude that the volume of 12 interventions for cooler controls replacement (D14h) is reasonable, based on the explanation from NIE Networks that these have ‘been identified in poor condition, due to wiring faults, switch and contactor failures. Failures are highlighted from site alarms resulting in the need to reduce the associated transformer’s assigned rating and in extreme cases this can result in the transformer being switched out’. However, no supporting condition model has been provided for these to support the statement in Appendix 2 of the EJP”.*<sup>46</sup>

14.6 Therefore, whilst GHD agreed with NIE Networks’ interpretation of the solution based on its description of the condition of these coolers, GHD was concerned that no evidence of that condition was provided to it. GHD has not included an allowance in Table 13 of its report to the UR<sup>47</sup> for any of the 12 volumes for which NIE Networks requested an allowance for cooler control replacements.

#### **Concerns with the UR's provisional decision**

14.7 In response to the comments at Table 10 of GHD’s report and in order to further support its requested allowance, NIE Network provides at Annex A4.6 an updated 33kV Primary transformer condition scoring spreadsheet which demonstrates the basis on which NIE Networks identified these 12 cooler control units for replacement.

14.8 In addition, NIE Networks provides at Annex A4.8 photographs of a number of these units which demonstrate their current condition.

14.9 If the cooler controls are not replaced at these 12 locations, there is a risk of moisture entering into the cooler controls, which would impact on the ability of the transformer to utilise pumps and fans via the coolers when required at high times of loading.

#### **NIE Networks' requested changes**

14.10 NIE Network requests that in its Final Determination the UR provides in full the requested allowance for cooler controls replacement, i.e. an allowance of [REDACTED] for 12 units.

### **15. D14I, T12Y AND T11W – SUMP PUMPS**

15.1 Sump pumps are used within the transformer's oil containment system (bundling) to drain excess rainwater while containing any oil leakage. They safeguard the integrity of the bunding, thus protecting the surrounding environment from potential oil leaks and ensuring compliance with environmental legislation.<sup>48</sup>

15.2 NIE Networks did not previously have a programme to replace sump pumps; the company would replace sump pumps on a case-by-case basis if and when they were reported to be faulty.

<sup>45</sup> Contained at Annex R of the DD.

<sup>46</sup> DD, Annex R, Table 10, p.10.

<sup>47</sup> DD, Annex R, Table 13, p.28.

<sup>48</sup> The Water (Northern Ireland) Order SI 1999/662 (including amendments).



15.3 However, in line with its growing commitments to the environment, and in light of an increased number of units having been reported as faulty, NIE Networks proposed in its Business Plan submission to proactively replace 250 sump pumps with known defects in RP7, across the following three different categories of transformer:

- T11w (275/110kV) – [REDACTED] sump pumps
- T12y (110/33kV) – [REDACTED] sump pumps
- D14I (33/11kV) – [REDACTED] sump pumps

15.4 NIE Networks requested the following allowances to replace these sump pumps:

- T11w – £96k
- T12y – £357k
- D14I – £1.148m

15.5 The replacement volumes proposed by NIE Networks were calculated in accordance with a strategy to replace the entire population of sump pumps over the next two regulatory periods, and to then transition to replacements on a rolling basis. On this basis, NIE Networks anticipates that a further 227 sump pumps will need to be replaced in RP8: 200 sump pumps for D14I (33/11kV transformers) and 27 sump pumps for T12y (110/33kV transformers).

#### **The UR's provisional decision**

15.6 GHD was appointed by the UR to analyse NIE Networks' Business Plan proposals with respect to sump pump replacement. GHD recognised that:

*"due to the poor condition of the sump pumps and the importance of their function, it is not unreasonable for a programme [of replacement] to be undertaken."*

15.7 However, GHD recommended the following reductions in the volumes for replacement.

- T11w – [REDACTED] sump pumps (rather than [REDACTED])
- T12y – [REDACTED] sump pumps (rather than [REDACTED])
- D14I – [REDACTED] sump pumps (rather than [REDACTED])

15.8 GHD made the following findings regarding each sub-category:

#### T11w

*"Given the population of 275/110kV transformers is 17, the poor condition of the sump pumps and the importance of their function, it is not unreasonable for a programme to be undertaken."*

*"However, given than no justification is given for the volume to be replaced, we recommend that the volume to be replaced in RP7 is eight units at the proposed RP7 unit cost of [REDACTED] rather than the 14 proposed at total value of £96.1k. The figure of eight replacements is based on the total population of transformers of 17 of which five are between 10 and 19 years old, and less*

*likely to require replacement and additionally six new transformers are being installed in RP7, replacing eight transformers."*

#### T12y

*"On the basis that there are 79 110kV/33kV transformers on the network with 31 units less than 20 years old and six new transformers to be replaced during RP7 it is not credible for a requirement to replace ■ units during RP7."*

*"Therefore, we recommend RP7 volume should be reduced to ■ (the units more than 30 years old, less the 8 (six new plus two from RP6) to be replaced, giving an RP7 total of 27. The unit costs are accepted in line with the NIE Networks submission."*

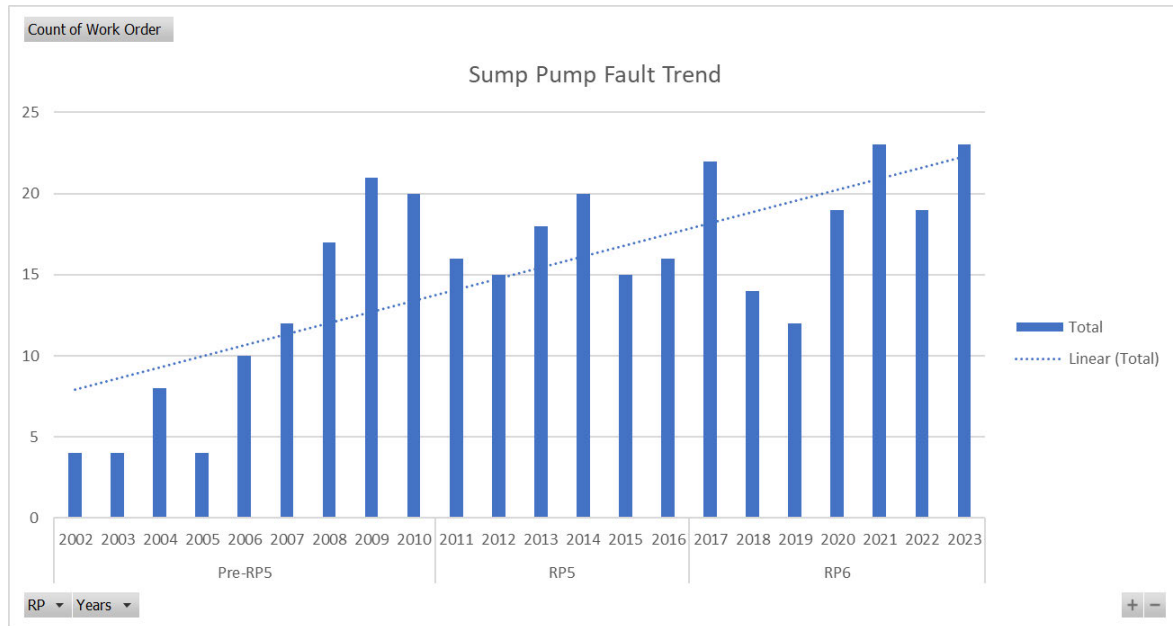
#### D14I

*"... requested volume of ■ recommended to be reduced by 50% (to ■ to enable a more manageable delivery programme for this new sub-programme. We acknowledge that NIE Networks proposes to introduce this sub-programme to address known defects, and that 'these assets have never been subject to any replacement activities and are in poor condition'. However, greater evidence is required to support this assertion about the condition."*

#### **Response to the UR's provisional decision**

- 15.9 NIE Networks welcomes the UR's and GHD's acknowledgment that this sub-programme is required. However, NIE Networks considers that GHD has not applied a consistent or properly reasoned approach for determining the volume of sump pumps to be replaced for each transformer category.<sup>49</sup>
- 15.10 For T11w and T12y, GHD's approach is predicated on the age of the parent transformer. However, for D14I, GHD has simply applied a 50% reduction to NIE Networks' requested volume without providing further reasoning. Neither approach takes into account the differing voltages of each transformer category.
- 15.11 It is important to note that each sub-category concerns the replacement of the same asset (i.e. the sump pump), with the only variable being the voltage of the parent transformer. Current OEM guidelines indicate that new sump pumps have a life expectancy of between 10 and 20 years, although older sump pumps can be prone to failures at an earlier stage. This is evident in the chart below which shows that the fault rates of sump pumps has been trending upwards.

<sup>49</sup> NIE Networks notes that GHD refers to the incorrect volume of replacement transformers on p.79 i.e., 8 instead of 3.

**Figure 4.5: Sump pump fault trend**

15.12 While the reduced volumes recommended by GHD represent a reduced cost overall, they also represent a higher risk of sump pump failure (especially for transformers at higher voltages and those that are older than 10-20 years), which could lead to a fire or an environmental incident.

15.13 Nevertheless, NIE Networks has reformulated its proposal for sump pump replacement in RP7 to:

- adopt GHD's approach of taking account of the age of each transformer category;
- take account of proposed transformer replacements;
- allow the risk of failure of sump pumps to be managed appropriately based on the voltage level the sump pump is protecting, recognising that higher voltages are associated with higher risk; and
- account for the OEM guidance on life expectancy referred to above.

15.14 Adopting this approach and using the data set out in the table below, NIE Networks proposes the following volumes for replacement:

- T11w – ■ sump pumps (those above 10 years old less replacements in RP7)
- T12y – ■ sump pumps (those above 20 years old less replacements in RP7)
- D14l – ■ sump pumps (those above 30 years old less replacements in RP7)

**Table 4.6: Sump pump replacement volumes**

	Count of 275/110kV Tx	Count of 110/33kV Tx	Count of 33/11kV Tx	Totals
Total Population	17	79	411	507
Total Txs above 30yrs	10	35	218	263
Total Txs above 20yrs	12	48	304	364
Total Txs above 10yrs	17	71	374	462
Replacement Txs in RP7	3	8	32	43
Total above 30yrs minus replacements	■	■	■	■
Total above 20yrs minus replacements	■	■	■	■
Total above 10yrs minus replacements	■	■	■	■
Submission	■	■	■	■
DD Allowance	■	■	■	■

15.15 Regarding the UR's concerns with respect to the manageability of the programme, NIE Networks has produced a deliverability strategy in conjunction with its delivery engineers, which included the original Business Plan submission volumes of work for sump pump replacements. Furthermore, as this work can be performed without the need for an outage, NIE Networks does not anticipate any deliverability challenges for this activity.

15.16 NIE Networks considers that this proposal balances GHD's concerns regarding a "*manageable delivery programme*" alongside the risk of sump pump failure and the voltage of the parent transformer.

### Conclusion

15.17 For the reasons set out above, NIE Networks requests that, in its Final Determination, the UR provides an allowance for the replacement of the above volumes of sump pumps, taking into account the unit costs originally proposed by NIE Networks and accepted by GHD (see below). This represents a reduction of £69,890 to the original allowance requested by NIE Networks.

**Table 4.7: Sump pump replacement cost breakdown**

	Units	Unit Cost (£)	Total (£)
D14i	■	■	1,160,454
T11w	■	■	96,096
T12y	■	■	274,560
			1,531,110

## 16. D14L – 33/11KV OIL REGENERATION

16.1 NIE Networks notes that there are some similarities between this Section and Section 32. For clarity, this Section relates to a different category of transformer to that covered in Section 32 below.

- 16.2 The insulating oil within transformers degrades over time due to the ingress of water and absorption of oxygen. This process is influenced by the breakdown and/or ageing of cellulose which also releases fumaric compounds and cellulose fibres.
- 16.3 NIE Networks is proposing to undertake oil regeneration/reprocessing to remove the increasing levels of moisture in the insulating oil and combustible and non-combustible gases generated in 40 of its primary 33/11kV transformers.

#### **The UR's provisional decision**

- 16.4 The UR has not included any allowance for oil regeneration activities at NIE Networks' primary 33/11kV transformers in the DD. This follows GHD's recommendation which was prepared on the basis that the 33/11kV condition assessment spreadsheet provided to the UR in support of NIE Networks' request indicated good or average scores for these transformers.<sup>50</sup>

#### **Concerns with the UR's provisional decision**

- 16.5 NIE Networks has identified that the overall oil scores in the 33/11kV condition assessment spreadsheet provided to the UR in support of this requested allowance were, through error, incorrectly populated. This error was identified by NIE Networks only upon receipt of the published DD.
- 16.6 NIE Networks attaches at Annex A4.6 an updated version of the 33/11kV condition assessment spreadsheet which contains the corrected overall oil scores. This spreadsheet demonstrates that, of the 40 primary 33/11kV transformer units for which NIE Networks has requested an allowance to carry out oil regeneration activities:
- 15 were rated as having a "Poor" overall oil score;
  - 11 have been identified as having 'Average' overall oil scores;
  - 8 received 'Inconclusive' overall oil scores and require re-testing but NIE Networks anticipates that they are likely to receive a score of "average" or "poor"; and
  - 6 had 'Good' overall oil scores. These have nonetheless been selected on the basis that they are located at the same site as another transformer which requires oil regeneration and NIE Networks considers that there would be synergies in carrying out the work at the same time. In particular, there is at least two days' work saved by only having to setup and dismantle the equipment for the oil regeneration once (as the generators at the site are usually located nearby each other).

#### **NIE Networks' requested changes**

- 16.7 Without this allowance, NIE Networks will not be able to perform oil regeneration activities on any of its primary 33/11kV transformers. If this work is not undertaken, there is an increased likelihood of a fault at these transformers, before the transformer is scheduled for planned replacement. This could lead to customer

<sup>50</sup> DD, Annex Q, p.3; Annex R, p.21.

outage or safety incidents. This would be disruptive to customers, potentially unsafe and would also be less cost-effective for NIE Networks, as it already has the equipment to perform the oil regeneration in house.

- 16.8 NIE Networks has provided updated and corrected, information with this Response in support of its requested allowance for costs in respect of oil regeneration at 40 of its primary 33/11kV transformers which supports the allowance originally requested.
- 16.9 Accordingly, NIE Networks therefore requests that the UR revisit its position in the DD and provides in full the requested allowance for Primary Oil Regeneration in its Final Determination.

## 17. **D150 – SECONDARY CIVILS**

- 17.1 NIE Networks has developed a prioritised list of civil defects across its secondary substation asset portfolio based on its inspection data. NIE Networks proposed to undertake 2,502 interventions in RP7 to address some of these civil defects. The 2,502 proposed interventions relate only to specific types of defects that the company has categorised as priority 1 or 2, rather than all the priority 1 or 2 defects identified. NIE Networks considers that this demonstrates that it has adopted a prudent approach in developing its proposed works for RP7. The proposed interventions relate to:

- Substation Shell Repair
- Ground Reinstatement Works
- Brick Built Building Roof Repairs
- Replacement and repairs of Boundaries and removal of climbing aids

- 17.2 This is an increase relative to RP6. As set out in its response to UR Query No UR-0206. NIE Networks estimated at that time that it had conducted interventions at 700 to 750 sites during RP6.

### **The UR's provisional decision**

- 17.3 The UR has provisionally determined to reduce the requested allowance across the D150 sub-category by 10%.<sup>51</sup> The UR's adviser, GHD, recommended such a reduction on the basis that:

*"across the various sub-programmes relating to secondary plant, we have made adjustments to the proposed unit costs which in overall terms results in a net reduction of more than 10%. We therefore propose to make a similar adjustment to the RP7 unit costs proposed by NIE Networks and we recommend a reduction in capex allowances of 10% to the NIE Networks submitted value for this activity".<sup>52</sup>*

### **Concerns with the UR's provisional decision**

- 17.4 There is no link between the D150 secondary civils sub-category and the various sub-categories relating to secondary plant that would justify a reduction in unit

<sup>51</sup> DD, Annex Q, p.3.

<sup>52</sup> DD, Annex R, p.48.

costs/capex on the basis of adjustments made "*across the various sub-programmes relating to secondary plant*"<sup>53</sup>, as GHD has recommended.

17.5 As recorded in the GHD report, NIE Networks provided clear details of its:

*"intervention types, proposed volumes and total costs for each intervention type, based on quotes per sq metre or linear metre measurements, bespoke to the requirements of each site".*<sup>54</sup>

17.6 GHD does not contest the evidence on costs provided by NIE Networks.

17.7 Further, GHD considered that:

*"Generally, the increased volumes of works proposed for RP7 are consistent with a continuing deterioration of the original building materials and potential underinvestment in previous price control periods."*<sup>55</sup>

17.8 GHD supported NIE Networks' proposals to address all priority 1 defects at RP7.<sup>56</sup> In relation to priority 2 defects, GHD noted that there might be possibilities for these defects to be addressed beyond RP7, but also acknowledged that additional civil defects (previously categorised as priority 3) may be re-categorised as priority 1 or 2 throughout the remainder of RP6 and within the RP7 period, requiring intervention.<sup>57</sup>

17.9 NIE Networks therefore does not consider that the reasoning relied on by the UR for its provisional decision is well-founded.

#### **NIE Networks' requested changes**

17.10 NIE Networks does not consider that the UR's provisional decision to reduce the allowed capex by 10% was supported by the evidence. There is no basis to reduce the allowed capex on the grounds that similar adjustments were made to other sub-categories within the same category.

17.11 As this is a lump sum award, a reduction in the allowed capex will result in certain priority 2 defects not being addressed in RP7, and therefore impact on the proper maintenance of NIE Networks' secondary substations.

17.12 NIE Networks requests that, in its Final Determination, the UR grant in full the requested allowance.

## **18. D39 – CONTROL CENTRE SCADA**

### **Introduction**

18.1 NIE Networks' Distribution Control Centre (DCC) monitors and controls the state of the electricity distribution network to ensure a safe, secure and reliable supply to all customers. The Supervisory Control and Data Acquisition (SCADA) system is used to securely monitor and control each item of electrical plant in real time.

<sup>53</sup> DD, Annex R, p.48.

<sup>54</sup> DD, Annex R, p.48.

<sup>55</sup> DD, Annex R, p.47.

<sup>56</sup> DD, Annex R, p.47.

<sup>57</sup> DD, Annex R, p.47.

- 18.2 SCADA enables the network to be managed, including remote control of electrical plant for planned and unplanned works, and the recovery of critical alarms and indications. SCADA also is critical for safety management, risk mitigation and resource response. In the event of a Black Start or load shedding event, the SCADA infrastructure enables us to effectively coordinate activities to restore electricity distribution.
- 18.3 In order to remain within manufacturer or vendor support, the current hardware and software will be replaced, consistent with a seven-year lifespan.
- 18.4 This will require NIE Networks to replace and upgrade its SCADA infrastructure during RP7. As this project is not scheduled to commence until mid-RP7, NIE Networks has used the previous project outturn costs to forecast the allowance required for RP7, with a number of adjustments to account for increasing end devices expected.
- 18.5 Failure to maintain the SCADA infrastructure would undermine the objective of maintaining safe and reliable monitoring and control of the distribution network, compliant with regulatory and legislative requirements.

#### **The UR's provisional decision**

- 18.6 In the DD, the UR indicated its agreement with NIE Networks as to the justification for the SCADA replacement/upgrade.<sup>58</sup> The UR noted, however, that the EJP submitted by NIE Networks considered only one upgrade option i.e. a tender from [REDACTED], which the UR interpreted as being completely based on a single tender action (STA) with no procurement activities.
- 18.7 The UR further indicated its view that:
- "NIE Networks has not adequately considered the replacement option or undertake[n] any optioneering of possible solutions, comparing implementation costs, risks, project duration and potential benefits such as reduced lifetime costs, maintenance costs, etc, for each option."*
- 18.8 On this basis the UR provisionally concluded that:
- "the justification for the single tender procurement does not adequately demonstrate this as an efficient and cost effective solution"*.
- 18.9 For these reasons, the UR has provisionally decided to reduce the allowance requested by NIE Networks by 20.5% (i.e. from [REDACTED]), on the basis that this removes the contingency provision requested by NIE Networks and applies a:
- "reduction for efficiency gains from competitive tendering for the SCADA software and reduction number of PMD interfaces"*.

#### **Concerns with the UR's provisional decision**

- 18.10 The UR's provisional decision to reduce the allowance in respect of the SCADA upgrade will mean there is insufficient funding available to deliver a mandatory

<sup>58</sup> DD, Annex R, p.62.



application upgrade. This will in turn put NIE Networks in the position of having to compromise security by operating an out-of-date platform in the second half of RP7, thereby compromising its ability to maintain a robust application platform and infrastructure at current levels.

Reduction of the allowance is excessive

- 18.11 The UR has provisionally reduced the requested allowance by 20.5%, thereby removing both the c.10% contingency and the c.10% provision to bring the previous project costs incurred in 2018/19 prices up to a 2021/22 price base that had been proposed by NIE Networks. Detail supporting these components was provided to the UR in response to UR-0165.<sup>59</sup>
- 18.12 NIE Networks accepts the removal of the contingency, but not the removal of the price base provision. As explained in the response to UR-0165, the proposed provision for inflation is based on real world outturn costs from RP6 (in respect of a previous system upgrade) plus inflation and so should be retained. The appropriate provision is 9.67%, reflecting the RPI increase from 2018/19 (when the majority of project costs were incurred) to the RP7 Business Plan base year of 2021/2022.

Competitive pricing issues are not relevant to all elements of the SCADA upgrade

- 18.13 The UR has concerns related to the procurement process by which NIE Networks will complete the SCADA upgrade project. As a result, the UR has applied a reduction to the entire allowance requested for the SCADA project, including the underlying infrastructure e.g. hardware, Operating System, servers, network switches, security apparatus, etc.
- 18.14 This is an incorrect approach, as although the service procured from [REDACTED] may comprise an STA, it is only one component of the overall SCADA domain upgrade and it is therefore inappropriate to apply reductions to the allowances for other components based solely on the UR's perceptions as to the process by which all other services were procured.
- 18.15 The other components of the SCADA upgrade referred to above (e.g. hardware, Operating System, servers, network switches, security apparatus, etc) were the subject of competitive procurement in RP6, involving competition between NIE Networks' MSP ([REDACTED]) and other resellers, and will be the subject of further such procurements in RP7.<sup>60</sup> In this regard, NIE Networks has benefitted from [REDACTED] making use of its strength in the market to offer considerable cost savings when compared with the turnkey solution offered by [REDACTED].

<sup>59</sup> See NIE Networks response to UR-0165.

<sup>60</sup> The form of such procurements has not yet been decided but could follow the same pattern as RP6 – i.e., (i) an STA for the SCADA software, as this can only be completed by the software vendor, and (ii) competitive procurement of all other components, via [REDACTED].

Testing the market for SCADA application

- 18.16 In its DD, the UR does not give due consideration to relevant timeframes for solution migration, logistical considerations, industry direction of travel, and resource requirements.
- 18.17 The requirements for the SCADA system in RP7 are driven primarily by the need to maintain safe, reliable and resilient monitoring and control of the distribution network, compliant with regulation and legislative requirements, as well as enabling significant capacity growth. The continued safe operation of the distribution network via the SCADA system is paramount and essential for the carrying out of NIE Networks' functions. The ██████ system has performed to a high standard even during the recent storms where the number of SCADA alarms and operations was excessive. The robustness of the system has been well tested and is a critical factor in any decision to change. Changing platforms is a major decision and this is something that NIE Networks reviews each time in the initial stages of a SCADA upgrade project.
- 18.18 As the SCADA upgrade project has not yet commenced, NIE Networks' current proposed approach is based on the RP6 approach. That is to say, NIE Networks plans to upgrade the existing SCADA platform in RP7, rather than migration to a new platform. This approach is not only based on the above-mentioned reliability and resilience requirements, but also NIE Networks' cognisance that, during RP7, there is expected to be significant growth of the network, which will require SCADA integration of renewable generation, distribution automation PMDs, transmission RTU assets, and smart devices. NIE Networks is also expecting to be moving the entire control room including the SCADA infrastructure into a new control centre. Attempting to also migrate to a new SCADA platform would risk compromising these activities, as it would not be practicably feasible to run and maintain parallel platforms for this purpose.
- 18.19 Furthermore, migrating to a new SCADA platform may not be an optimal solution in the long-term, in the context of strategic Operational Technology ("**OT**") deployment in a modern control centre environment for electrical utilities. NIE Networks has engaged with various SCADA and OT vendors in recent years, from which it is apparent that Advanced Distribution Management System ("**ADMS**") solutions are likely to absorb and replace SCADA in the future. ADMS solutions are, in particular, able to integrate applications that are currently run as standalone (but connected) applications, such as SCADA, Outage Management Systems ("**OMS**") and data historians. Migrating to a new SCADA solution only to migrate again to an ADMS solution in the near future (potentially as soon as RP8) would give rise to additional challenges and may be viewed as counterintuitive when considered in terms of planning for the future.
- 18.20 NIE Networks is not aware of any evidence that changing SCADA supplier would achieve any cost savings.

## Conclusion

- 18.21 For the reasons set out above, NIE Networks requests that the UR in its Final Determination reverse its provisional decision to remove the inflation provision element of the allowance for this activity. This would reduce the total reduction to this allowance from 20.5% to 10.83%, and therefore increase the allowance from [REDACTED].

## 19. D41AB – OTN CAPACITY GROWTH

- 19.1 NIE Networks' Operational Telecoms Network ("**OTN**") infrastructure provides connectivity from Transmission and Distribution Control Centres to, and between, generation units and sub-stations.
- 19.2 In its RP7 Business Plan, NIE Networks explained that planned investment in OTN capacity growth ("**D41ab**") reflected the significant societal change expected during RP7 as part of the transition to achieving a net zero energy system. It noted that the increase in demand for reliable communications (in response to embracing Low Carbon Technology ("**LCT**")) would be met by transitioning to a more efficient MPLS IP<sup>61</sup> based network, together with increasing capacity on core links and extending capacity into Primary substations.<sup>62</sup>
- 19.3 The company's proposed costs for the D41ab programme during RP7 were £337,718.<sup>63</sup>

### The UR's provisional decision

- 19.4 The UR engaged GHD to assist with its assessment of network investment of direct allowances. GHD's report is included with the DD at Annex R (the "**GHD Report**").
- 19.5 The UR has provisionally disallowed all D41ab investment,<sup>64</sup> based on the following recommendation in the GHD Report:

*"We note that the expansion of the MPLS network, provision of 10.5G point-to-multipoint radio system, transition to IP based protocols and the provision of additional capacity in the optical fibre network as part of the OTN upgrade are all considered elsewhere in NIE Networks' proposals. Furthermore, in EJP 4.102 (DSO Operational Telecoms Network Transition) the provision of a pLTE network to expand IP based communications is proposed and will be subject to further discussion with UR. In our opinion the works described in this sub-category have been covered elsewhere or are insufficiently defined at this time to justify the allowance. Therefore, it is our recommendation this allowance is disallowed."<sup>65</sup>*

<sup>61</sup> Multi-Protocol Label Switching Internet Protocol.

<sup>62</sup> NIE Networks, RP7 Business Plan, EJP 1.902 'Operational Telecoms Network Development and Replacement', p.15.

<sup>63</sup> NIE Networks, RP7 Business Plan, EJP 1.902 'Operational Telecoms Network Development and Replacement', p.20.

<sup>64</sup> DD, Annex P, 3.146.

<sup>65</sup> GHD Report, p.70.

### Concerns with the UR's provisional decision

- 19.6 NIE Networks welcomes that the UR supports the company's proposed investments in all other areas of OTN works ("**D41 works**") detailed in the RP7 Business Plan.
- 19.7 However, the UR and GHD have misunderstood the distinction of D41ab investment and have therefore incorrectly disallowed these costs.
- 19.8 It is understandable that there are difficulties in distinguishing between sub-categories of D41 works, where different sub-categories are planned on the same core link. In the following paragraphs, therefore, NIE Networks clarifies the distinction between the work content included with D41ab and how that differs from the work content already included and allowed for with sub-categories D41k (microwave radio) and D41m (optical fibre assets). For this purpose, the core link for Aughrim fc Craigavon is used as an example (please see at Annex A4.9 the spreadsheet "*Comms CCTs split over sub categories*" for further details).
- The asset replacement works (D41k) on the Aughrim fc Craigavon link concern the replacement of current hardware at either end of the current link, based on manufacturer end of support timelines. As such, this is a like-for-like replacement.
  - However, the capacity increase work (i.e. the D41ab work) for this link is additional to this replacement work and includes the additional components at either end of the link. These works include: (1) changing a single polarisation antenna to a dual polarisation antenna, (2) additional cabling; (3) two additional outdoor units (ODU) at each end of the link and (4) additional multiplexer hardware.
  - In addition, there are configuration changes that need to be applied to the current hardware and the newly installed hardware to enable the capacity increase. There are also usually temporary works required by the managed service provider to facilitate the outages caused by the works. This includes re-configuring ports and moving services temporarily onto unaffected links for the duration of the outage to avoid service interruption.
- 19.9 As this example shows, the monies included within D41ab are in *addition* to D41k and D41m as opposed to duplicated costs. The approach of separating out the asset replacement requirements from the capacity increase requirements was taken by NIE Networks to align with the way in which its electrical network is managed, for which electrical asset replacement works are separate from the capacity-related works.
- 19.10 Moreover, the fact that these works are identified separately should not be viewed as giving rise to any inefficiency. Rather, when commencing work at each site, all different allowances for the site (or the link) are assessed and completed at the same time if possible. This is in order to take advantage of deliverability synergies.
- 19.11 While the current equipment will be replaced and hence remain in support, without a distinct allowance for D41ab, NIE Networks would not be able to carry out the works necessary to facilitate capacity growth. This would in turn increase the latency

of the link, such that it falls outside acceptable timings. This would impact on timely actions being taken based on the affected data, such that it would constrain the capacity of required communications to the relevant geographic regions.

#### **NIE Networks' requested changes**

- 19.12 For the reasons set out above, the company requests that an allowance of £337,718 is granted for D41ab works in the Final Determination.

#### **20. D41J – MAST ASSETS**

- 20.1 NIE Networks' Operational Telecommunications Network consists of communications masts, which assist with connectivity between Transmission and Distribution Control Centres, and generation units and substations.
- 20.2 The majority of NIE Networks' masts were installed between 1980 and 1990 while the expansion of DER (distributed energy resources) sites has led to the addition of further masts in recent times. The masts are regularly inspected and painted throughout their working life. However, certain masts have been identified by NIE Networks as requiring replacement.
- 20.3 In EJP 1.902, NIE Networks requested an overall allowance of £582,832 to perform a number of interventions on masts. As part of a SCADA/COMMS engagement session, NIE Networks provided additional details regarding the breakdown of the various cost elements with this sub-category. This breakdown identified three masts requiring replacement. However, in NIE Networks' response to a separate but related query (UR-0171), one of the three masts was omitted from the explanation in error.

#### **The UR's provisional decision**

- 20.4 The GHD Report notes the above discrepancy in the number of masts that are proposed to be replaced by NIE Networks. Although NIE Networks originally requested an allowance of £582,832, of which £343,000 was for [REDACTED] mast replacements and the remaining £239,832 for other interventions, GHD identified a query response which suggested the replacement of only two masts.
- 20.5 In light of this discrepancy, GHD recommended a reduction to the allowance of £114k, resulting in an allowance of £229k for the mast replacement component of D41k. The overall sub-category was subsequently reduced to £469k. The UR's provisional determination reflected this recommendation.

#### **Response to the UR's provisional decision**

- 20.6 NIE Networks has identified the error in the information provided to the UR in its response to UR-0171 and can confirm that the original EJP 1.902 and the SCADA/COMMS engagement session provided the correct number (three) of mast replacement and costs.
- 20.7 NIE Networks provides a structural report for each of the three masts that justifies the need for their replacement:
- Molly Mountain Structural Report (Annex A4.10)

- NIE Temain GDC Report (Annex A4.11)
  - Tandragree-NIE GDC Report (Annex A4.12)
- 20.8 These reports note that the masts are in poor condition and there is a risk of structural failure. This could lead to a complete loss of communications or a loss of redundancy, which may result in single points of failure for critical generation, transmission and distribution assets in the areas in which they are located. Furthermore, in their current state, NIE Networks is unable to add further equipment to these masts, which constrains the development of assets in the respective areas.
- 20.9 NIE Networks did investigate whether the masts could be braced to provide the required strength instead of opting for their replacement. However, this was assessed as not possible for two of the three sites and was deemed to be less cost effective for the third. Recent costs for bracing enhancements to the Pollnalaght mast (which is the same type as the Molly Mountain mast) requested by the mobile operators was quoted at ██████ to reduce the utilisation ratio from over 100% to only 67%. While the bracing option for the third mast would resolve the strength issues, it would not resolve the capacity issues. Ultimately this would still require a full mast replacement. Therefore, it was deemed more cost effective to resolve the strength and capacity issues with one intervention within RP7 rather than multiple interventions on the same asset in a short period of time.

### Conclusion

- 20.10 For the reasons set out above, NIE Networks requests that, in its Final Determination, the UR provides in full the allowance requested by NIE Networks which includes the replacement of three masts – namely, £582k.

### 21. D43C – VERY HIGH RISK / HIGH RISK SITES

- 21.1 The Electricity Safety, Quality and Continuity Regulations ("ESQCRs") specify the safety standards which are aimed at protecting the general public and consumers from danger. In addition, the ESQCRs specify power quality and supply continuity requirements to ensure an efficient and economic electricity supply service for consumers in NI.
- 21.2 The ESQCRs came into force in NI in 2012 and required NIE Networks to carry out certain tasks to ensure its network met the new standards. In RP6, NIE Networks began implementing the necessary tasks to achieve this aim.<sup>66</sup>
- 21.3 In the course of RP6, a number of very high/high risks sites were identified for which work was expected to be completed in RP6. NIE Networks has identified a further tranche of very high/high risks sites for which work is to be completed during RP7, in respect of which it requested a lump sum allowance of £8,462,266 in its RP7 Business Plan.<sup>67</sup>

<sup>66</sup> DD, Annex R, 3.147 – 3.148.

<sup>67</sup> DD, Annex R, 3.149, 3.157 and Table 3.26 on p.56.

### **The UR's provisional decision**

21.4 In the DD, the UR has provisionally determined to reduce the requested allowance by 7%, i.e. by £0.6m to £7.9m. This reduction was based on the RP6 costs to date, which the UR has interpreted as indicating an efficiency saving of 7% against the corresponding allowance for this sub-category in RP6.<sup>68</sup>

### **Concerns with the UR's provisional decision**

21.5 NIE Networks welcomes the UR's acceptance that NIE Networks needs to undertake additional work in RP7 in respect of very high risk/high risk sites and its recognition that further instances (particularly linked to the repurposing of land) should be expected in future price controls.<sup>69</sup>

21.6 However, NIE Networks does not consider that the basis for the UR's proposed 7% reduction in the requested allowance is correct.

21.7 The delivery of the programme in respect of high risk/very high risk sites within RP6 is ongoing and will continue into the RP6 extension year. In particular:

- There are currently 111 sites left to complete by March 2025. A high proportion of these remaining sites are large and/or complex in nature and require statutory planning permission.
- In total there are 43 sites for which planning applications are in progress. The majority of these are caravan sites, which limits the window in which much of the required work can be completed. Typically the bulk of works at these sites can only be completed during the close season i.e. approximately October – March.
- A number of other sites involve schools which, again, creates limitations as to the times at which works can be completed.
- NIE Networks currently estimates<sup>70</sup> the cost for completing works at 23 of these large sites (across seven projects) will be approximately £2.23m. For the remaining 88 sites NIE Networks estimates that completion of works will cost approximately £2.65m, based on average costs incurred so far. Taken together, these figures provide a total estimated cost of £4.88m expected in the final year of RP6, whereas the unspent part of the RP6 allowance is £3.8m as of February 2023.

21.8 In view of the above, NIE Networks expects to have over-spent as against the allowance at RP6 by the end of the RP6 extension year. NIE Networks can provide further information regarding the work that is still required in RP6 if it would be helpful to the UR.

### **NIE Networks' requested changes**

21.9 The UR's provisional decision to reduce the requested allowance by 7%, based on the level of costs incurred within RP6 at the time of submission of the RP7 Business

<sup>68</sup> DD, Annex R, 3.165.

<sup>69</sup> DD, Annex R, 3.164 and 3.165.

<sup>70</sup> Note: all of the following values are expressed in nominal prices.

Plan, is not well-founded. NIE Networks has not yet completed its programme of works for RP6 and anticipates that it will overspend the RP6 allowance for this aspect (rather than achieve an efficiency saving) by the end of the RP6 extension year.

- 21.10 NIE Networks therefore requests that, when setting the Final Determination for RP7, the UR grant in full the requested allowance.

## 22. D50 – FLOODING RESILIENCE

- 22.1 NIE Networks intends to complete flooding protection works at certain primary and secondary sites during RP7 to ensure that plant and apparatus are protected from the risk posed by water ingress into substation buildings.

- 22.2 Due to the extensive work undertaken to date, the company proposed to lower volumes in RP7 to complete necessary priority flood resilience work. NIE Networks proposed a programme to increase the resilience of five primary substations and 40 distribution substations to flooding, which have been assessed as presenting a high strategic risk or providing supplies to key infrastructure. NIE Networks also proposed to install protective measures at 11 substations that are not within floodplains but are affected by high water tables, resulting in water ingress into underground basements, creating safety issues for staff and poor environmental conditions for equipment.

- 22.3 The company's proposed sub-categories of substation flooding works ("**D50 works**"), and their forecast costs for RP7 are as follows:

- D50a – Permanent protection of primary substations: £556,977
- D50b – RMU substations – Provision of flood protection: £416,206
- D50c – High water table remediation: £406,509.<sup>71</sup>

### The UR's provisional decision

- 22.4 The UR has provisionally decided to allocate NIE Networks its entire requested allowance for D50 works, stating in its DD that it is minded to accept NIE Networks' proposal for D50a and D50b programmes with the caveat that it will "*continue dialogue with the company prior to the final determination to explore deferral to some of the works to a later price control.*"<sup>72</sup>

- 22.5 The UR notes that the D50c sub-category is a new programme of work for which it has no outturn data on which to inform its decision but considers that the value of works is sufficiently low to present a low risk to consumers.<sup>73</sup>

- 22.6 Following the issuing of the DD, NIE Networks submitted a query to the UR to clarify what additional dialogue the UR considered was required regarding deferred works:

*"The UR states that they are "minded to accept NIE Networks' RP7 proposal for primary and secondary sites with the caveat that we will continue dialogue*

<sup>71</sup> NIE Networks, RP7 Business Plan, EJP 1.804 'Climate Change Resilience – Substation Flooding', p.1-2.

<sup>72</sup> DD, Annex P, 3.190.

<sup>73</sup> DD, Annex P, 3.191.



*with the company prior to the final determination to explore deferral of some of the works to a later price control." Can further clarity be provided with respect to this caveat with a view that the UR position can be fully assessed as part of NIE Networks' response to the DD."*<sup>74</sup>

22.7 The UR responded to this query:

*"Some of the sites proposed for flood mitigation appear to be modelled on 2080 forecast data. We would like to explore the possibility of deferring these sites based on shorter term risk analysis."*<sup>75</sup>

### **Concerns with the UR's provisional decision**

22.8 NIE Networks welcomes the UR's provisional decision to allocate the company its requested allowance for D50 works during RP7.

22.9 In consideration of the UR's response to the company's query set out at paragraph 22.7 above, NIE Networks seeks to clarify its use of 2080 data and explain why sites modelled on such data should not be deferred to a later price control.

22.10 NI indicative flood maps illustrate two scenarios, namely the (i) Present Day scenario; and (ii) 2080 (i.e. Climate Change) scenario.

22.11 Present Day maps illustrate the floodplains that have been identified by the predictive models using meteorological input data, representative of the current climate conditions. The Climate Change maps have been produced to highlight the estimated floodplains for the year 2080 and are based on the best available predictions for the meteorological conditions and sea levels for that time.<sup>76</sup>

22.12 For its analysis, NIE Networks used the publicly available indicative flood map data from [arcgis.com](https://arcgis.com)<sup>77</sup> which provides both Present Day and Climate Change data.

22.13 Whilst NIE Networks used the Climate Change scenario for its RP7 Business Plan to allow sites to be prioritised based on the worst possible outcome, it has assessed that these sites are high risk using the Present Day scenario also.

22.14 Table 4.8 below compares the site locations for each substation identified within the RP7 Business Plan against both scenarios. The substation location has been marked as green outlines. The table demonstrates that there are only minor differences between the Present Day and Climate Change scenarios for the majority of the primary distribution substation sites proposed for flood mitigation.

<sup>74</sup> RP7 Draft Determination Query Log, Query written by Jonathan Pollock (NIE Networks) on 15/12/2023.

<sup>75</sup> RP7 Draft Determination Query Log, Response written by Colin Walker (UR) on 12/01/2024.

<sup>76</sup> Department for Transport NI, 'Contents of the Flood Maps NI', (<https://www.infrastructure-ni.gov.uk/articles/contents-flood-maps-ni>).

<sup>77</sup> DfI Rivers, 'Flood Maps NI', (<https://dfi-ni.maps.arcgis.com/apps/webappviewer/index.html?id=fd6c0a01b07840269a50a2f596b3daf6>)

**Table 4.8: Present Day versus Climate Change Scenario at Primary Distribution Substations**

Site	Present Day Scenario	Climate Change Scenario
Holywood East		
Lisburn South		
Maghera North		
Roughfort Central		



### NIE Networks' requested changes

22.15 NIE Networks considers that the further information provided in this Response clarifies that the sites proposed for flood mitigation that have been modelled on Climate Change scenario data are not considered to be at a lower risk today and should therefore not be deferred to a later price control.

22.16 On this basis, NIE requests that, in its Final Determination, the UR provides allowances for the requested works without any caveat.

### 23. D57M – HIGH IMPACT LOW PROBABILITY EVENTS

23.1 Decarbonisation of heat and transport will increase customer reliance on electricity. While all Bulk Supply Points ("**BSP**") in the NI network comply with the requirements of the Distribution System Security and Planning Standards ("**DSSPS**"), for some BSPs the limited resupply capacity is not sufficient under double outage conditions to prevent large numbers of customers being off supply for prolonged periods of time.

23.2 To reflect the increased reliance on the electricity network and the potential for major customer disruption should a High Impact Low Probability ("**HILP**") event occur, NIE Networks commissioned consultants to benchmark NIE Networks against the GB DNOs and, if necessary, to provide recommendations as to any works required to be undertaken by NIE Networks in order to establish a comparable level of security of supply in Northern Ireland.

23.3 Substations classified as "N-1" have sufficient redundancy to continue to supply customers in the event of a single outage. This can be enhanced by providing elements of "N-2" redundancy i.e. sufficient redundancy to allow continued supply in the event of two simultaneous outages.

23.4 In view of the recommendations received by NIE Networks from its consultants, and following an economic review of the value this investment would deliver to the company's customers, NIE Networks has proposed reinforcement targeted at locations with the potential for the largest customer disruption if a HILP event were to occur. This is intended to deliver maximum benefit at minimal cost.

23.5 In RP7 NIE Networks proposes enhancing the N-2 redundancy capability of four 110/33kV substations, upgrading the network at these locations where it can be

achieved at low cost. These sites have been selected as their N-2 resupply capability is below 50% i.e. in the event of two simultaneous outages, less than 50% of customers could be supplied from the relevant substation. The proposed reinforcements include overhead line and cable up-rating as well as a small amount of new build overhead line.

- 23.6 This proposed HILP investment will enhance network resilience at a number of key locations where the result of a HILP event would be significant on customers.

#### **The UR's provisional decision**

- 23.7 In the DD, the UR indicated that it agreed with the scope of works proposed by NIE Networks but that it did not agree with the costs put forward for these works.<sup>78</sup> The UR has carried out its own cost assessment of the costs of 33kV overhead line rebuilds and the cost for 11kV overhead new build, using the cost for works in the D07 category and Cost and Volumes (CV) RIGs as a baseline.<sup>79</sup>

- 23.8 Using this approach, the UR has provisionally decided to significantly reduce the cost for 11kV new build<sup>80</sup> and 33kV rebuild works, thereby reducing the requested allowance significantly. The UR provisionally applied a 32% reduction to the allowance requested by NIE Networks, resulting in a £1.3m shortfall.

- 23.9 The UR indicated that it intends to maintain an open dialogue with NIE Networks regarding this allowance, including as to the possibility that the cost figures it has used might be skewed and the possibility of adopting a unit cost as the basis for this allowance.<sup>81</sup>

#### **Concerns with the UR's provisional decision**

- 23.10 NIE Networks considers that the UR has applied inappropriate rates in its DD assessment of the HILP allowance.

##### 33kV rebuild: Inappropriate use of D07 category costs

- 23.11 The UR has carried out its own calculation of costs for 33kV rebuild works using the cost of existing tasks in the D07 category as a base. This is not appropriate, as the 33kV re-engineering unit cost is not reflective of the works required to rebuild a 33kV line.

- 23.12 For 33kV network re-engineering, the work carried out by NIE Networks is typically limited to (i) rebuilding any main line sections which contain 75mm conductor to the latest standard, (ii) carrying out intensive refurbishment to the remainder of the main line, and (iii) refurbishing or rebuilding the associated spur lines where this is necessary. Therefore, for any given km of 33kV re-engineering, only a portion of the circuit is rebuilt while the other portion is refurbished. Accordingly, this is not an

<sup>78</sup> DD, Annex P, 3.196.

<sup>79</sup> DD, Annex P, 3.197-3.199.

<sup>80</sup> Note: Capacity on the 33kV network can be constrained by connections to LV customers. Works to improve the N-2 capability of the 33kV network can therefore include building new 11kV lines in order to move the LV customer connections off of the 33kV line, thereby releasing capacity in the 33kV line.

<sup>81</sup> DD, Annex P, 3.200.

appropriate basis on which to determine costs for 33kV rebuilding, as this entirely comprises rebuilding and not refurbishing.

- 23.13 In order to determine the requested allowance for HILP works, NIE Networks has modelled network constraints and developed solutions to increase network capacity as required. The cost submissions that it made are calculated by reference to these models and the length of the actual rebuild that is needed. For each km modelled as requiring a rebuild within the HILP allowance, the relevant cost is that of rebuilding for the whole of that km, which is not for case within D07. In order to calculate the requested allowance, NIE Networks then used RP6 out-turn rates for the rebuilding of a 33kV circuit for load reinforcement projects (part of D57b) as the cost basis.

11kV new build: Inappropriate use of RIGs data

- 23.14 For 11kV new-build, NIE Networks has based its calculations on RP6 out-turn rates for the building of a new circuit of similar construction. With many new build circuits, however, there is often a need for a portion of the circuit to comprise underground cable (e.g. due to planning and legality constraints). Applying this to 11kV new build in the HILP context, as it is not feasible at business planning stage to identify the required split of overhead line and cable on a proposed new circuit, it is prudent to utilise previous new build out-turns for similar constructions. Based on previous experience, it is assumed that any new circuit will consist of 32% underground cable.
- 23.15 The RIGs cost-build up calculated by the UR does not reflect the cost required to construct a new circuit. Firstly, it does not include any of the underground cabling costs which are often required with a new circuit. Secondly, the CV RIGs costs used are from asset replacement categories and are therefore relevant for calculating overhead line replacement costs rather than new build. For example, the pole change cost in the CV RIGs will not reflect the increased excavation required with installing a pole for a new build or the surveying and legal requirements, which is higher for new builds. The new 11kV circuit will also include distribution transformer installations and LV network alterations to remove voltage constraints from the existing 33kV system.
- 23.16 With the substantial reductions proposed by the UR, NIE Networks would not be able to deliver the proposed work within the allowances set out in the DD. Accordingly, in order to carry out this necessary work (the scope of which is agreed by the UR), NIE Networks would have to take on a significant and unfair cost risk burden, thereby undermining its ability to finance its regulated activities. Ultimately, this risks acting as a disincentive to carrying out HILP investment, which will mean that customers at these sites remain exposed should a HILP event occur.

**NIE Networks' requested changes**

- 23.17 For the reasons set out above, the UR's proposed allowances in respect of HILP works will not be sufficient to enable NIE Networks to finance this activity. In order to rectify this, NIE Networks requests that the UR reverts to the allowances requested by NIE Networks.

## 24. **D603 – 33KV PROTECTION AND 11KV PROTECTION**

- 24.1 The 33kV protection and 11kV protection retrofit sub-programmes began as a trial in RP6 and is now proposed to be scaled up in RP7. The programmes involve retrofitting circuit breakers with new relays (i.e. replacement of relay units), prioritised on a condition basis, having regard to obsolescence, manufacturers' ability to support the relays with spares and expertise, the expected life span of the relays, and installation dates of the relays.
- 24.2 This work is required in order to protect the public from dangers arising from the generation, transmission or supply of electricity, consistent with the objective of securing the establishment and maintenance of machinery for promoting the health and safety of persons employed in the generation, transmission, distribution or supply of electricity.
- 24.3 It is also required in order to ensure compliance with NIE Networks' legal obligations under Electricity at Work Regulations, Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), and Management of Health and Safety at Work Regulations 1999 (MHSAWR).

### **The UR's provisional decision**

#### 33kV protection

- 24.4 In its DD, the UR has provisionally reduced by half the requested volumes for the sub-categories covering 33kV protection work, thereby reducing the total allowance from £2.1m to £1.1m.<sup>82</sup> This affects the following sub-categories:
- D603a – 33kV Feeder Protection retrofit;
  - D603e – Automatic Voltage Control replacements;
  - D603g – 33kV Bus coupler retrofit;
  - D603i – 33kV Transformer Protection retrofit;
  - D603j – 33kV Distance Protection retrofit;
  - D603k – 33kV Unit Protection retrofit;
  - D603l – 33kV Auto Changeover retrofit; and
  - D603m – 33kV SP Schemes.

#### 11kV protection

- 24.5 In its DD, the UR has provisionally reduced by half the requested volumes for the sub-categories covering this work, thereby reducing the total allowance from £2.3m to £1.1m.<sup>83</sup> This affects the following sub-categories:
- D603b – 11kV protection retrofit; and
  - D603s – 11kV unit protection retrofit.

<sup>82</sup> DD, Annex R, p.56.

<sup>83</sup> DD, Annex R, p.56.

### The UR's rationale

- 24.6 The 33kV protection and 11kV protection categories are among a number of sub-categories within Annex R, WP1; Distribution Protection group. Other activities within this group include substation monitors, Mesh VT replacement, Switchboard VT replacement, and pilot protection.
- 24.7 In Annex R to the DD, GHD recommended a blanket volume reduction in respect of most of the protection sub-categories (other than Substation Monitors and Mesh VTs), which GHD's report attributes to a lack of clarity within the evidence submitted by NIE Networks to support the allocation of condition scores and the resulting work volumes. The GHD report confirms, however, that the relevant unit costs were found to be justified and so were unchanged.
- 24.8 The effect of this volume reduction, insofar as concerns 33kV and 11kV protection work, is to reduce the respective allowances by 50%.

### **Concerns with the UR's provisional decision**

- 24.9 NIE Networks acknowledges that the format of the supporting evidence provided in the Business Plan submission was difficult to relate to volumes requested.
- 24.10 NIE Networks believes this was because the condition information presented in the Business Plan submissions was on a "per site" basis, whereas the volumes requested were on a "per asset" basis. This was due to the "many-to-one" relationship between protection relays and their parent circuit breaker, and the "one-to-many" relationship that a new replacement may have with older relays – in other words, a single circuit breaker may connect to multiple protection relays, and a single modern relay may replace the functionality of three or more older relays on a single circuit breaker.
- 24.11 NIE Networks has reviewed the detail that it submitted for these sub-categories and has re-structured the data to enable the condition of multiple relays at the same circuit breaker to be assessed and then linked to the required number of units for each sub-category. NIE Networks is therefore providing with this Response additional information in support of its previously requested volumes for these activities.
- 24.12 In RP6, the UR accepted that routine replacement of distribution network protection was required in a similar manner to that of transmission network protection. In this context, a small number of sites were identified to determine the most effective approach for this new programme (replacements, substitutions, use of spares) ready for scaling up in RP7. The majority of the work programmed for RP6 has been completed, with the learning gathered from that now informing the creation of the RP7 programme. Thus, the reference in the GHD report to a "significant increase in volumes"<sup>84</sup> is based on a misconception: volumes in RP6 were limited by the need to test the available alternatives and are therefore not a suitable starting point for RP7.

<sup>84</sup> DD, Annex R, p.53.

- 24.13 The reduced volumes proposed by the UR would represent only a marginal increase on the volumes from the RP6 trial period, as opposed to a ramp up in volumes to meet the ongoing requirement of distribution protection replacement with expected asset lives of 25 years. In view of that expected asset life, which is approximately half that of the previous generation of relays,<sup>85</sup> approximately 20% of the network has to be addressed in each regulatory period with selection depending on condition criteria as set out in the attached scoring spreadsheets described in the following paragraphs.
- 24.14 In respect of 33kV protection, NIE Networks is providing with this Response at Annex A4.13 the spreadsheet, "*Distribution 33kV Protection Modelling*", comprised of four tabs:
- 33kV Summary – This tab includes distinct counts via pivot tables for each sub-category, based on the data with the '33kV Details' tab.
  - 33kV Details – This is the raw data extracted from Maximo with condition scores based on reliability and network resilience criteria.
  - Scoring – This tab records the scoring criteria used within the '33kV Details' tab.
  - Defects – This tab records the number of protection defects logged on Maximo. This is utilised within the '33kV Details' tab as part of the scoring.
- 24.15 In respect of 11kV protection, NIE Networks is providing with this Response at Annex A4.14 the spreadsheet, "*Distribution 11kV Protection Modelling*", comprised of four tabs:
- 11kV Summary – This tab includes distinct counts via pivot tables for each sub-category, based on the data with the '11kV Details' tab.
  - 11kV Details – This is the raw data extracted from Maximo with condition scores based on reliability and network resilience criteria.
  - Scoring – This tab records the scoring criteria used within the '11kV Details' tab.
  - Defects – This tab records the number of protection defects logged on Maximo. This is utilised within the '11kV Details' tab as part of the scoring.
- 24.16 As shown in the spreadsheets, the criteria applied by NIE Networks take account of obsolescence, manufacturers' ability to support the relays with spares and expertise, the expected life span of relays, and installation dates for relays. These factors are measured using reliability metrics, and scoring also incorporates weighting metrics to demonstrate how account is taken of resilience.
- 24.17 The 11kV protection assets serve a critical purpose of protecting the network, operatives and members of the public in the event of a fault. For this reason, proactive action to address equipment in poor condition is the only acceptable option

<sup>85</sup> The majority of relays are now of electronic type. While this offers increased functionality it does come at the expense of a shorter lifespan compared to predecessor electro-mechanical types (20-25 years compared to 50 years).



to maintain a safe, resilient and reliable network and ensure compliance with Electricity at Work Regulations, Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), Management of Health and Safety at Work Regulations 1999 (MHSAWR).

### **NIE Networks' requested changes**

- 24.18 In view of the re-structured and supplemental data provided with this Response, NIE Networks requests that the UR, in its Final Determination, allows in full the allowances requested by the company for 33kV protection and 11kV protection (i.e. £2.1m and £2.3 m respectively).

### **25. D603 – PROTECTION PILOT**

#### **Introduction**

- 25.1 The Protection Pilot sub-category (D603w) covers work required to replace two 5kV insulated pilot boxes at the Ballymacash Substation (on the Lisburn Main to Lisburn West circuit, via Ballymacash). These pilot boxes are located outdoors and are in very poor condition. The photographs provided in Annex A4.15 to this Response show the current condition of the protection boxes proposed for replacement and re-location indoors.
- 25.2 As well as replacing this equipment, relocating the pilot boxes indoors will eliminate the weather degradation that has affected the existing units.
- 25.3 The proposed work comprises the excavation and cutting of the pilot cables, jointing of a new section to divert the pilot cables into the substation control room, and establishment of two new pilot boxes indoors. Carrying out these works will also require groundworks and incur reinstatement costs.
- 25.4 This work would not fall within any other programmes covered by the price control, as these protection pilot boxes are not used for any purpose other than inter-tripping protection.
- 25.5 This work is required in order to protect the public from dangers arising from the generation, transmission or supply of electricity, consistent with the objective of securing the establishment and maintenance of machinery for promoting the health and safety of persons employed in the generation, transmission, distribution or supply of electricity. It is also required in order to ensure compliance with NIE Networks' legal obligations under Electricity at Work Regulations, Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), Management of Health and Safety at Work Regulations 1999 (MHSAWR).

#### **The UR's provisional decision**

- 25.6 The UR has provisionally reduced by half the requested lump sum allowance for the sub-category covering this work (D603w – Protection Pilot) from £20k to £10k, following GHD's recommendation to this effect.<sup>86</sup> This reflects a blanket reduction recommended by GHD in respect of most of the protection sub-categories (other

<sup>86</sup> DD, Annex R, p.56.

than Substation Monitors and Mesh VTs), which GHD's report attributes to a lack of clarity within the evidence submitted by NIE Networks to support the allocation of condition scores and the resulting work volumes. The GHD report confirms, however, that the relevant unit costs were found to be justified and so were unchanged.

- 25.7 The effect of this reduction, insofar as concerns D603w – Protection Pilot, is to reduce the allowance from £20k as requested by NIE Networks to £10k, a 50% reduction.

#### **Concerns with the UR's provisional decision**

- 25.8 NIE Networks does not take issue with the UR's provisional determination insofar as it stems from a lack of detail in the submissions as to the work requirements and associated costs for this activity. NIE Networks has reviewed the detail that it submitted within the EJP for this sub-category and is therefore providing additional information in support of its request for a lump sum allowance for this activity.
- 25.9 In addition to the detail of the work requirements above, the costs proposed for this work have been rounded down to £20k for both pilot boxes based on the below breakdown of costs built up from contract prices:

**Table 4.9: Protection Pilot cost breakdown**

Type	Cost (£)	Detail
Materials	█	Includes Multicore cables, Pilot boxes and pilot cable box glands and mounts.
Labour	█	Includes installation, testing and decommissioning
BIS	█	Cable Jointing and E&R within Substation
Total	20,062	

- 25.10 Due to the condition of the pilot boxes (as described above) the proposal to move and replace them has been made to ensure reliability of the protection pilot cables. If the UR were to confirm its provisional decision not to grant this allowance in full, NIE Networks would not be able to complete the works necessary to relocate both boxes indoors (which is the optimum solution for this equipment).
- 25.11 The protection pilots are critical to the safe and reliable operation of protection equipment to isolate the electrical network when necessary as quickly as possible to avoid damage to equipment or danger to personnel. These assets therefore serve a critical purpose of protecting the network, operatives and members of the public in the event of a fault. For this reason, proactive action on a risk basis to address equipment in poor condition is the only acceptable option to maintain a safe, resilient and reliable network and ensure compliance with Electricity at Work Regulations, Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), Management of Health and Safety at Work Regulations 1999 (MHSAWR).

### NIE Networks' requested changes

25.12 With the additional evidence provided in this Response, NIE Networks considers that the UR should have sufficient confidence in the data provided by NIE Networks to allow the previously requested lump sum of £20k in its Final Determination.

### 26. D603V – SWITCHBOARD VTS

26.1 Voltage Transformers ("VTs") are used to step down the power system voltages to a workable secondary voltage of 110V AC more suited for working in the confined spaces of protection panels and also requiring equipment with lower insulation specifications (which in turn reduces the cost of protection and monitoring apparatus).

26.2 The switchboard VTs proposed for replacement within RP7 are over 50 years old, oil filled and therefore a fire risk. They pose a risk with respect to compliance with legislative requirements, safety, the environment and outages to customers.

26.3 As part of its RP7 strategy for VT replacement, NIE Networks proposed the replacement of single phase and three phase oil filled switchboard VTs with three-phase dry type. The purpose of this replacement strategy is to reduce fire risk and improve reliability. As a result, this will facilitate improved network monitoring and therefore network management, and ensure continued operation of protection systems.<sup>1</sup>

26.4 Table 4.10 below sets out the company's proposed volumes and costs associated with its RP7 strategy for switchboard VT replacement:

**Table 4.10: NIE Networks' proposed volumes and costs for switchboard VT replacement for RP7**

Sub-category	Sub-category name	Volume	Costs (£)
D603v	Switchboard VT replacement	■	£777,160

### The UR's provisional decision

26.5 The UR has provisionally reduced NIE Networks' proposed allowance for RP7 by an arbitrary 50% to £389,000 based on the recommendation in the GHD Report that this is reasonable to address specific issues and provide an "*efficient approach*" to addressing the main drivers based on its experience in other jurisdictions and "*in the absence of specific evidence for individual assets*".<sup>87</sup> GHD notes:

*"Whilst it makes practical sense to replace the last remaining fire-risk from these sites, there is no analysis to indicate that the relevant makes/models of VT are prone to failure or present a significant risk to life or the equipment (especially as these devices are not operating to break faults in the way that switchgear does). In addition, no analysis has been presented to show the impact of replacing these VTs in terms of life extension or health improvement".<sup>2</sup>*

<sup>87</sup> DD, Annex R, p.56.

**Concerns with the UR's provisional decision**

- 26.6 Due to the condition of oil-filled switchboard VTs as detailed above, NIE Networks' proposed allowance aims to support the commencements of a programme to proactively replace VTs showing increasing failure rates. This is in order to negate the risk of catastrophic failure and the inability to get replacement parts to deal with ongoing faults, as the current equipment is no longer available from manufacturers.
- 26.7 If the proposed allowance is not granted in full NIE Networks will have to maintain the current approach of replacing defective VT's due to oil leaks or internal fuse failure under fault by utilising strategic stock that has been salvaged from replacement boards. Unfortunately, this is not sustainable in the long term and could result in long outage periods, should one of these VTs catastrophically fail in service and damage surrounding switchgear.
- 26.8 NIE Networks currently replaces defective VTs due to oil leaks or internal fuse failure under fault by utilising strategic stock that has been salvaged from replacement boards. However, the strategic stock is severely depleted and the company does not consider that this is not a long-term solution for replacing assets.
- 26.9 As these assets serve the critical purpose of protecting the network, operatives and members of public in the event of a fault, proactive action on a risk basis is the only acceptable option to maintain a safe, resilient and reliable network and comply with Electricity at Work Regulations, Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), Management of Health and Safety at Work Regulations 1999 (MHSAWR).
- 26.10 NIE Networks acknowledges the UR's proposed approach to setting the allowance for switchboard VT replacements and GHD's comments on the lack of supporting analysis provided by NIE Networks in its RP7 Business.
- 26.11 NIE Networks has therefore sought to provide the UR with additional information to support its proposed volumes and costs for switchboard VT replacement for RP7.
- 26.12 Table 4.11 below lists the oil-filled switchboard VTs that have previously required replacement under fault. The list illustrates the relevant makes/models of VT that are prone to failure.

**Table 4.11: Oil-filled switchboard VTs replaced under fault**

Site	Switchboard VT Type	Serial Number	Year
Farmfield Chickens	D8 Brush (Oil filled VT)	2ZP2709	2001
Brookhill Central	Reyrolle LMT (Oil filled VT)	4BDA51V	2002
Drumard Barracks	D8 Brush (Oil filled VT)	2ZP2708	2002
Ballinamallard West	C4X Brush (Oil filled VT)	-	2013
Atnagelvin HVC	Reyrolle LMT (Oil filled VT)	-	2013
Ballyclare Central	C4X Brush (Oil filled VT)	-	2018
Warringpoint North	C4X Brush (Oil filled VT)	-	2024

26.13 In addition, the images at Annex A4.16 illustrate the level of leakage from the South Wales Switchgear (an oil filled VT) at Warringpoint North, which was recently identified and replaced under fault (see Table 4.11 above).

26.14 The above oil filled VT types at Table 4.11 are no longer supported by the relevant manufacturer due to known gasket and seal degradation. This results in oil leaks which are becoming more prominent as these assets age. Degradation of the oil seals on these types of oil filled VTs results in oil leakage, that can compromise the primary insulation and therefore result in failure of the VT. The degradation of the oil seals can also result in moisture ingress and therefore failure. Due to these known failure risks, manufacturers no longer supply oil filled VTs for these types of switchboards.

26.15 Cast resin VTs are the direct replacement for oil filled VTs since they do not have issues with oil leakages and mitigate to a significant extent the fire risk if failure was to occur as there is nothing to combust in the event of a catastrophic failure.

26.16 The proposed list of switchboard oil filled VT replacements included within NIE Networks RP7 Business Plan submission were prioritised based on the following criteria:

- the VT represents the last risk of fire due to the circuit breakers already being replaced with vacuum or SF6 equivalents;
- they are single phase as opposed to three phase (whereby the latter measurement is required for enhanced monitoring of power flows through the circuit breakers);
- they relate to other RP7 proposed works.

26.17 NIE Networks considers that its proposed allowance of this sub-category is required not only to reduce the fire risk at sites, but also to allow for strategic spares to be replenished to manage the remainder of the switchboard VT population until the entire switchboard is due replacement, while taking advantage of deliverability synergies where possible.

26.18 The company's proposed volume of replacements is also not significant and represents less than 9% of the total switchboard VT population (■ VTs out of a total 422).

#### **NIE Networks' requested changes**

26.19 NIE Networks considers that it has provided sufficient evidence to support its proposed allowance, which for the reasons sets out above are key to allow the replace defective VTs to negate the risk of catastrophic failure and the inability to get replacement parts.

26.20 NIE Networks requests that in its Final Determination, the UR provides the allowance requested by NIE Networks.

### **27. D605A – NETWORK ACCESS & COMMISSIONING**

27.1 NIE Networks based its request for allowances in respect of D605a Distribution Network Access & Commissioning on the spend within this category in the period from October 2017 to March 2022 (i.e. during RP6).

27.2 The UR indicated in Annex P to the DD its provisional decision to provide the allowance requested. In doing so, the UR noted that the allowance requested by NIE Networks was approximately 27% lower than the UR had expected.

#### **Error in the prices used by NIE Networks to calculate the requested allowance**

27.3 NIE Networks has identified that the allowance requested for RP7 was erroneously calculated on the price base for 2015/16 instead of the correct 2021/2022 price base. This resulted in the request being understated by approximately £1.2m.

27.4 In order to reflect the true requirements for RP7, the requested allowance should be uplifted by 20.23% which reflects the movement in RPI from 2015/2016 to 2021/2022.

#### **Conclusion**

27.5 NIE Networks requests the UR to uplift the requested allowance for Network Access & Commissioning to reflect this correction.

### **28. D701A AND T701A – EARTHING SURVEYS**

28.1 Earthing systems for transmission and distribution equipment perform a number of safety-related roles, including:

- ensuring sufficient fault current flows to enable the operation of protection equipment;
- providing a zero-volt reference point for transformers with a grounded star connection; and
- preventing step and touch voltages within substation boundaries providing a safe environment for staff.

28.2 In RP7, NIE Networks proposed earthing surveys and remediation to locate and repair any defects in the earthing systems at its substations. NIE Networks requested the following allowances for earthing surveys:

- D701a (distribution) – £324,600
- T702a (transmission) – £199,920

### **The UR's provisional decision**

28.3 The UR disallowed the funding request for substation surveys on the basis that there are already allowances in place to carry out substation inspections under IMF&T funding. The UR stated:

*"We believe the earthing system is part of the substation apparatus and, therefore, should have its condition checked during the inspections."*

28.4 The UR did, however, allow funding for remediation works since:

*"this requires new capital expenditure to bring the substations up to the required standard".*

### **Response to the UR's provisional decision**

28.5 NIE Networks agrees that the earthing system is part of the substation. However, the work involved in an earthing survey is different to that which is carried out during inspections of the condition of the apparatus and plant.

28.6 In particular, the earthing survey involves an earth test, which is a complicated procedure that requires specialist equipment and multiple hours of work onsite and additional work to analyse thereafter. This involves inserting test probes in the ground at different locations around the substation and comparing the measurements. Once the test is completed, the consultant prepares a report and sends it to NIE Networks' engineers, who review the results and determine whether remediation works are required. This test goes beyond the substation inspector's expertise, scope of work, and allowed costs for each site inspection that is currently included within the IMF&T funding.

28.7 If NIE Networks was to perform this task in-house this would require additional asset engineers, training and the purchase of specialist equipment that has not been included within the original Business Plan submission. Instead, NIE Networks' proposed approach is to outsource this work to a third-party consultant based on the number of sites requiring testing. NIE Networks considers this to be a more efficient use of time and internal resources.

28.8 Without separate funding for earthing surveys, NIE Networks will not be able to properly assess and determine which substations require remediation works.

### **Conclusion**

28.9 For the reasons set out above, NIE Networks requests that, in its Final Determination, the UR provides in full the allowances requested by NIE Networks for earthing surveys – namely £324,600 (D701a) and £199,920 (T702a).

## **29. T10D REFURBISH 110KV SWITCHGEAR / T10E REPLACE 110KV CIRCUIT BREAKER**

29.1 NIE Networks has adopted a strategy to resolve issues of high Sulphur Hexafluoride ("SF6") leakage rates associated with 110kV circuit breakers ("CBs"). Whilst SF6 is

an effective insulator at these high voltages it is now recognised as a potent greenhouse gas and a significant contributor to global warming. This has informed NIE Networks' approach to ensuring compliance with relevant environmental legislation, including F-Gas regulations, and its licence obligations.

- 29.2 For example, the CCA 2022 includes F-gases such as SF6 within its definition of greenhouse gases ("**GHG**"). The Act commits NI to achieve net zero total GHG emissions by 2050 compared to the baseline for F-gases set in 1995. For NIE Networks to be able to play its part in meeting this NI climate change target, it needs to be able to improve its current emission contribution; refurbishment or replacement of CBs with the highest leakage rates is an important contributor to this.
- 29.3 NIE Networks identified nine CBs as requiring refurbishment during RP7 under sub-category T10d, and a further six CBs requiring replacement under T10e.
- 29.4 The nine CBs identified for refurbishment are all experiencing a degree of leakage but, based on the type of equipment, NIE Networks believes that these can be rectified without needing to replace the entire asset.
- 29.5 The six CBs identified as requiring replacement have experienced flange leaks giving rise to significant environmental risk, as well as putting NIE Networks at risk of being in breach of its legal obligations in this regard. NIE Networks has already attempted on a number of occasions to refurbish the assets in question and has previously provided to the UR additional information as to the difficulties of such repairs. While repairs can reduce the amount of leakage for a short period of time, these assets continue to leak gas at an increasing rate over time. As such, NIE Networks classifies repairs for these types of assets as having a zero-success rate. This zero-success rate is usually due to the type of asset: leaks usually occur at locations on these assets that make it extremely difficult, if not impossible, to complete a permanent repair.
- 29.6 If NIE Networks were to continue to attempt to refurbish the relevant CBs without success, and therefore not be able to permanently fix the SF6 leaks, this could put the company at risk of prosecution.

#### **The UR's provisional determination**

- 29.7 In its report to the UR, GHD indicated that insufficient evidence had been provided to demonstrate why the proposed volumes of CBs are unsuitable for refurbishment and require replacement. On this basis, GHD recommended that the six CBs that NIE Networks proposed would be replaced should instead be added to the total selected for refurbishment in sub-programme T10d.
- 29.8 On the basis of GHD's recommendation, the UR has provisionally disallowed the replacement of all six CBs which NIE Networks had identified for replacement and instead increased the allowance for the refurbishment of CBs to compensate. Accordingly, the UR has provisionally reduced the allowance requested by NIE Networks across the T10d and T10e sub-categories from £779k to £280k, a reduction of £499k.



**Concerns with the UR's provisional decision**

- 29.9 NIE Networks welcomes that the UR supports the need for the refurbishment of the circuit breakers with a lower leakage rate.
- 29.10 As regards the UR's provisional decision not to allow replacement of the six relevant CBs, NIE Networks believes that GHD's recommendation to this effect is based on a misunderstanding as to the extent to which NIE Networks has already attempted to fix the leaks on the assets that it has proposed for replacement. NIE Networks reiterates that it has attempted on a number of occasions to refurbish the assets in question and has previously provided to the UR information as to the difficulties of such repairs, as well as to the zero-success rate of such repairs on this particular type of asset.
- 29.11 To further demonstrate the need for replacement of these assets rather than refurbishment, NIE Networks is providing with this Response at Annex A4.17 an updated version of the 110kV Circuit Breaker Condition Scoring Spreadsheet, containing the most recent extract from the SF6 leakage reporting database and the recent interactions with the original equipment manufacturer. This updated condition scoring shows a sizable increase in the amount of SF6 leakage across the six CBs proposed by NIE Networks to be replaced.
- 29.12 NIE Networks is also providing with this Response at Annex A4.18 data showing the leakage rates on each of the CBs with the highest leakage rates. In four of the graphs contained in that annex, NIE Networks has marked in red the OEM inspection and repair date. NIE Networks notes that the relevant CBs continued to experience leaks at a similar rate after the OEM inspection and repair, demonstrating the difficulty and ultimate failure of the attempted repair. The other two graphs contained in the annex show that repairs attempted by NIE Networks have had a short-lived positive impact in reducing leakage, but leakage rates return thereafter despite NIE Networks' best efforts to effect permanent repairs.
- 29.13 As this data shows, NIE Networks has been actively maintaining and refurbishing these CBs but has not been able to rectify the leakage issues at any of the six CBs proposed for replacement. NIE Networks notes that this includes having engaged with the OEM (shown as a red dot on the relevant scatter charts) but this has still not resolved the leaks.
- 29.14 If NIE Networks is not able to replace these six high-leakage CBs, it would have to continue to carry out further attempts to refurbish them with a low likelihood of success. At the same time, unless and until leakages can be adequately addressed these CBs will contribute to an increased system risk, in that should there be a significant worsening of the leaks in a short timeframe this would cause the circuit breaker to trip and lockout.
- 29.15 Failure to address these leaks would also mean NIE Networks would be unable to significantly reduce the amount of SF6 leakage from its network, thereby preventing it from contributing to NI's legal commitment to reducing GHG emissions to net-zero by 2050. It could also place NIE Networks at risk of prosecution under applicable regulatory provisions.

## Conclusion

- 29.16 NIE Networks has identified six CBs with significant SF6 leakage for which refurbishment is not a viable option. Failure to replace these CBs will inhibit NIE Networks' efforts to contribute to NI meeting its climate change targets, as well as exposing the company to legal risks.
- 29.17 NIE Networks therefore requests the UR, in its Final Determination, provide the allowance requested by the company for the purpose of replacing these CBs during RP7 (i.e. increasing the allowance by £499k to the requested allowance of £779k).

## 30. T11G – SECURITY SYSTEMS

- 30.1 In its RP7 Business Plan, NIE Networks requested an allowance of £1.132m in order to improve transmission substation security. The requested allowance was developed following a review by NIE Networks of all transmission and primary substations to determine the extent of security works required to resolve identified issues. The allowance will be used to undertake work in relation to security fencing, access gates, security doors, floodlighting and CCTV.<sup>88</sup>
- 30.2 The works at the proposed sites have been prioritised by NIE Networks based on its site security / condition assessment model.
- 30.3 A summary scope of works for each transmission site, which itemised the proposed works and associated cost to address the identified security risks, was also provided by NIE Networks.<sup>89</sup>

### The UR's provisional decision

- 30.4 In the DD, the UR has allowed the volume of works proposed by NIE Networks, i.e. the number of sites at which NIE Networks proposed to carry out works. However, the UR has reduced the allowance to £879,000. This is in line with the report by GHD which recommended:

*"some reductions to the assumptions provided by NIE Networks on length and unit cost of palisade fencing and gates, and security door, similar to the approach that we recommend for cost reductions relating to secondary substation security (D15ac) ...".<sup>90</sup>*

### Concerns with the UR's provisional decision

- 30.5 NIE Networks welcomes that the UR has accepted the requested volume of works (i.e. the number of sites) proposed by the company under this sub-category.
- 30.6 However, NIE Networks does not consider that it is correct or justifiable for the proposed allowance to be reduced on the basis that similar reductions were proposed in relation to secondary substation security (D15ac).
- 30.7 As acknowledged by GHD, NIE Networks provided an itemised list of works and associated costs at each of the relevant transmission sites.<sup>91</sup> This was developed

<sup>88</sup> DD, Annex R, p.85.

<sup>89</sup> DD, Annex R, p.85.

<sup>90</sup> DD, Annex R, p.85.

<sup>91</sup> DD, Annex R, p.85.

based on site specific measurements for the length and volume of fencing, numbers of doors/gates and cameras required. Unit costs were based on contracted rates from previous works. It is not the case that NIE Networks applied the same assumptions used to determine the requested allowance for secondary substation security. Consequently, there is no legitimate basis for reducing the requested allowance for transmission site security in line with the approach to the allowance for secondary substation security.

- 30.8 The proposed reduction in allowance would not allow works at the full list of transmission sites to be complete within RP7, which would place the security of NIE Networks' transmission sites at risk.

#### **NIE Networks' requested changes**

- 30.9 NIE Networks does not consider that the reasoning relied on by the UR for the proposed reduction in allowance is well-founded. The requested allowance was not based on the assumptions applied in respect of secondary substation security, and so there is no reason for the same approach to reductions to be applied.
- 30.10 NIE Networks therefore requests that, in its Final Determination, the UR grant in full the requested allowance (i.e., £1.132m).

#### **31. T11X AND T12Z – EARTHING SPIGOTS**

- 31.1 Substation portable primary earths are applied to busbars to facilitate work to take place on substation plant. These devices are fitted by connecting the bottom end of the portable primary earth to an available section of copper tape connected to the main earth grid before the other end of the portable primary earth is manually raised and fitted to the busbar. Often this practice must take place from a mobile elevated work platform.
- 31.2 Currently, earthing spigots and parking bays that would permit connection of the portable primary earth from ground level are not fitted as common practice, and it is left to the discretion of a Senior Authorised Person to identify suitably rated points on the busbar and external earth tape to attach the portable primary earth.
- 31.3 An inquiry following a fatal event in one of NIE Networks' substations highlighted the need to install busbar earthing spigots and designated parking bars at a significant number of existing open busbars at 110/33kV and 275/110kV substations.
- 31.4 In its RP7 Business Plan submission, NIE Networks proposed the installation of earthing spigots/parking bays at substations in addition to the installation of fixed permanent earthing switches (as proposed in EJP 2.207).

#### **The UR's provisional decision**

- 31.5 The UR provisionally determined that the RP7 allowance for earthing spigots be reduced by 50%, from:
- £112k to £56k for 275kV earthing spigots (T11x); and
  - £308k to £154k for 110kV earthing spigots (T12z).

31.6 The UR's provisional decision is based on the finding by GHD that no justification had been provided by NIE Networks for the installation of further earthing spigots/parking bays in addition to the installation of fixed earthing switches.<sup>92</sup>

#### **Concerns with the UR's provisional decision**

31.7 NIE Networks welcomes that, by granting an initial allowance for this new sub-category, the UR recognises that there is a safety issue to be addressed. However, without the full requested allowance, NIE Networks is unable to comprehensively address the findings of the recent inquiry that recommended the installation of earthing spigots.

31.8 In reaching its provisional decision, NIE Networks considers the UR has failed to take account of the following:

- The installation of earthing spigots for the T11x sub-category is proposed for the substation's 275kV mesh equipment, whereas the installation of permanent earthing switches is proposed for the substation's 110kV mesh equipment. There is therefore no overlap between these devices, contrary to the GHD's finding and so no justification for reducing the T11x sub-category.
- In any event, the installation of earthing spigots and fixed earth switches, whether they be on the 275kV mesh or the 100kV mesh, are not mutually exclusive. The installation of both devices will allow maintenance to be carried out on each while maintaining an appropriate earth that complies with industry standards.<sup>93</sup>

#### **Conclusion**

31.9 For the reasons set out above, NIE Networks requests that, in its Final Determination, the UR provides in full the allowance requested by NIE Networks for the installation of earthing spigots – namely, £308k for T12z and £112k for T11x.

### **32. T12AC – 110/33KV TRANSFORMER OIL REGENERATION**

32.1 The insulating oil within transformers degrades over time due to the ingress of water and absorption of oxygen. This process is influenced by the breakdown and/or ageing of cellulose which also releases fumaric compounds and cellulose fibres.

32.2 NIE Networks is proposing to undertake oil regeneration/reprocessing in 30 of its main transformers to remove the increasing levels of moisture in the insulating oil and combustible and non-combustible gases generated.

32.3 As the UR recognised in the DD,<sup>94</sup> whilst oil regeneration does not stop the ageing processes, it is well recognised as a means of refurbishment to potentially increase

<sup>92</sup> GHD stated that no response had been provided to its query under UR-0273. However, a response dated 30 June 2023 was provided by NIE Networks.

<sup>93</sup> According to section 5.4 of SRI 2, an earth must be “*at a point not more than 9m (30 ft) beyond the point of work from the point of isolation*”. Therefore when a permanent earth switch is unavailable because it is undergoing maintenance, earth spigots will be required to maintain an earth no more than 9m away from the earth switch.

<sup>94</sup> DD, Annex R, p.84.

asset life and help control asset health and reduce risks of failures that could lead to customer outage or safety incidents.

### **The UR's provisional decision**

- 32.4 The UR reduced the requested allowance in the DD from 30 transformers to 15 transformers.<sup>95</sup> This appears to follow the recommendation by GHD which considered that NIE Networks did not put forward enough evidence to substantiate the full requested amount.<sup>96</sup>

### **Concerns with the UR's provisional decision**

- 32.5 The DD states that NIE Networks has not provided a justification for the frequency of predicted oil regeneration.<sup>97</sup> NIE Networks notes that there is no required frequency at which oil regeneration at a transformer should be carried out. NIE Networks' preferred approach is therefore to monitor the oil results at its transformers and schedule oil regeneration intervention when sustained negative oil results are present.
- 32.6 NIE Networks previously provided to the UR within its RP7 Business Plan a condition assessment spreadsheet in support of its request for a main transformer oil regeneration allowance. NIE Networks has now identified that an incorrect version of this spreadsheet was provided to the UR. An updated and corrected version of the condition assessment model is at Annex A4.19. This spreadsheet takes account of those transformers that have been replaced already and so do not require oil regeneration. It demonstrates that, of the 30 units for which an allowance has been requested:
- 8 have received an overall oil result score of "poor";
  - 16 were identified as having "average" overall oil results;
  - 4 received inconclusive overall oil results and require re-testing but NIE Networks anticipates that they may only receive a score of "average"; and
  - 2 received an overall oil result score of "good". These have nonetheless been selected on the basis that they are located at the same site as another transformer which requires oil regeneration and NIE Networks considers that there would be synergies in carrying out the work at the same time.

### **NIE Networks' requested changes**

- 32.7 The reduced allowance in the DD would not cover the costs for oil regeneration to be undertaken at each of the 30 main transformers where it is required. If this necessary work is not undertaken, there is a significantly increased likelihood of a fault at these transformers, before the transformer is scheduled for planned replacement. As recognised in the DD, this could lead to customer outage or safety incidents. This would be disruptive to customers, potentially unsafe and would also

<sup>95</sup> DD, Annex Q, p.7.

<sup>96</sup> DD, Annex R, p.85.

<sup>97</sup> DD, Annex R.

be less cost-effective for NIE Networks, as it already has the equipment to perform the oil regeneration in house.

- 32.8 NIE Networks has provided updated information with this Response in order to further substantiate its requested allowance for costs in respect of oil regeneration at 30 of its main transformers.
- 32.9 NIE Networks therefore requests that the UR revisit its position in the DD and provides in full the requested allowance for the Oil Regeneration of Main Transformers in its RP7 Final Determination.

### 33. T13F / T14C – ASSOCIATED CABLES

- 33.1 Under NIE Networks' policy, there are no joints in the cables that come from or go to the transformer within a substation. This is to ensure that no weak points are introduced to these cables and to reduce the possibility of a fault occurring in close proximity to the transformer to limit the potential damage to these strategic assets.
- 33.2 As a result, whenever a transformer is replaced, the associated cables within the substation are replaced simultaneously in order to mitigate the risks outlined above and to take advantage of delivery synergies.
- 33.3 For the replacement of associated cables for transformers, NIE Networks requested allowances of:
- £1,867,040 for 275/110kV transformers (T13f);<sup>98</sup> and
  - £1,532,495 for 110/33kV transformers (T14c).<sup>99</sup>

#### The UR's provisional decision

- 33.4 In the DD, the UR has provisionally decided to reduce the proposed allowances to:
- £1,250,000 for T13f; and
  - £1,100,000 for T14c.
- 33.5 The UR's provisional determination is based on GHD's recommendations.<sup>100</sup> In respect of both T13f and T14c sub-categories, GHD has recommended reducing the allowances to align with its recommended allowances for the costs relating to T20 categories, which concern the full or partial replacement of cables outside of substations.
- 33.6 In respect of costs for the T13f sub-category, GHD states that:

*"Whilst the need to replace the cables associated with the replacement of the planned 275/110 kV transformers is accepted as necessary, no justification for the cable replacement costs has been provided. Given that this sub-category was not included in RP6 it is not possible to conclude on the justification of the costs. GHD consider that on the basis of the likely costs associated with replacing 275 kV, 110 kV and 22 kV cables (for connection of tertiary connected reactors), plus associated power supply and control*

<sup>98</sup> NIE Networks, RP7 Business Plan, EJP 2.201 '275/110kV Transformers', p.3.

<sup>99</sup> NIE Networks, RP7 Business Plan, EJP 2.202 '110/33kV Transformers', p.2.

<sup>100</sup> See DD, Annex P, p.74.

*cables, that a total cost as proposed by NIE Networks of £1.87m is high. Furthermore it appears high compared to NIE Networks own submissions in WP5 relating to Transmission Cables. On the above basis, whilst the volumes are accepted, the total cost across the three-transformer replacement is adjusted from £1.867m to £1.25m."*<sup>101</sup>

33.7 In respect of costs for the T14c sub-category, GHD states that:

*"Whilst the need to replace the cables associated with the replacement of the planned 110/33 kV transformers is accepted as necessary, no justification for the cable replacement costs have been provided. Given that this sub-category was not included in RP6 it is not possible to conclude on the justification of the costs. GHD consider that on the basis of the likely costs associated with replacing the 110 kV and 33 kV cables, plus associated power supply and control cables, that a total cost as proposed by NIE Networks of £1.5m is high and does not align with RP6 costs. Additionally, it appears high compared to NIE Networks own submissions in WP5 relating to Transmission Cables. On the above basis, whilst the volumes are accepted, the total cost across the three-transformer replacement is adjusted from £1.5m to £1.1m."*<sup>102</sup>

#### **Concerns with the UR's provisional decision**

- 33.8 NIE Networks considers that in adopting GHD's recommendations, the UR's approach to aligning the associated cable costs under the T13f and T14c sub-categories with the costs under the T20 categories is incorrect. The costs associated with cable laying activities inside of a substation are higher than those outside of a substation for the reasons set out at paragraphs 33.10 to 33.13 below.
- 33.9 NIE Networks has provided at Annex A4.20 a breakdown of the company's costs for associated cable laying for both T13f and T14c sub-categories for RP7. These costs are based on contract rates and a design assessment of a 'per kilometre' rate. The company has also provided further details on its proposed costs for T20 categories at Section 40 of this Chapter.
- 33.10 There is a different unit rate for replacing cable within a substation as against replacing cable outside of a substation. This is predominantly due to the increased E&R (excavation and reinstatement) costs for replacing cable within a substation. This is due to the necessity of more costly hand digging as opposed to mechanical digging, which is required to minimise the risk of damaging other cables within the substation - especially during a period of work where the site is likely relying on its "N-1" substation network capability. As the substation will be down to a single point of failure, should the cable to that single point of failure be damaged, the entire site would be de-energised. This could cause disruption for a significant number of customers with limited or no immediate re-supply options.

<sup>101</sup> DD, Annex R, p.92.

<sup>102</sup> DD, Annex R, p.93.

- 33.11 The other major contributor to the high cost (which can be seen in the breakdown for these sub-categories at Annex 4.20) is the requirement to install costly and time-consuming oil stop joints and termination joints at a number of sites. There are a number of these joints within a substation that require intervention when completing related works. Conversely outside a substation, there will be much fewer joints to account for. Indeed, this issue is currently putting considerable pressure on current RP6 allowances for these sub-categories, where NIE Networks are expecting a significant overspend.
- 33.12 In addition, there are necessary protections for cables within substations that are not required for cables outside of substations. For example, troughs are required within certain areas of the substation to provide protection to cables.
- 33.13 Further, the cables within a substation are of higher capacity than those used within the T20 category for outside substations to ensure that there are no thermal constraints between the transformer and the outgoing circuits.

#### **NIE Networks' requested allowances**

- 33.14 For the reasons set out above, the company considers that the associated cable costs under the T13f and T14c sub-categories should not be aligned with costs under the T20 categories and that the breakdown provided at Annex A4.20 sufficiently demonstrates this difference.
- 33.15 NIE Networks therefore requests that in the Final Determination the UR allows in full the allowances requested by the company for both the T13f and T14c sub-categories (i.e., £1,867,040 and £1,532,495 respectively).

#### **34. T17 – 275KV OVERHEAD LINE ASSET REPLACEMENT**

- 34.1 The 275kV overhead transmission network comprises over 400km route length of double circuit overhead tower line. The majority of the 275kV overhead network was constructed between 1966 and 1978 and can be considered as a number of discrete assets that together form a system.
- 34.2 The RP7 proposal set out the requirements for several programmes of work to ensure the safety, resilience and reliability of NIE Networks' 275kV transmission overhead lines. These programmes are essential for ensuring compliance with legislative and licence requirements as well as maintaining the resilience and reliability of NIE Networks' transmission network.
- 34.3 The works covered in these sub-categories are necessary in order to reduce the risk of failure and ensure compliance with the Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), safety and environmental legislation, licence obligations and future capacity requirements.

#### **The UR's provisional determination**

- 34.4 The UR has provisionally determined to apply blanket percentage reductions to the allowances that NIE Networks had requested for 275kV OHL asset replacement.



34.5 As part of its provisional determination, the UR made a number of observations regarding the Cyberhawk data, including the following:<sup>103</sup>

- *"NIE Networks has not challenged or calibrated the condition assessment thresholds (i.e. what constitutes the different levels of deterioration) but have instead chosen to use the Cyberhawk standard thresholds."* The UR did not indicate whether it considered that the use of bespoke assessment thresholds would have been appropriate, nor whether it believed that approach would have altered the outcome of the condition assessment.
- Noting that the *"Transfer of data from Cyberhawk into the EJP volumes is via an export from Cyberhawk followed by significant manual collation and summation exercise"*, the UR indicated that it has carried out sample checks of the manual collation and summation and identified the following rate of errors in respect of the 275kV network:
 

*"14 errors in 168 datapoints checked (≈8.3% error rate) or total numerical error 35/1185 (≈3% error rate)"*
- In respect of checks carried out across data for the 110kV and 275kV networks together, the UR stated that *"Manual processing of the Cyberhawk data appears to result in a number of errors"*. The UR did not provide any comparison with error rates from other approaches.
- *"While the source data and condition monitoring regime are adequate and in places high quality there are multiple indications of errors in the handling of the data, inconsistencies in the application of the data in the EJP, and a number of volume errors [were] identified by NIE Networks following query."*
- *"On the basis of the multiple incidents of confirmed or suspected errors identified in the calculated volumes, GHD does not have confidence in the accuracy of the final volumes. In view of this an allowance reduction of 10% has been applied to the sub-categories based on the Cyberhawk volume outputs, which GHD [working on behalf of the UR] considers is commensurate with the potential residual error in the volumes and reasonable efficiencies savings that can be achieved on the combined volumes represented. The affected sub-categories are as follows:*
  - *T17e Note; volume error identified by NIE Networks when queried.*
  - *T17m*
  - *T17v*
  - *T17y*
  - *T17aa Note; volume error identified by NIE Networks when queried*
  - *[...]"*

<sup>103</sup> DD, Annex R, pp.111-112.

34.6 Based on the above, the UR has provisionally decided to apply a blanket 10% reduction to the affected sub-categories, equating to the following reductions to the allowances requested by NIE Networks:

- T17e – Replace colour and number plates
- T17m – 275kV Remedial
- T17v – 275kV Fittings
- T17y – 275kV Tower Security
- T17aa - 275kV Stepbolt

34.7 This implies a total shortfall against the requested allowances of £0.2m.

**Concerns with the UR's provisional decision**

*T17e – Replace colour and number plates*

*T17v – 275kV Fittings*

*T17y – 275kV Tower Security*

*T17aa - 275kV Stepbolt*

34.8 The UR has applied a blanket 10% reduction to proposed allowances for these sub-categories despite NIE Networks having provided corrected data on which the UR could base its assessment. Even if it were appropriate to apply a reduction, the reduction applied by the UR is disproportionate to the errors identified.

34.9 As referenced in the UR's provisional decision, following a query from the UR and the subsequent open and transparent engagement between NIE Networks and the UR, NIE Networks identified a volume error that had occurred in some categories as a result of mistranslation of the Cyberhawk data into the EJP. NIE Networks subsequently corrected and updated the volumes for the affected areas and provided this data to the UR.<sup>104</sup> Accordingly, the errors identified by the UR had already been corrected in the revised data on which the DD was based. Despite this, the UR's provisional decision imposed a further reduction of 10% from the proposed allowances in the sub-programmes listed above i.e. a further 10% reduction was applied on top of the corrections to the EJP.

34.10 NIE Networks disagrees with the principle of imposing blanket cost reductions in cases where NIE Networks has already made corrections to data. This does not incentivise NIE Networks to identify and report on any data errors as to do so will not mitigate reductions to allowances that the UR might have imposed but instead result in further reductions being applied. This effectively penalises NIE Networks for the initial error and for having corrected it, and fails to support good faith efforts to provide accurate data by assuming that errors persist even after correction.

34.11 Moreover, even if it were appropriate to impose a reduction, the error rate calculated by GHD is not correct. GHD, working on behalf of the UR, found a total numerical error rate of 3%, based on 35 errors in a dataset of 1,185. NIE Networks analysis,

<sup>104</sup> See response to UR-0082, UR-0084, and UR-00845 – 110kV Transmission OHL Volume Build Up.

however, found only 12 errors in the dataset of 1,185, which equates to a 1% error rate. The reason for this discrepancy is that the GHD analysis appears to reflect a misinterpretation of data,<sup>105</sup> rather than actual errors in the data.

- 34.12 Even if the error rate was 3% as identified by GHD, that would not provide a basis for applying a 10% reduction – at over three times the magnitude of the error (as measured by GHD), a 10% reduction would be excessive even if the 3% error rate were accurate. In any event, the error rate was in fact approximately 1%, and so any reduction of allowances should be limited to 1%.

*T17m – 275kV Remedial*

- 34.13 The UR has also provisionally determined to reduce the T17m allowance by 10%, ostensibly due to the same reasons as applied to the sub-programmes addressed above i.e. lack of confidence in the accuracy of the final volumes. For this sub-programme, however, no volume errors were identified. Nor can this reduction be attributed to mistranslations of the Cyberhawk data, as that data was not used to identify the required investment for this sub-category.
- 34.14 As detailed in the EJP, NIE Networks has identified then need for work in this sub-category based on known information, customer issues, ground maintenance, assessments to be completed in RP7 and ad hoc replacement of defective assets that may arise during the price control period. It is therefore wrong to base reductions to this allowance on errors identified in data that is not relevant to it.
- 34.15 In Table 60 of Annex R to the DD, GHD (working on behalf of the UR) accepted the cost justification for T17m, but this figure has then been reduced in Table 61. NIE Networks believe that T17m has been incorrectly identified as being affected by the Cyberhawk mistranslation. Therefore the 10% reduction applied to this sub-category is unfounded and should be removed.

**Conclusion**

*T17e – Replace colour and number plates*

*T17v – 275kV Fittings*

*T17y – 275kV Tower Security*

*T17aa - 275kV Stepbolt*

- 34.16 For the reasons set out above, there is no basis for the 10% reduction in volumes. If the UR still considers that the low error rate is sufficient to necessitate a reduction, an appropriate reduction would be 1% - i.e., commensurate with the error rate.

*T17m – 275kV Remedial*

- 34.17 T17m – 275kV Remedial appears to have been incorrectly identified as being affected by the Cyberhawk mistranslation error. As it was not in fact affected, the 10% reduction applied to the allowances requested for this sub-category should be removed in the Final Determination.

<sup>105</sup> Note: Without having access to further information from GHD NIE Networks is unable to comment on the precise nature of the error. NIE Networks would welcome engagement with GHD on this point.

### 35. **T19 – 110KV OVERHEAD LINE ASSET REPLACEMENT**

- 35.1 The 110kV overhead network consists of 390km of overhead tower lines and 745km of single circuit overhead lines. There are 29 separately identifiable sections of double circuit 110kV towers (plus three sections of 110kV construction currently operating at 33kV) and 35 separately identifiable sections of single circuit 110kV wood pole lines.
- 35.2 NIE Networks' RP7 Business Plan set out the requirements for several programmes of work to ensure the safety, resilience and reliability of its 110kV transmission overhead lines. These programmes of works are essential for ensuring compliance with legislative and licence requirements as well as maintaining the resilience and reliability of NIE Networks' transmission network.
- 35.3 NIE Networks addresses below three aspects of the DD in respect of 110kV Overhead Line Asset Replacement, namely the UR's proposed:
- 20% reduction to item T19a (Replace conductor);
  - blanket reductions applied to items T19b (Replace suspension insulator), T19c (Replace tension insulator), T19g (Replace colour and number plates (double)), T19g1 (Replace colour and number plates (single)), T19ab (Tower security), T19ad (Step bolt replacement (single)), T19ai (Step bolt replacement (double)), and T19aj (Replace fittings); and
  - reduction applied to item T19ah (Clearances).

### 36. **T19A – REPLACE CONDUCTOR**

- 36.1 Replacement of conductors (i.e. the lines that carry electricity) is the single largest cost sub-category within the T19 Overhead Line Asset Replacement group. NIE Networks has proposed investment totalling ██████ in respect of this activity, reflecting the cost of works on a single circuit, being the Castlereagh-Rathgael circuit. The expected cost of this project is significantly higher than the allowance for the equivalent sub-category in RP6 because it is much larger in scope: the RP6 allowance covered 30 spans of conductor replacement, whereas the proposed work in RP7 covers 136 spans. The proposed unit cost for RP7 is actually lower than the equivalent RP6 allowance, as it is based on outturn data.
- 36.2 Conductor replacement works are necessary in order to reduce the risk of failure and ensure compliance with the Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), safety and environmental legislation, licence obligations and future capacity requirements.

#### **The UR's provisional decision**

- 36.3 The UR has provisionally determined to apply a 20% reduction to the allowance requested by NIE Networks for this activity, indicating that this reflects a:

*"lack of confidence in the robustness of the investment appraisal".<sup>106</sup>*

<sup>106</sup> DD, Annex R, pp.113-114.

- 36.4 This represents a shortfall in the requested allowance of approximately £0.7m, thereby imposing a significant cost burden on NIE Networks for the performance of these works.
- 36.5 As part of its review of NIE Networks' investment proposals, the UR requested additional narrative from the company on its requested allowance in respect of conductor replacement. NIE Networks provided this additional narrative as requested.<sup>107</sup>
- 36.6 GHD (on behalf of the UR) identifies in Annex R of the DD what it appears to consider to be shortcomings in the narrative provided by NIE Networks, relating to the optionality considered, quantification of risk, assumptions as to efficiencies that can be achieved by combining conductor replacement with other works, the availability of outages (within which conductor replacement would be carried out) during RP8, and the deliverability of projects in RP8.
- 36.7 The GHD Report provisionally concluded that the narrative presented was reasonable, but states that "the investment appraisal provided is not robust and does not provide confidence that the best value is being achieved".<sup>108</sup>
- 36.8 GHD indicated that it was "not convinced that the replacement option chosen is the most efficient solution", notwithstanding that it does "accept the general approach to schedule the conductor replacement works into RP7". On this reasoning, GHD recommended that the UR apply a 20% reduction to the allowance requested by NIE Networks and stated that "*we consider this reduced amount to be more efficient allowance based on the information presented for our review and reflects our lack of confidence in the robustness of the investment appraisal*".

#### **Concerns with the UR's provisional decision**

- 36.9 In its provisional determination, notwithstanding GHD's comments on the narrative provided by NIE Networks, its core concern appears to be a perceived lack of optioneering (i.e. consideration of alternatives to carrying out the conductor replacement works) rather than the actual costs of carrying out that work. As such, the approach of reducing the allowance by reducing the unit cost is not appropriate. Indeed, this approach would operate only to ensure that the project undertaken in RP7 will be arbitrarily underfunded and does nothing to address GHD's apparent concern as to whether it is in fact the most suitable project to be undertaken in RP7.
- 36.10 NIE Networks has proposed that, of the four circuits identified as having a 10-15 year residual life (i.e. circuits for which conductor replacement could conceivably be carried out either in RP7 or RP8), it is optimal to schedule the Castlereagh-Rathgael conductor replacement for RP7. As regards the other three circuits with a 10-15 year residual life, the rationale for not proposing conductor replacement works during RP7 is as follows:
- Tandragee-Pattersons Lake and Pattersons Lake-Lisburn A: Conductor replacement for these circuits will require sections of overhead to be

<sup>107</sup> See response to UR-0080 – 110kV Overhead Lines.

<sup>108</sup> DD, Annex R, p.114.

replaced with underground cable. This work will require a more detailed design and cable route, and will involve a greater cost than a direct asset replacement (i.e. replacing the existing overhead lines with new overhead lines). For this reason, conductor replacement works on these circuits were not proposed for RP7 in order to allow more detailed design to be carried out.

- Tandragee-Waringstown: This circuit is due for refurbishment works in RP8. Efficiencies can be gained from completing the conductor replacement alongside the refurbishment programme and therefore this circuit was not considered for conductor replacement during RP7.

36.11 NIE Networks has prepared Cost Benefit Analyses ("**CBA**") for conductor replacement work on each of these four individual circuits, together with an overall CBA for all four of them (see Annex A4.21).<sup>109</sup> These demonstrate that the Castlereagh-Rathgael conductor replacement is the most suitable to be brought forward to RP7.<sup>110</sup>

36.12 Given that the UR has indicated its acceptance of the principle of scheduling conductor replacement in RP7, in view of the CBAs clearly demonstrating that the Castelreagh-Rathgael circuit is the most appropriate to be brought forward, there is no justification for the UR to apply any reduction to the requested allowance.

#### Conclusion

36.13 As demonstrated in the CBAs, the proposed works on the Castelreagh-Rathgael circuit are the most suitable to be brought forward to RP7. That being so, and the UR having already accepted the principle of scheduling conductor replacement work in RP7, the proposed 20% reduction is without justification and should be removed from the Final Determination.

#### **Blanket reductions applied to multiple T19 allowances**

36.14 The investment proposal prepared by NIE Networks sets out proposed allowances for a number of separate sub-categories within the transmission overhead lines category. For each sub-category, NIE Networks proposed specific volumes and costs. The sub-categories relevant to this Section are as follows:

- T19b: Replace suspension insulator;
- T19c: Replace tension insulator;
- T19g: Replace colour and number plates (double);

<sup>109</sup> Note, the Tandragee-Patersons Lake circuit is a double circuit tower line, splitting onto portals at Patersons Lake, with one circuit going to Lisburn A and the other one going to Banbridge. The double circuit section and the portal section of Tandragee-Lisburn A were not constructed in the same time-period and therefore NIE Networks tested the conductor separately. As both sections have been assessed as having 10-15 year conductor life spans, however, NIE Networks proposes to replace the whole Tandragee-Lisburn A conductor together therefore Tandragee-Patersons Lake and Patersons Lake-Lisburn A is included in one CBA.

<sup>110</sup> NIE Networks notes that it is difficult to quantify the outage constraints on the transmission network in a CBA. NIE Networks is still working towards being able to fully quantify risk for OHL assets, so at present it is not possible to provide quantified risk information on each circuit. Conductor sampling has been used to determine the most at risk circuits to be taken forward.

- T19g1: Replace colour and number plates (single);
- T19ab: Tower security;
- T19ad: Step bolt replacement (single);
- T19ai: Step bolt replacement (double); and
- T19aj: Replace fittings.

36.15 The works covered in these sub-categories are necessary in order to reduce the risk of failure and ensure compliance with the Electricity Safety, Quality and Continuity Regulations (NI) 2012 (ESQCR), safety and environmental legislation, licence obligations and future capacity requirements.

36.16 As the UR is aware, proposed works across the network are based on extrapolating inspection and survey work carried out on a sub-set of the network. The UR has commented that it considers this approach to be generally reasonable and that the:

*"condition assessment regime developed appears to be generally robust and is proposed to be expanded on further in RP7".<sup>111</sup>*

36.17 For the sub-categories covered in this Section, NIE Networks used Cyberhawk visual condition assessments to assess the extent of condition-based works that will be required. The UR has noted that:

*"Cyberhawk is a very good tool which notably retains significant data and photographs providing a resource to check condition classifications".<sup>112</sup>*

#### The UR's provisional decision

36.18 As part of its provisional determination, the UR made a number of observations regarding the Cyberhawk data, including the following:<sup>113</sup>

- *"NIE Networks has not challenged or calibrated the condition assessment thresholds (i.e. what constitutes the different levels of deterioration) but have instead chosen to use the Cyberhawk standard thresholds."* The UR did not indicate whether it considered that the use of bespoke assessment thresholds would have been appropriate, nor whether it believed that approach would have altered the outcome of the condition assessment.
- Noting that the *"Transfer of data from Cyberhawk into the EJP volumes is via an export from Cyberhawk followed by significant manual collation and summation exercise"*, the UR indicated that it has carried out sample checks of the manual collation and summation and identified the following rate of errors in respect of the 110kV network:
  - *"Single circuit lines – 2 errors in 204 datapoints checked (≈1% error rate) or total numerical error 4/500 (≈0.8% error rate)"*
  - *"Double circuit lines – 2 errors in 120 datapoints checked (≈1.7% error rate) or total numerical error 4/500 (≈0.7% error rate)"*

<sup>111</sup> DD, Annex R, p.111.

<sup>112</sup> DD, Annex R, p.111.

<sup>113</sup> DD, Annex R, pp.111-112.

- In respect of checks carried out across data for the 110kV and 275kV networks together, the UR stated that "*Manual processing of the Cyberhawk data appears to result in a number of errors*". The UR did not provide any comparison with error rates from other approaches.
- "*While the source data and condition monitoring regime are adequate and in places high quality there are multiple indications of errors in the handling of the data, inconsistencies in the application of the data in the EJP, and a number of volume errors identified by NIE Networks following query.*"
- "*On the basis of the multiple incidents of confirmed or suspected errors identified in the calculated volumes, GHD does not have confidence in the accuracy of the final volumes. In view of this an allowance reduction of 10% has been applied to the sub-categories based on the Cyberhawk volume outputs, which GHD [working on behalf of the UR] considers is commensurate with the potential residual error in the volumes and reasonable efficiencies savings that can be achieved on the combined volumes represented. The affected sub-categories are as follows:*
  - [...]
    - T19b Note; volume error identified by NIE Networks when queried.
    - T19c
    - T19g Note; volume error identified by NIE Networks when queried.
    - T19j / g1 Note; volume error identified by NIE Networks when queried.
    - T19p Note; volume error identified by NIE Networks when queried.
    - T19ab Indirectly effected as it is based on T17y
    - T19ad Note; volume error identified by NIE Networks when queried.
    - T19ai Note; volume error identified by NIE Networks when queried.
    - T19aj Note; volume error identified by NIE Networks when queried."

36.19 In view of the above, the UR has provisionally decided to apply a blanket reduction to the allowances requested by NIE Networks in respect of these sub-categories. This equates to a shortfall in funding of £0.4m.

Concerns with the UR's provisional decision

- T19b - 110kV Replace Suspension Insulator
- T19c - 110kV Replace Tension Insulator
- T19g - 110kV Replace colour and number plates (double)
- T19g1 - 110kV Replace colour and number plates (single)
- T19ab - 110kV Tower Security
- T19ad - 110kV Step bolt Replacement (Single)
- T19ai - 110kV Step bolt Replacement (Double)
- T19aj - 110kV Replace Fittings



- 36.20 The UR has applied a blanket 10% reduction to proposed allowances for these sub-categories despite NIE Networks having provided corrected data on which the UR could base its assessment. Even if it were appropriate to apply a reduction, the reduction applied by the UR is disproportionate to the errors identified.
- 36.21 As referenced in the UR's provisional decision, following a query from the UR and the subsequent open and transparent engagement between NIE Networks and the UR, NIE Networks identified a volume error that had occurred in some categories as a result of mistranslation of the Cyberhawk data into the EJP. NIE Networks subsequently corrected and updated the volumes for the affected areas and provided this data to the UR.<sup>114</sup>
- 36.22 Accordingly, the errors identified by the UR had already been corrected in the revised data on which the DD was based. Despite this, the UR's provisional decision imposed a further reduction of 10% from the proposed allowances in the sub-categories listed above i.e. a further 10% reduction was applied on top of the corrections to the EJP.
- 36.23 NIE Networks disagrees with the principle of imposing blanket cost reductions where NIE Networks has already made corrections to data. NIE Networks considers that this does not incentivise it to identify and report on any data errors as to do so will not mitigate reductions to allowances that the UR might have imposed but instead result in further reductions being applied. This effectively penalises NIE Networks for the initial error and for having corrected it, and fails to support good faith efforts to provide accurate data by assuming that errors persist even after correction.
- 36.24 In any event, GHD, working on behalf of the UR, found a total numerical error rate of 0.8% and 0.7% total for single circuit and double circuit lines respectively. Even if it were appropriate to reduce allowances even after data is corrected, there is no basis for an arbitrary blanket 10% reduction in volumes when the error rate is less than 1%.

*T19ab – 110kV Tower Security*

- 36.25 In relation to T19ab – 110kV Tower Security, NIE Networks notes that this was mistakenly submitted to the UR as a unitised sub-category instead of a lump sum allowance. As described in response to queries UR-0343 and UR-0345 both T17y and T19ab should both be lump sum sub-categories – the UR has accepted this for T17y in the DD but appears not to have done so for T19ab. NIE Networks assumes that this was an oversight and requests that T19ab be aligned as a lump sum sub-category for the Final Determination. Failure to do so would constrain the use of this sub-category and rely on a unit cost that is arbitrary due to the variability in the work activities being carried out at different locations under this category with substantially different costs.
- 36.26 Furthermore, GHD has recommended that this allowance is reduced to reflect 370 ACD replacements (20% of population) and 460 DoD signs (25% of population as per request) in view of a lack of optioneering and condition assessment data.

<sup>114</sup> See response to UR-0082, UR-0084, and UR-00845 – 110kV Transmission OHL Volume Build Up.

Therefore, as per UR Query Response NIEN-015 "As indicated in the technical justification section for Tower security, the recommended unit cost *is based on a blended unit cost of £2,092 (368 x ██████████ {ACD replacements for 20% of population} + 460 x ██████████ {DoD sign installations for 25% of population as per the request} = £962,596.*" Despite this recommendation, the UR has provisionally decided to deduct a further 10%, reducing the allowance to £866k.

#### *T19p – 110kV Remedial*

- 36.27 The UR has also provisionally decided to reduce the T19p allowance by 10%, ostensibly due to the same reasons as applied to the sub-categories addressed above i.e. lack of confidence in the accuracy of the final volumes. For this sub-category, however, no volume errors were identified. Nor can this reduction be attributed to mistranslations of the Cyberhawk data, as that data was not used to identify the required investment for this sub-category.
- 36.28 As detailed in the EJP, NIE Networks has identified required work in this sub-category based on known information, customer issues, ground maintenance, assessments to be completed in RP7 and ad hoc replacement of defective assets that may arise during the price control period. It is therefore inappropriate to base reductions to this allowance on errors identified in data that is not relevant to it.
- 36.29 In Table 60 of Annex R to the DD, GHD (working on behalf of the UR) accepted the cost justification for T19p Remedial, but this figure has then been reduced in Table 61. NIE Networks believe that T19p – 110kV Remedial has been incorrectly identified as being affected by the Cyberhawk mistranslation. Therefore the 10% reduction applied to this sub-category should be removed.

#### Conclusion

- 36.30 The UR's provisional determination to apply a 10% reduction to multiple sub-categories due to data errors is unjustified, given that these errors were corrected before the DD was issued. In any event, even if it were appropriate to apply a reduction, the 10% reduction applied by the UR is disproportionate given the identified error rate of less than 1%.
- 36.31 For one sub-category, T19p, NIE Networks believes that the UR has applied a reduction based on a misunderstanding of the data on which that sub-category is based. Given that the basis for the reduction does not apply to this sub-programme, the reduction should be removed.
- 36.32 These reductions should therefore be removed in the UR's Final Determination.

#### **37. T19 – STRABANE-OMAGH ADSS (D5 CONSIDERATION)**

- 37.1 During development of the RP7 Business Plan, NIE Networks identified the need to replace the all dielectric self-supporting cable (ADSS) on the Strabane-Omagh A circuit during RP7, as it is in poor condition and has experienced a recent break, and not all fibres are operational. After consultation with SONI, NIE Networks did not request any allowance in respect of this work in its Business Plan submission as both of the Strabane-Omagh circuits had been identified for upgrading in the Transmission Development Plan (TDPNI). Therefore, NIE Networks and SONI

jointly agreed to include the removal of the ADSS and retrofitting of an optical ground wire (OPGW) as part of SONI's overall scheme.

- 37.2 SONI has since notified NIE Networks that these circuits will no longer be upgraded in the near future as the needs case is not currently justifiable. NIE Networks will now need to complete its own works to remove the poor condition ADSS. At this stage of the RP7 process, it is not possible to determine the optimal replacement for this ADSS or an accurate cost for the work. For example, earthing issues at Strabane Main substation would greatly benefit from the installation of an earthwire but this would need to be considered fully against the cost of the work and allowing for future needs (with a view to NIE Networks' "touch the network once" approach).
- 37.3 In view of the uncertainty as to the scope of this work at this late stage of the RP7 process, NIE Networks believes this would most appropriately be addressed via the D5 process and intends to bring this forward as an additional D5 project in due course.

### 38. **T19AH – 110KV CLEARANCES**

- 38.1 NIE Networks requested allowances for sub-category T19ah – 110kV Clearances. Under the Electricity Safety, Quality and Continuity Regulations (Northern Ireland) 2012 ("**ESQCR**"), overhead lines (as well as other objects including wires and cables attached to supports that carry overhead lines) are required to be at or above a specified height above ground, as detailed in Schedule 2 to the ESQCR.<sup>115</sup>
- 38.2 Recent LiDAR surveys have highlighted 54 clearance issues on the 110kV network which will need to be addressed during RP7. A number of solutions are proposed based on individual clearance issues, tower strength calculations and the extent of infringement. More detail on clearance infringements per circuit and ESQCR requirements was included in the relevant EJP, and is available within the spreadsheet provided at Annex A4.22
- 38.3 This work is necessary in RP7 to ensure compliance with the ESQCR, safety and environmental legislation, licence obligations and future capacity requirements.

#### **The UR's provisional determination**

- 38.4 The UR's provisional determination reduces the allowance for Clearances from £0.5m to £0.4m (a reduction of 13.2%), implying a shortfall of £0.1m.
- 38.5 In proposing this reduction, the UR explained that this was due to NIE Networks having provided no justification for the allowance.

#### **Concerns with the UR's provisional decision**

- 38.6 NIE Networks notes the UR's concern about the absence of a justification for this allowance. NIE Networks has provided a breakdown of the 110kV clearance cost-build up in the document provided at Annex A4.22.
- 38.7 NIE Networks notes that of a number of clearances are schedule to be addressed within the RP6 ESQCR allowances and within RP7 under the pole replacement

<sup>115</sup> See ESQCR, Regulation 17 and Schedule 2.

allowances. The remainder are scheduled within this sub-category, which can be identified from the 'Plan' column listed as 'RP7-T19ah'.

### **Conclusion**

38.8 The additional information contained in Annex A4.22 provides justification for the allowance requested by NIE Networks. Accordingly, the reduction should be removed from the T19ah allowance in the Final Determination.

### **39. T17J, T17T, T19N, T19T, D06L, D06M – MUFF REPAIR AND PAINTING**

39.1 In RP6, as there was no separate sub-category for Muff painting: this was allocated to the same sub-category as Muff Repairs.

39.2 Although it does make sense to deliver these work activities in parallel when at the same tower, the variability in cost across the two types of work and the scope of work that also varies from tower to tower created a unit cost that was unreflective of the cost to repair a muff compared to the contracted price. Therefore, in order to rectify this situation in its RP7 Business Plan, NIE Networks proposed a unit cost for tower muff repair of [REDACTED], aligned with actual contract prices, and created a new sub-category for tower muff painting with a unit cost of [REDACTED].

39.3 The same approach and unit costs has been applied across 275kV, 110kV and 33kV tower muff painting and repair categories.

### **The UR's provisional decision**

39.4 The UR approved the tower muff repair and painting sub-categories but reduced the unit cost for tower muff repair to £320 (a 70% reduction) to align with the unit cost of the previous programme's RP6 outturn to March 2023. The UR accepted the new proposed unit cost for tower muff painting.

### **Concerns with the UR's provisional decision**

39.5 NIE Network considers that the UR should not base the unit cost for tower muff repair on the outturn unit cost in RP6. That is because the outturn unit cost as of March 2022 and March 2023 were inclusive of painting and in RP6 certain tower muffs were painted with only very minor repairs carried out. This artificially suppressed the actual cost of muff repair.

39.6 In RP7, NIE Networks has separately budgeted for the costs of painting and repair. For these reasons, NIE Networks considers that the unit cost in RP6 is not representative of the true cost of tower muff repair in RP7.

39.7 The table below shows the most recent contracted rates for 2024 ("**[REDACTED] Framework Rate**" worst case and best case), alongside the unit costs submitted in the RP7 Business Plan. NIE Networks notes that the contracted rates have been updated compared with those provided to the UR with the March 2023 Business Plan submission due to having been the subject of a "mini-tender" as part of the annual overall OHL contract.

**Table 4.12: Comparison of MEAT costs vs RP7 Unit Costs**

Comparison of MEAT Costs vs RP7 Unit Costs				
RP7 Category	Description	RP7 Units	RP7 Business Plan Unit Cost	
T17f	275kV Foundation Assessments (Per Tower)	208	£2,755.55	
T17j	275kV Muff Repairs (Per Muff)	131	£1,064.59	
T17t	275kV Muff Painting (Per Tower)	272	£786.87	
T19h	110kV Foundation Assessments (Per Tower)	389	£2,955.66	
T19n	110kV Muff Repairs (Per Muff)	183	£1,064.59	
T19t	110kV Muff Painting (Per Tower)	380	£786.87	

39.8 The prices shown in the table above are 2024 prices. Reverting these to 2021/22 prices (assuming RPI to the 2023/24 regulatory year) provides the following unit costs:

- 275kV & 110kV Muff Repairs: £ [REDACTED] / 1.2109 = £ [REDACTED] (compared with the requested allowance of £1,064.59)
- 275kV & 110kV Muff Painting: £ [REDACTED] / 1.2109 = £ [REDACTED] (compared with the requested allowance of £786.87)

39.9 These prices further demonstrate the exceptional cost increases that have been experienced since the start of the RP6 period, and that outturn unit costs are not always the most appropriate method for setting unit costs following the macro-economic circumstances experienced since 2020.

**NIE Networks' requested unit cost**

39.10 NIE Networks requests that the UR in its Final Determination approves unit costs that reflect the most recent contracted rates for 2024 as updated in this Response – i.e., [REDACTED] for Muff Repairs and [REDACTED] for Muff Painting.

**40. T20 – TRANSMISSION UNDERGROUND CABLES**

40.1 The overall strategy for RP7 is to maintain a safe, reliable and resilient operation of the transmission underground cable network utilising proven end of life assessment techniques, condition information, known type defects, failure information, spares utilisation, technical support and assigned ratings.

40.2 RP7 includes an enhanced strategy to replace and decommission Fluid Filled Cables ("FFC") in poor and unserviceable condition and to invest in new leak management technologies to further prolong the life of these critical assets.

40.3 The company’s proposed costs for transmission underground cables for RP7 are set out at Table 4.13 below.

**Table 4.13: Proposed Transmission Underground Cables costs (FY21/22 prices)**

Reference	Sub-category name	RP6 (inc. extension year) (£)	RP7 (21/22 prices) (£)
T20j	Replace Sheath Voltage Limiters	42,893	-

T20k	Refurbish 110kV FFC	127,441	436,274
T20m	Transmission cable accessories and ancillaries	408,934	1,357,447
T20l	Cable Flushing	197,332	
T20n	Replacement 110kV FFC	-	2,518,035
T20r	Decommission FFC	-	242,007
T20s	Leak management technologies	-	148,032
<b>Total Transmission Underground Cable costs</b>		<b>776,600</b>	<b>4,701,795</b>

40.4 Whilst Table 4.13 shows an increase in the cost to complete the proposed 110kV FFC refurbishment works (T20k), the works proposed reflect NIE Networks' enhanced proactive strategy and apply to different circuits to that proposed during RP6.

40.5 Similarly, there is a significant increase in the cost to complete the proposed overall transmission cable accessories and ancillaries works (T20m) as there are a number of new work activities included within this sub-category for RP7 compared to RP6. One of the major increases is the replacement of 110kV sealing ends and installation of a new oil stop joint due to safety concerns with the porcelain construction. In addition, general unit costs have increased world-wide due to material and labour increases. Cable flushing (T20n), FFC decommissioning works (T20r) and leak management technologies (T20s) are new subcategories that were not included in in RP6. These account for most of the RP6 to RP7 increase in transmission underground cables costs.

#### **The UR's provisional decision**

40.6 The UR has provisionally determined NIE Networks' allowance for Transmission Underground Cable costs based on the recommendations included in GHD Report.

40.7 In the GHD Report, GHD recommends an overall 10% reduction on NIE Networks' allowance for Transmission Underground Cable:

*"NIE Networks attribute the cost increase in part to "In addition, general unit costs have increased world-wide due to material and labour increases...GHD recommends these cost increases be excluded as these likely constitute real price increases that the UR has advised are within the scope of the UR's real price effect adjustments, detailed in their frontier shift annex."*

*NIE Networks has provided no reference to out-turn costs or evidence for the "contract prices" presented. We note that certain items such as replacing cable sealing ends, sheath refurbishment, and replacing underground cable*

*ancillary pits have all been carried out in RP6 and as such there is no reason the information could not be presented to support the RP7 lump sum costs."*

*"On the basis that no detail or evidence has been provided to support the "contract prices", and the statement in the EJP that the prices include material and labour increases, we recommend a decrease of 10% on all WP5 allowances. This is generally based on observed deductions that we applied elsewhere within our review of the WPs, where we recommended certain cost increases be excluded as they likely constitute real price increases that the UR has advised are within the scope of the UR's real price effect adjustments, detailed within the frontier shift annex."<sup>116</sup>*

- 40.8 GHD also assesses each of the five sub-categories of works individually. Its recommendations for each sub-category are provided at Table 4.14 below. GHD's recommendations result in substantial reductions in NIE Networks' proposed allowances, by well above 10% in certain cases.

**Table 4.14: GHD transmission cables recommendation summary**

Table 65 Transmission cables recommendations summary

Sub-programme ID	Requested by NIE Networks		Recommended by GHD	
	RP7 allowance (£k)	RP7 volume	RP7 allowance (£k)	RP7 volume
T20k - Refurbish 110kV Cable	436	-	159	-
T20m - Procurement of Transmission Cables Accessories and Ancillaries	1,357	-	961	-
T20n - Replacement 110kV FFC Cable	2,518	-	2,266	-
T20r - Decommission FFC	242	-	194	-
T20s - Leak Management Technologies	148	-	133	-
<b>Total</b>	<b>4,702</b>	<b>-</b>	<b>3,714</b>	<b>-</b>

### Concerns with the UR's provisional decision

- 40.9 As provided above at paragraph 40.7, GHD justifies its 10% reduction on all sub-category allowances on the basis that NIE Networks has not provided evidence to support its proposed cost increases in RP7. It notes that certain cost increases can be excluded on the basis that they constitute real price increases that will fall within the scope of the UR's real price effect ("**RPE**") adjustments.
- 40.10 NIE Networks considers that GHD's assessment is incorrect. The company sets out in further detail at Section 3 above its disagreement with the UR's approach to assume that uplifts in material or contractor costs will be accounted for in the RPE adjustments.
- 40.11 NIE Networks has also identified concerns with, or otherwise has provided further information in response to, GHD's recommendations in respect of each of the five sub-categories of works for RP7, which are set out below.

<sup>116</sup> Annex R, p.128.

T20k – Refurbishment works*Belfast North Main to Donegall Main*

- 40.12 In its DD, the UR has disallowed NIE Networks' proposed costs associated with the Belfast North Main to Donegall refurbishment works. This is partly on the basis that "there is a significant probability that the cable will be replaced in the near future rendering the works unnecessary" due to works associated with the SONI Belfast Metropolitan plan.<sup>117</sup>
- 40.13 The company acknowledges this position. However, it considers that there is a risk that the Belfast Metropolitan plan does not secure regulatory funding or indeed the scope of the plan changes such that the Belfast North Main to Donegall circuits are not replaced.
- 40.14 On this basis, NIE Networks requests that the UR accepts in its Final Determination that, should the Belfast North Main to Donegall circuits work not be covered under the Belfast Metropolitan plan, this circuit can be progressed under the D5 mechanism as an asset replacement D5 project by NIE Networks within the RP7 period.

*Donegall Main to Hannahstown circuit*

- 40.15 These cables are single core construction but share a common manifold at the tank locations. This means that it is not possible to determine which phase of the circuit has developed a leak.
- 40.16 It is proposed that works are to be undertaken initially to modify the tank locations and to separate the individual cables. This work will enable engineers to determine which phase or phases are responsible for the leak(s). A route patrol can then be undertaken to locate the source(s) of the leaks, so remedial repairs can be carried out.
- 40.17 This cable route is along extremely busy roads, and these cables provide the primary supplies to Belfast City Centre, so it is imperative that an accurate location is identified for the fault to limit disruption to customers whilst the fault is repaired.
- 40.18 This work requires five 110kV cable tank manifold refurbishments to take place, The breakdown for the total cost for each manifold refurbishment ( ) is detailed Table 4.15 below:

<sup>117</sup> Annex R, p.126.



**Table 4.15: Breakdown of total costs for 110kV cable manifold refurbishments (per manifold)**

Cost Category	Description	Unit Price	Quantity	Sub-total
Materials	300l Buried Pre-Pressure Tank 2.0ats	█	2	█
Materials	Armoured Oil Line (per m)	█	40	█
Materials	GAUGE 4" BRASS 30 psi	█	4	█
Labour	BAU - Install (mandays)	█	10	█
BIS	2 WAY TRAFFIC CONTROL FULL DAY	█	5	█
BIS	E&R - Joint Bay - Footway - JB33-2 (33kV Oil filled) [nr] - High Amenity Surfaces (Bitmac sub base)	█	1	█
Decommissioning	Recover & Scrap plant	█	2	█
<b>Total</b>				<b>£35,371</b>

40.19 The 5 manifold refurbishments above for Donegall to Hannahstown circuit equate to the █ component of the overall £436,274 for T20k. The remaining £259,417 was for Donegall to Belfast North Main circuit, which will be addressed through D5, if not progressed via the SONI Belfast Metropolitan plan.<sup>118</sup>

T20m – Transmission cables accessories and ancillaries

*Replace 110kV cable sealing ends*

40.20 In its assessment, GHD has reduced the company's total sets of cable sealing ends from 10 units to 8. GHD notes that:

*"the EJP and UR-0087 response indicate that 8 sets of cable sealing ends will be replaced compared to a volume of 10 provided in the cost breakdown. In view of this inconsistency, cost to be reduced based on 8 sets."<sup>119</sup>*

40.21 NIE Networks considers that GHD is incorrect to state that there is an inconsistency in the volumes provided by the company.

40.22 In EJP 2.101 of the RP7 Business Plan and in its response to Query UR-0087,<sup>120</sup> the company outlined that 6 sets of sealing ends will be replaced within Castlereagh Main and Strabane Main as well as 2 sets located on a tower beside a leisure centre associated with Springtown Main.

40.23 It was also outlined that a further 2 sets of cable sealing ends will be removed at Hannahstown Main, with a new oil stop joint installed. NIE Networks noted that the cost of the removal and jointing work required at Hannahstown Main will align with the cost to replace these two sealing ends, in consideration of the new materials and additional labour for the oil stop joints required.

<sup>118</sup> Annex R, p.126.

<sup>119</sup> Annex R, p.128.

<sup>120</sup> UR-0087, pp.4-5.

40.24 To evidence that NIE Networks' proposed costs are robust, Table 4.16 provides an extract of the quotation received from [REDACTED] for the installation (excluding removal) of new 110kV sealing ends at [REDACTED] per set.

**Table 4.16: Quotation from Prysmian Group for sealing ends installation works (per set)**

DESCRIPTION	QTY	RATE (£)	Total (£)
Supply CFT-145 ClickFit termination	[REDACTED]	[REDACTED]	[REDACTED]
Site Establishment, submission of RAMS and safe systems of work	[REDACTED]	[REDACTED]	[REDACTED]
Joining	[REDACTED]	[REDACTED]	[REDACTED]
Supervision	[REDACTED]	[REDACTED]	[REDACTED]
Tooling & Equipment	[REDACTED]	[REDACTED]	[REDACTED]
Scaffold	[REDACTED]	[REDACTED]	[REDACTED]
Busbar works	[REDACTED]	[REDACTED]	[REDACTED]
Steel works modifications	[REDACTED]	[REDACTED]	[REDACTED]
HV Test	[REDACTED]	[REDACTED]	[REDACTED]

40.25 NIE Networks considers that there is no inconsistency within its submission and that the costs requested should be allowed in full in the Final Determination.

*Cable sealing end cleats*

40.26 To evidence that NIE Networks' proposed costs are robust, the company has also provided a breakdown of the costings to replace one cable sealing end cleat (per set) at Table 4.17 below. NIE Networks' RP7 Business Plan proposed five times the cost of the below table, totalling [REDACTED] for cleating activities.

**Table 4.17: NIE Networks' costs<sup>121</sup> for replacement of cable sealing end cleats (per set)**

Cost Category	Description	Unit Price (£)	Quantity	Sub-total (£)
Materials	Cable Cleating Materials (per set)	[REDACTED]	1	[REDACTED]
Labour	Installation (Man days)	[REDACTED]	6	[REDACTED]
BIS	Scissor Lift Rough Terrain Diesel [7 – 15m] per week	[REDACTED]	1	[REDACTED]
<b>Total</b>				<b>5,746</b>

<sup>121</sup> Excludes additional fabrication costs where inspections have found cable terminations with no cleats.

*Sheath refurbishment*

40.27 GHD states the following in response to NIE Networks' proposed costs for sheath refurbishments:

*"Understood that 10 circuits will be refurbished. No detail has been provided on the assumptions used in the compiling of the lump sum."*<sup>122</sup>

40.28 As NIE Networks detailed in EJP 2.101, there are currently 10 active sheath faults recorded (on Maximo) on the transmission cable network associated with aluminium sheathed FFC. The process to locate sheath faults requires specialist test equipment, experienced fault location staff and can be a time consuming and expensive process. A positive sheath test indicates that a circuit section has a sheath fault but not how many faults. This number of faults will only become evident when a fault is located, repaired and the circuit section tested again.

40.29 NIE Networks' proposed budget for RP7 sheath refurbishment was provided in its RP7 Business Plan as a lump sum, as the amount of excavation and reinstatement ("E&R") to locate each fault is unknown.

40.30 Table 4.18 below provides the minimum E&R unit costs to locate and repair a single fault (excluding traffic management costs) based on internal costing from contracted prices and internal labour rates. NIE Networks' RP7 Business Plan proposed ten times the cost of the below table, totally £102,471 for sheath activities.

**Table 4.18: NIE Networks' costs for sheath refurbishments (per fault)**

Cost Category	Description	Unit Price (£)	Quantity	Sub-total (£)
Labour	BAU - Install (man days)	█	4	█
Labour	Project Engineer (man days)	█	2	█
Bought in Service (BIS)	E&R - Joint Bay - Footway - JB33-2 (33kV Oil filled) [number] - High Amenity Surfaces (Bitmac sub-base)	█	1	█
<b>TOTAL</b>				<b>10,249</b>

*Refurbish/replace underground cable ancillary pits*

40.31 GHD states the following in response to NIE Networks' proposed costs for the refurbishment/replacement of underground cable ancillary pits:

*"GHD considers that NIE Networks has provided no evidence or argument that the existing programme is insufficient. Further, the expected remediation rate of 20% is not supported with any source or basis."*<sup>123</sup>

<sup>122</sup> Annex R, p.128.

<sup>123</sup> Annex R, p.128.

*"GHD considers reasonable compromise between the positions of accepting unsupported volumes, and disallowing completely an allowance for which the fundamental need has not been rejected. In view of the overall replacement volumes GHD considers that the 50% allowance is reasonable to ensure efficiency while also allowing for critical works to be delivered."*<sup>124</sup>

- 40.32 There are 50 locations comprising of 131 pits associated with transmission cable accessories on the network, of which 100 are located outside of substations. These locations are on carriageways, in footpaths or on green space in close proximity to the cable route. The pits may contain link boxes, oil pressure gauges and pumping equipment or oil tanks.
- 40.33 A new inspection programme is proposed during RP7. The current cable route patrols will be enhanced during RP7 to capture information on cable link box and cable oil ancillary equipment that are located in underground pits on the footpath or roadway along cable routes. As this is moving from a reactive programme to a proactive programme, NIE Networks had estimated that 20% of the pits outside of the substations would require remediation works. Such remediation may range from the replacement of pit access covers, civil rebuild of the pit, through to complete replacement of the pit and equipment within. However, the costs were subsequently submitted on the basis that 10% of the pits outside the substation would require remedial works. Therefore, NIE Networks can confirm that the UR's concern over the 20% had already been taken into account within the costs, without the associated commentary being updated.
- 40.34 To evidence that NIE Networks' proposed costs are robust, Table 4.16 below provides details of the associated costs for the sub-category. This demonstrates a cost of c.£18,825 per job. The total cost submitted were calculated on the basis that 10% of the 100 pits outside would require remedial action.

**Table 4.19: NIE Networks' costs for refurbishment of a 110kV Linkbox/Oil Tank Pit (per job)**

Cost Category	Description	Unit Price (£)	Quantity	Sub-total (£)
Materials	Buried link box LBM4	█	1	█
Materials	Earth conductor	█	20	█
Labour	BAU - Install (man days)	█	10	█
BIS	2 way traffic control – Full day	█	5	█
BIS	E&R - Removal of existing - Miscellaneous - Remove and dispose of UDB [nr]	█	1	█

<sup>124</sup> Annex R, p.127.

	- Underground Distribution Box			
BIS	E&R - Install new; in all Footway surface types; - Miscellaneous - Ref. Sketch No UDB 4 Way [nr] - Underground Distribution Box	■	1	■
BIS	E&R - Joint Bay - Footway - JB33-2 (33kV Oil filled) [nr] - High Amenity Surfaces (Bitmac sub base)	■	1	■
Decommissioning	Recover & Scrap plant	■	2	■
	<b>TOTAL</b>			<b>18,825</b>

40.35 For the reasons, and based on the additional information, set out above, NIE Networks requests the UR grants the company its total proposed costs for T20m.

*Refurbishment of hydraulic ancillary systems*

40.36 NIE Networks refurbish the ancillary systems associated with our FFC network to ensure that the equipment is fit for purpose and reduce the risk of environmental incidents. This includes tanks, pressure gauges, valves and pillars. The programme for RP7 will replace poor condition assets as and when they are found. In addition, single alarm pressure gauges will be replaced with ones providing dual alarms. Single alarms provide a low-pressure alarm only, whilst dual alarms will provide a falling pressure alarm.

40.37 As this programme is a continuation of a current RP6 programme, the costs have been derived from the out turn costs for this activity up to March 2022 as set out at Table 4.20 below:

**Table 4.20: NIE Networks' outturn costs for refurbishment of hydraulic ancillary systems**

RP6 Out Turn Costs (15/16PB)	Per Annum (15/16PB)	Per Annum (21/22PB)	RP7 Cost
£42,867	£10,717	£12,885	£64,424

40.38 It is noted that the above cost is £1,727 higher than the cost submitted. However, NIE Networks is willing to accept this delta and adhere to its originally submitted costs of £62,697 for this element of work. In any case, Table 4.20 above demonstrates that the costs requested are in line with current RP6 outturn for this work activity.

T20n – Replace 110kV FFC

40.39 GHD states the following in response to NIE Networks' proposed costs for the replacement of 110kV FFC:

*"No detail has been provided on the basis of the lump sum (such as proposed cable route, installation, new cable details etc) making an accurate benchmarking assessment impossible."*<sup>125</sup>

40.40 In relation to the specific sub-programme costs relating to the installation of non-pressured 110kV UG cable (per km), GHD states:

*"The cost falls at the top end of GHD benchmark comparisons for 1 km of 110 kV dual circuit cable installation. On the basis that the cost includes decommissioning of the existing oil cable the cost falls within the reasonable benchmarking range."*<sup>126</sup>

40.41 To evidence that NIE Networks' proposed cost build up is robust, Table 4.21 below provides details of the associated costs for this sub-category. This costing exercise was undertaken by NIE Networks' design department based on FY2021/2022 baseline prices and initial scoping requirements.

40.42 The associated costs at Table 4.21 relate to the total circuit length of 1.1km and includes the decommissioning of the existing cable. The costs include the decommissioning of the existing cable which fall within the reasonable benchmarking range and therefore should be allowed in full, without the subsequent blanket reduction that was applied to all of T20.

40.43 However, following the submission of NIE Networks' RP7 Business Plan, SONI has indicated that the Castlereagh to Cregagh circuit will likely require increased future capacity. In line with 'Touch the Network Once' ("TTNO") principles, instead of replacing this cable with a 124MVA, it should be replaced by a 200MVA cable at a marginal cost increase. In doing so this will avoid duplication of work and will significantly reduce the cost to customers over the asset life. For the avoidance of doubt, the RP7 Business Plan assumed a 124MVA cable. NIE Networks continues to work with SONI to collate the necessary justification for this TTNO investment alongside carrying out detailed costings on the use of 200MVA cable, any associated cable route changes and decommissioning impacts. The company welcomes further engagement with the UR once this work is complete to agree the best way to capture these potentially significant differences.

**Table 4.21: NIE Networks' costs for replacement of 110kV cable on 1.1km circuit**

<b>Castlereagh - Cregagh replacement</b>	
<b>Description</b>	<b>Total (£)</b>
Route Investigation and Design	
Miscellaneous	
Excavation	
Cabling, Jointing & Earthing	

<sup>125</sup> Annex R, p.128.

<sup>126</sup> Annex R, p.129.

Testing	
Adjustment for Working in Substations	
Non-normal Working	
Oil jointing and accessories	
Nominated sub-contractor	
Cable supply	
<b>Sub Total T314 schedule</b>	<b>2,273,301</b>
<b>Includes March 2022 Uplift to Contract rates T314, [REDACTED] at March 2022</b>	
Shift oil cables to new position, clear tanks and cables from building site, remove tanks from joint bay 2/3.	
Drain and hydrogel pump oil filled cables	
Contaminated ground, disposal of oil, cables and tanks	
Demolish and replace cable termination bases at Castlereaugh	
NIE Networks supply of 12 pair and 7 core tele/ pilot cables	
Tree cutting	
Create new accesses, gates and remedial work on completion	
TME team 8 days	
Engineering Design 50 days	
Technical Engineer 6 days	
Drawing Office 15 days	
Project Engineer 60 days	
Wayleaves Officer 10 days	
RPS surveys and CEMP	
<b>Assume cable easement granted FOC</b>	
<b>Total</b>	<b>£2,518,035</b>

T20r – Decommission FFC

40.44 GHD states the following in response to NIE Networks' proposed costs for the decommissioning of FFC:

*"We observed an inconsistency between the cost breakdown provided and the Lump Sum amount. The sum of the cost breakdown line items is £138,249. Given the uncertainty relating to the cost information provided, and the need to propose an efficient allowance, we recommend a 10% reduction is made (in addition to the 10% general reduction proposed for all WP5 allowances)."*<sup>127</sup>

40.45 In the response to the UR's query UR-0422, NIE Networks provided the volume and cost for the decommissioning and removal of 110kV FF cable and the decommissioning and hydrogel of 110kV FF cable, as provided at Table 4.22 below.

<sup>127</sup> Annex R, p.129.

**Table 4.22: NIE Networks' T20r costs breakdown in UR Query No. UR-0422**

T20r Breakdown	Vol	Cost (£)	Basis for cost estimate
Decommission & remove 110kV FF cable (km)	0.157	█	Based on contract pricing.
Decommission & hydrogel 110kV FF cable (km)	5	█	Based on contract pricing.
<b>Total:</b>		<b>242,007</b>	

40.46 NIE Networks clarifies that a row was inadvertently missing from the version submitted to the UR in NIE Networks' RP7 Business Plan. This is corrected at Table 4.23 below. As this presentational matter has now been rectified, NIE Networks considers it is both disproportionate and wrong to impose an additional 10% reduction on the allowance in consequence. Otherwise, the required work will not be able to be delivered under the proposed allowance provided.

**Table 4.23: NIE Networks' corrected T20r costs breakdown**

T20r Breakdown	Vol	Cost (£)	Basis for cost estimate
Decommission & remove 110kV FF cable (km)	0.157	█	Based on contract pricing.
Install 110kV Oil Cable Stop Joint	2	█	Based on contract pricing.
Decommission & hydrogel 110kV FF cable (km)	5	█	Based on contract pricing.
<b>Total:</b>		<b>242,007</b>	

#### T20s – Leak Management Technologies

40.47 NIE Networks notes that GHD had no comments on the company's proposed costs for T20s and recommended an allowance of its proposed total (subject to the overall 10% reduction imposed for RPE adjustments).

40.48 In any case, to evidence that NIE Networks' proposed costs are robust, Table 4.24 below provides a detailed bottom up costing assessment for this sub-category, which demonstrates a cost of █ per oil section. The below costing is based on a single section of 2 km.

40.49 The costs at Table 4.24 have been compared to a quotation for third party works for the completion of the Castlereagh to Knock 110kV circuits in 2019 and are comparable. The proposed works were for four oil sections of varying lengths and duration required to complete the works. The average cost per oil section at that time was █ (excluding costs relating to the supply or disposal of cable oil used, portable site supplies, security services and traffic management).

**Table 4.24: NIE Networks' costs for leak management technologies (based on 2km of oil section)**

Cost Category	Description	Unit Price (£)	Quantity	Sub-total (£)
Materials	Cable oil	█	2,200	█
Materials	PFT	█	2,200	█



Labour	BAU - Install (man days)	█	14	█
Labour	Project Engineer (man days)	█	10	█
Labour	Switching (2 men for 2 days)	█	4	█
BIS	Forklift services to remove access covers	█	2	█
BIS	Excavation and reinstatement	█	4	█
Decommissioning	Recover & Scrap plant			█
<b>TOTAL</b>				<b>24,672</b>

40.50 The cost per job set out in Table 4.24 above are illustrated in the T20s breakdown provided by NIE Networks in its RP7 Business Plan (see Table 4.25 below).

**Table 4.25: NIE Networks' T20s costs breakdown in UR Query No. UR-0422**

T20s Breakdown	Vol	Cost (£)	Basis for cost estimate
PFT Tagging FFC (per Oil Section) - Ballyhenry Rd Tower - Glengormley A	1	█	Based on contract pricing.
PFT Tagging FFC (per Oil Section) - Ballyhenry Rd Tower - Glengormley B	1	█	Based on contract pricing.
PFT Tagging FFC (per Oil Section) - Castlereagh - Cregagh A	2	█	Based on contract pricing.
PFT Tagging FFC (per Oil Section) - Castlereagh - Cregagh B	2	█	Based on contract pricing.
<b>Total:</b>		<b>148,032</b>	

#### **NIE Networks' requested changes**

40.51 Based on the additional information provided by NIE Networks above, the company requests that the UR in its Final Determinations provides in full the allowances proposed by NIE Networks.

#### **41. T602AI – 61850 HARDWARE REPLACEMENT / T602AJ – PROTECTION STUDIES**

41.1 Category T602 relates to replacement by NIE Networks of its transmission protection systems. This category contains a range of sub-categories which include:

- T602ai: this sub-category relates to the replacement of IT hardware within its transmission protection systems; and
- T602aj: this sub-category relates to undertaking studies to assess its transmission protection systems.

- 41.2 NIE Networks requested lump sums of £150,000 for hardware replacement and £22,400 for protection studies during RP7.<sup>128</sup>
- 41.3 These sub-categories form part of NIE Networks' ongoing programme, which started in RP6 and will continue in RP7, to replace its transmission protection systems in order to reduce risks of failure which could result in widespread customer outage, equipment damage and potential safety incidents. The programme seeks to address the highest risk protection assets as part of an optimised rolling plan, replacing assets which are obsolete, unsupported by the manufacturer and approaching end of life.<sup>129</sup>
- 41.4 The key drivers for the programme are to maintain a safe, reliable, and resilient network, facilitating net zero through a flexible and integrated energy system, and compliance with legislation.<sup>130</sup>

#### **The UR's provisional decision**

- 41.5 The UR has disallowed the requested allowances for hardware replacement and protection studies on the basis that insufficient evidence was provided to support these requests.<sup>131</sup>

#### **Concerns with the UR's provisional decision**

- 41.6 NIE Networks acknowledges that it did not provide sufficient justification for these two sub-categories. Further justification is set out below.

##### T602ai – 61850 Hardware Replacement

- 41.7 The work intended to be carried out under this sub-category relates to the replacement of computer gateways and engineering stations at Tamnamore Substation.
- 41.8 Tamnamore Substation was originally built using the technology of a 61850 network protocol with a [REDACTED] system, which was later replaced in approximately 2016 with a [REDACTED] system. This means that the substation relays are on a common network and, instead of a traditional hardwired control panel, it uses a networked computer-based display. Similarly, the SCADA information is not hardwired, but rather is delivered through the computer system via a gateway server to SONI control centre.
- 41.9 There is a lifespan of approximately 7 to 8 years for such hardware (given that it is operational 24 hours a day, 7 days a week). This lifespan has now been exceeded in respect of two gateway servers and three engineering stations at the site. As a consequence, NE Networks has already experienced faults on this system and it is currently running on the backup sever. Investment is required to replace these assets at the site.

<sup>128</sup> DD, Annex R, p.101.

<sup>129</sup> DD, Annex R, p.102.

<sup>130</sup> DD, Annex R, p.102.

<sup>131</sup> DD, Annex R, p.105.

41.10 NIE Networks sets out detailed costings of the work required below, which are based on catalogue pricing from vendors:

**Table 4.26: 61850 Hardware Replacement Costs**

	Cost category	Description of work	Unit Cost	Units	Total cost	Notes
	BIS	SERVER_WINDOWS_SERVER		2		
	BIS	SERVER_WINDOWS_PC		3		
	Labour	BAU - Install (mandays)		10		2 men for 1 week to re-lay fibre as required in trenches
	BIS	FIBRE_ASSET_UG_48F_PER METRE		500		
	BIS	SONI_CISCO_2900_ROUTER		1		
	BIS	SONI_CISCO_SWITCH		2		
	BIS	GE Software Configuration Services - Agile Upgrade		1		
	BIS	GE Software Configuration Services - Networks Upgrade		1		
	Sundries	Misc. Materials		1		
	Labour	BAU - Test (mandays)		20		2 men for 2 weeks
	Labour	BAU - Install (mandays)		10		2 men for 1 week to install new equipment as required
	Non-Stock Materials	61850 - Network Card Upgrade		5		
	Non-Stock Materials	61850 - Relay Upgrade		4		

T602aj – Protection Studies

41.11 The proposed work under this sub-category relates to re-assessing the transmission line characteristics on 20 power line carrier circuits on the 275kV network, using current technology, to ensure that the information available to NIE Networks, and which is being supplied to SONI, is precise and accurate. This will, in turn, enable accurate protection settings to be applied.

41.12 This is becoming increasingly important given the increased use of inverter-based generation and larger loads being connected to the transmission system. Poor line characteristic information can lead to distance protection operating in the wrong zone. It can also cause inaccuracy on the protection relay for distance to fault information. These are inputs used by SONI in modelling the transmission system to calculate how it responds under different fault and generation scenarios to ensure stability of the transmission system.

41.13 Detailed costs information for this investment is set out below.

**Table 4.27: Protection Studies Costs**

	Cost category	Description of work	Unit cost	Units	Total cost	Comments
	Labour	BAU - Test (man days)	█	40	█	2 man days per cct. 20 ccts with PLC to be completed
	Labour	Technical Engineer (man days)	█	20	█	1 man day per CCT
	Labour	BAU - Install (man days)	█	10	█	0.5 man day per CCT, to account for expected changes

**NIE Networks' requested changes**

41.14 The requested allowances for these sub-categories were disallowed on the basis that NIE Networks had not provided sufficient justification. NIE Networks considers that the further information provided in this Response demonstrates why this work needs to be undertaken and the basis for the allowance requested by the company. However, NIE Networks is ready to engage further on this matter if additional information would be helpful for the UR.

41.15 In light of the additional information provided in this Response, NIE Networks requests that, in its Final Determination, the UR grant in full the requested allowance.

## 42. MINOR CORRECTIONS

42.1 NIE Networks has identified a number of contextual labels in Annex Q to the DD that could be misleading. NIE Networks requests that in the Final Determination the UR implement the following textual changes to avoid the risk of confusion:

- Sub-category T11k is currently labelled as 'Ballylumford 275kV CVT Replacement'. This should be changed to '275kV CVT Replacement'. Whereas in RP6 this sub-category related only to Ballylumford capacitive voltage transformer ("**CVT**") replacements, for RP7 there are a number of CVTs at other sites included within this sub-category.
- Sub-category T11p is currently labelled as 'Kilroot 275kV CT Replacement'. This should be changed to '275kV CT Replacement'. Whereas in RP6 this sub-category related only to Kilroot current transformer ("**CT**") replacements, for RP7 there are a number of CTs at other sites included within this sub-category.
- Sub-category T12o is currently labelled as 'Civil works to primary substations'. This should be changed to 'Civil works to transmission substations'.

## CHAPTER 5

### REAL PRICE EFFECTS AND PRODUCTIVITY

#### SUMMARY

This Chapter relates to the UR's provisional determination of a 'frontier shift' which takes account of NIE Networks' input prices changing at a rate above or below inflation (real price effects, or "RPEs") and general improvements in productivity that NIE Networks is expected to achieve.

It should be read in the context of the UR's recognition in the DD that NIE Networks is already amongst the most efficient companies in its sector, as well as the general level of price volatility applicable to activities in the utility arena. Given this background, the proposed reductions in allowances for RPEs, together with a 25% increase in productivity target, is a matter of great concern for NIE Networks.

NIE Networks' more detailed concerns, in summary, are that:

- The UR has made two errors in its approach to calculating RPEs in the DD, in particular: (i) the UR does not distinguish between general labour indices and specialist labour indices for the purposes of determining labour cost RPEs, and (ii) the UR does not propose to include an ex-post true up mechanism for the RPE calculation; and
- The productivity target of 1% per annum proposed by the UR is too stretching.

The UR's proposals with respect to frontier shift contribute to one of NIE Networks' three main concerns with the DD – namely, that aspects of totex allowances are insufficient to allow full delivery of the overall RP7 plan. The cumulative effect of the UR's proposals is that the proposed frontier shift will not appropriately reflect NIE Networks' costs during RP7, leading to a shortfall in proposed allowances for RP7 of approximately £84m.

If the UR's proposals are carried over in its Final Determination, this shortfall in allowances will undermine NIE Networks' ability to deliver the full RP7 plan. This, in turn, will hinder NIE Networks' plans to fully facilitate the decarbonisation of society and maintain a safe, reliable and resilient network.

#### 1. INTRODUCTION

- 1.1 The UR's DD proposes a 'frontier shift' which takes account of NIE Networks' input prices changing at a rate above or below inflation (real price effects, or "RPEs") and general improvements in productivity that NIE Networks is expected to achieve.<sup>1</sup>
- 1.2 NIE Networks considers the frontier shift proposed by the UR in its DD is not correctly positioned because the UR has made two errors in its approach to calculating RPEs:

<sup>1</sup> DD, Chapter 5; DD, Annex C.

- First, the DD determines labour cost RPEs by reference to general labour costs indices only instead of also including specialist labour indices.
  - Second, the DD does not include an ex-post true-up mechanism for the RPE calculation.
- 1.3 As regards productivity, the DD proposes a productivity factor of 1% per annum. However, NIE Networks considers that this target is too stretching and that a 0.8% productivity factor is a more reasonable target, given the UR's assessment of NIE Networks as an organisation operating at upper quartile efficiency<sup>2</sup>.
- 1.4 These errors in approach result in an aggregate shortfall in allowances for RP7 of approximately £84 million.
- 1.5 RPEs and productivity are considered separately in this Chapter, which is structured as follows:
- Section 2 sets out our concerns with the UR's calculation of RPEs in the DD; and
  - Section 3 sets out our concerns with the UR's approach to Productivity in the DD.
- 1.6 The submissions in Sections 2 and 3 of this Chapter on RPEs are supported by a report from NIE Networks' advisers, EY, which responds to the relevant sections of the DD ("**NIAUR's approach to Real price effects and productivity in RP7, 8 March 2024**", referred to as the "**EY RPE and Productivity Report**"), included as Annex 5.1 to this Response). That report is an integral part of NIE Networks' submissions on these issues and should be read in conjunction with this Chapter.

## 2. REAL PRICE EFFECTS

### Introduction

- 2.1 NIE Networks sought an ex-ante RPE allowance as part of its business plan for RP7, recognising that it would face input price pressures over and above inflation. The allowance sought was based on analysis by NIE Networks' economic advisers, EY, who forecasted changes in input prices during RP7 in a report submitted to the UR with NIE Networks' RP7 Business Plan submission ("**NIE Networks, Real price effects and ongoing productivity in RP7, Final Report, 22 March 2023**", referred to here as the "**March 2023 EY Report**").
- 2.2 The UR makes provision for RPEs in its DD.<sup>3</sup> However, errors identified in the UR's proposed approach to RPEs will leave NIE Networks with a significant aggregate shortfall in its RPEs allowance, estimated at around £61 million over the course of RP7.

<sup>2</sup> DD, Annex B.

<sup>3</sup> DD, Annex C.

### The issue

- 2.3 The shortfall identified above is explained by differences in the UR's methodology for calculating RPEs relative to that adopted by EY. NIE Networks submits that the UR's methodology is wrong in the following respects:
- In forecasting wage growth, the UR does not apply specialist labour indices to determine labour costs but instead makes use of general labour indices only; and
  - The UR has not applied in the DD an ex-post true-up mechanism which would mitigate any unexpected movements in outturn price inflation which have the potential to generate unintended gains and losses for NIE Networks in the delivery of the RP7 plan due to differences from the UR's forecast inflation.
- 2.4 These issues are summarised below. This summary should be read in conjunction with the EY RPE and Productivity Report which sets out the issues in full detail.
- Concerns with the UR's provisional decision not to apply specialist labour indices to determine labour costs**
- 2.5 The UR's provisional decision not to distinguish between general and specialist electrical engineering labour would, if carried forward into the Final Determination, prejudice NIE Networks' ability to fund its input costs for its regulated activities. As acknowledged in paragraph 2.17 of DD Annex C, this cost category (i.e., labour costs) makes up "*over half of the opex and capex*" for NIE Networks and, accordingly, it is particularly important that NIE Networks receives the correct RPE allowance in respect of this cost category.
- 2.6 The UR's objectives and duties include delivering good value for consumers as well as shareholders and having regard to the need for regulated companies to be able to finance their activities. It is therefore important that NIE Networks' allowed costs accurately reflect the actual changes in costs that are specific to NIE Networks.
- 2.7 In its business plan submission, NIE Networks proposed including, on the basis of the March 2023 EY Report, two specialised indices for the relevant proportion of NIE Networks' labour costs that relates to specialised labour. In particular, NIE Networks proposed that the UR include:
- The BCIS' 4/CE/01 Civil Engineering Labour index on the basis that it was relevant to specialised activities carried out by DNOs, was the most up to date BCIS index for civil engineering and had been used by Ofgem in RIIO-ED2.
  - BEAMA's Electrical Engineering Labour index on the basis that it was relevant to specialised activities carried out by DNOs and had been used by Ofgem in RIIO-ED2.
- 2.8 The approach adopted in the EY RPE and Productivity Report to distinguishing between general and specialist engineering labour and its selection of relevant



specialised labour indices mirrors the approach recommended by other subject matter experts, in particular the approach of Ofgem in RIIO-ED2. The business plan for NIE Networks, based on the March 2023 EY Report also proposed that the UR use the same two specialist labour indices which Ofgem accepted in RIIO-ED2.

- 2.9 However, in its DD, the UR has not distinguished between general and specialist engineering labour.

NIE Networks' response to the UR's proposals in the DD

- 2.10 The UR recognises at paragraph 2.23 of DD Annex C that "*consideration of specialist labour is not unreasonable and some of the specialist labour indices may have grown at faster rates than general wage growth*". However, the DD indicates that the UR decided not to make a distinction between general and specialist electrical engineering labour for three reasons: (i) focussing on only some labour specific costs would be an asymmetric approach to the potential detriment of consumers; (ii) other roles that may be pertinent to DNOs where there has been wage growth lower than the whole economy average would also need to be considered. It would be asymmetric and improper to consider only specialist labour costs that are above the economy average; and (iii) data on pay increases for key occupations specific to NIE Networks from 2021-2022 show that specialist salaries are growing slightly below the OBR average hourly earnings index and therefore specialist provision is not necessary.

- 2.11 NIE Networks, supported by the EY RPE and Productivity Report<sup>4</sup>, responds as follows to the comments raised in the DD:

- Given specialist labour makes a significant proportion of NIE Networks labour, with labour costs accounting for 52.8% of NIE Networks' capex costs and 77.3% of NIE Networks' opex costs, the inclusion of the two specialist labour indices better reflects these costs to NIE Networks.
- The cost categories selected by NIE Networks are in line with Ofgem's decision in RIIO-ED2. During the development of RIIO-ED2, Ofgem (supported by CEPA) conducted a thorough approach for selecting indices at RIIO-ED2 and included the two specialist labour indices as they are reflective of the costs structure of a network operator. This would also apply to NIE Networks. For example, in considering RPEs at RIIO-ED2, Ofgem was clear that its aim was "*to focus our RPE assessment on significant and robust claims for which meaningful indices are available*".<sup>5</sup> Other labour cost categories were assessed by Ofgem during RIIO-ED2 and they were found not to meet the selection criteria.
- Data on past pay increases for key occupations specific to NIE Networks growing below the OBR average hourly earnings index should not be a reason for excluding from future allowed costs labour indices that reflect

<sup>4</sup> EY RPE and Productivity Report, p.6.

<sup>5</sup> RIIO-ED2 SSMD Annex 2, 4.13.

the cost of NIE Networks or a notional company in the sector. In RIIO-ED2, Ofgem used a notional cost structure to set each DNO's RPE adjustment.<sup>6</sup>

- The indices chosen and their weightings should seek to closely match NIE Networks' cost profile.

Concerns with the UR's approach to considering regulatory precedent

- 2.12 At paragraphs 2.20 of DD Annex C, the UR notes that "*There has been no agreed or common approach by regulatory bodies with respect to this issue. There is precedent for and against distinguishing between different types of labour in setting RPEs.*"
- 2.13 The DD does not address the different regulatory approaches that have been taken in respect of this issue, nor consider whether any particular previous approach might be more appropriate to follow in this case.
- 2.14 The DD notes the UR's view that it is most appropriate to use OBR forecasts of average hourly earnings for the purpose of estimating labour RPEs, and that this is in line with the approach adopted for gas companies in the recently completed GD23 price control.<sup>7</sup> However, the DD fails to address the recent decision by Ofgem in RIIO-ED2 to distinguish between general and specialist labour. Nor does it consider that the indices proposed by NIE Networks for forecasting specialist labour inflation accord with those accepted by Ofgem in that decision.
- 2.15 As a result, NIE Networks considers that the UR has not properly considered regulatory precedent. For the purposes of making its Final Determination:
- GD23 should not be considered a relevant precedent for RP7 in the present context, because the GD23 price control is for gas rather than electricity and the skill sets are different across each industry.
  - The UR should take into account Ofgem's recent RIIO-ED2 decision, in which Ofgem recognised the importance of the general/specialist labour split and applied the two specialised labour indices which NIE Networks proposed to the UR. RIIO-ED2 is an appropriate recent regulatory precedent for the UR to look to in this case, as it relates to electricity and is the skill sets involved are directly comparable.

NIE Networks' proposed approach for RP7

- 2.16 For the purpose of calculating RPEs in RP7, the UR should distinguish between specialised and general labour costs in the manner proposed in NIE Networks' RP7 Business Plan and the March 2023 EY Report.

<sup>6</sup> RIIO-ED2 SSMD Annex 2, 4.3.

<sup>7</sup> DD, Annex C, 2.21.

### Concerns with the UR's decision not to apply an ex-post true-up mechanism

- 2.17 NIE Networks proposed in its Business Plan for RP7 that an ex-post true up mechanism in respect of RPEs should be included for RP7 in order to mitigate any unexpected movements in outturn price inflation which have the potential to generated unintended gains and losses for NIE Networks in the delivery of the RP7 plan, due to differences from the UR's forecast inflation. The DD does not include such a mechanism.
- 2.18 The March 2023 EY Report, which was submitted alongside NIE Networks' RP7 Business Plan, demonstrated the potential benefits to this mechanism.<sup>8</sup> Specifically, it noted that:
- Outturn input price inflation for the first four years of RP6 materially differed from the UR's forecasts, with much greater volatility than anticipated. Inflation growth was lower than forecast for all indices in FY 2019/20 and 2020/21 (likely due to Covid 19), but it was much higher than forecast in FY 2021/22 (in light of the Ukraine war and other global events).
  - If a 'true-up' mechanism had been applied at RP6, the ex-post adjusted allowances would have been slightly higher for NIE Networks relative to the ex-ante approach used by the UR.
  - Given the volatility in inflation, a true-up mechanism in line with that applied by Ofgem in RIIO-ED2 was a "safe hedge" for NIE Networks and its customers.
  - Analysis of historical data indicates that the benefit of the mechanism is symmetrical as there will be some years that it will benefit the company, and some years where it benefits consumers.
- 2.19 NIE Networks considers that this demonstrates the benefits of the true-up mechanism in better matching the allowances to actual costs.

### Response to the UR's comments regarding the ex-post true-up mechanism

- 2.20 The UR acknowledges in the DD that "*a true-up mechanism is a reasonable suggestion*"<sup>9</sup> but decided not to include such a mechanism in the DD.
- 2.21 NIE Networks, supported by the EY RPE and Productivity Report<sup>10</sup>, sets out below its responses to the reasons put forward in the DD for dismissing the mechanism.
- 2.22 First, although the UR is correct that any adjustment will not be perfect given that indices are only a proxy for electricity industry costs, it is still important that the indices applied are as accurate and reflective of true short-term cost pressures as much as possible.
- 2.23 Second, any additional burden that would arise from administering the mechanism, as the UR suggests, would be outweighed by the benefits of the true-up mechanism

<sup>8</sup> March 2023 EY Report, p.7-10.

<sup>9</sup> DD, Annex C, 2.72.

<sup>10</sup> EY RPE and Productivity Report, p.7.

in mitigating any unexpected gains or losses. In any event, Ofgem appears to have resolved any concerns over unmanageable complexity and a simplified process is incorporated in its financial model for RIIO-ED2.

- 2.24 Third, the risk raised in the DD that some of the indices may become defunct can be managed through careful and thorough selection of the indices, which takes into account the credibility and maturity of the index to avoid selecting indices that are more likely to be discontinued. Such a process was undertaken by Ofgem and CEPA in considering whether or not to apply a true-up mechanism in RIIO-ED2.<sup>11</sup>
- 2.25 Fourth, the UR suggests that the existing approach represents a "fair bet" that it considers is justified, and that in any event that there are various other factors which reduce the risk. However, as set out in the EY RPE and Productivity Report, the "fair bet" principle allows an investor to earn returns above the cost of capital to compensate for the additional downside risks that they faced when the investment was made. Under an ex-ante regime, such as for RP7, there is a possibility that NIE Networks is unable to recover their efficiently incurred costs. Insofar as inclusion of a true-up mechanism allows recovery of efficient costs, it may be more representative of a "fair bet".

Concerns with the UR's approach to regulatory precedent

- 2.26 The UR notes in the DD that it has decided to follow the approach used in GD23 and not adopt a true-up mechanism. It further states that "*departure from regulatory precedent needs to be well justified*".<sup>12</sup>
- 2.27 NIE Networks considers that the UR has not appropriately considered regulatory precedent in this specific matter as:
- The DD does not contain any discussion of regulatory precedent on this issue.
  - The DD does not address the recent Ofgem Final Determination in RIIO-ED2, in which Ofgem applied a true-up mechanism in respect of RPEs. The DD therefore is incorrect in stating that applying a true-up mechanism would be a departure from regulatory precedent (as opposed to a different approach from that applied at GD23).
  - No reasons are given in the DD for choosing to follow the approach in GD23 in preference to Ofgem's approach at RIIO-ED2 (or any other relevant regulatory precedent). NIE Networks considers that the UR should have given consideration in the DD to whether the approach followed by Ofgem in RIIO-ED2 might be more appropriate than the approach in GD23 in the context of the significant investment requirements in RP7 and provided a detailed rationale for its decision.

<sup>11</sup> RIIO-ED2, Draft Determination, Core Methodology Annex, 7.445-7.458.

<sup>12</sup> DD, Annex C 2.72.

Interplay with the UR's proposed two year glide-path

- 2.28 In its RP7 Business Plan, supported by the March 2023 EY Report, NIE Networks proposed that, for the purposes of estimating RPEs, the UR apply a five year linear glide-path from the latest historical index data to the long-term average for indices where specific forecasts are not available. In its DD, the UR has proposed to apply a two year linear glide-path instead of the five year glide-path proposed by NIE Networks.
- 2.29 NIE Networks concurs with the view set out in the EY RPE and Productivity Report that if a shorter glide-path is applied in the Final Determination as set out in the DD, this should be supported with the inclusion of an ex-post true-up mechanism to ensure that companies are compensated for any volatility outside their control.<sup>13</sup>

NIE Networks' proposed approach for RP7

- 2.30 NIE Networks remains strongly of the view that an ex-post true-up mechanism in respect of RPEs should be introduced in line with that applied in RIIO-ED2.
- 2.31 Analysis put forward by NIE Networks has demonstrated the benefits of such a mechanism in ensuring that allowances better match actual costs, given the inherent uncertainty in forecasting inflation.
- 2.32 Whilst inflation is now forecast to return to lower levels during the RP7 period, there remains considerable uncertainty over how inflation will develop. The recent volatility in inflation has demonstrated that the inflationary environment can change rapidly. Ongoing geo-political events (e.g., the situation in Gaza) also have the potential to impact inflation and further adds to the uncertainty of the future outlook.
- 2.33 NIE Networks therefore requests that the UR revisit its position in the DD and apply an ex-post true up mechanism in respect of RPEs as part of its Final Determination.

**Conclusion as regards treatment of RPEs**

- 2.34 For the reasons set out above, the UR has materially underestimated the extent of the real input price pressures NIE Networks is likely to face over the course of the RP7 price control, and its proposals lead to an estimated shortfall of at least £61 million (with the scope for further shortfall if no ex-post true-up mechanism in respect of RPEs is applied).
- 2.35 NIE Networks requests that the UR: (i), in calculating RPEs, distinguish between specialised and general labour for the purpose of labour costs; and (ii) apply an ex-post true-up mechanism in respect of RPEs to mitigate any unexpected movements in outturn price inflation which have the potential to generate unintended gains or losses for NIE Networks in the delivery of the RP7 plan due to differences from the UR's forecast inflation.

<sup>13</sup> EY RPE and Productivity Report, p.8.

### 3. PRODUCTIVITY

#### The UR's provisional decision and the issue

- 3.1 In its Business Plan, NIE Networks proposed a productivity assumption for RP7 of 0.8% for both capex and opex spend.<sup>14</sup> This was slightly higher than the midpoint of the productivity estimate range (of 0.5% - 1% for both capex and opex) as calculated and submitted in EY's accompanying analysis in the March 2023 EY Report.
- 3.2 In its DD, the UR is proposing a productivity factor of 1% per annum for both opex and capex.<sup>15</sup>

#### A productivity target of 0.8% is more appropriate

- 3.3 An efficiency factor of 0.8% per annum remains a challenging target that is consistent with data on long term productivity trends, as evidenced by EY in the March 2023 EY Report. NIE Networks considers that it would be able to deliver on a 0.8% productivity factor if the Final Determination provided a balanced and reasonable outcome on allowances for the efficiency-driving projects proposed in the RP7 Business Plan.
- 3.4 Although a productivity stretch of 1% was at the top of the range submitted in the March 2023 EY Report, EY has confirmed NIE Networks' view in the RPE and Productivity Report that the UR's decision to set the target at this level is "overly stretching"<sup>16</sup>. EY explains that<sup>17</sup>:
- EY's advice that a range of 0.5% - 1.0% would be a well-evidenced, yet stretching target for NIE Networks was based on a holistic assessment of CEPA's Total Factor Productivity ("TFP"), regulatory precedence and historical labour productivity differences between NI and the rest of the UK;
  - However, EY considers that an ongoing productivity assumption of 0.8% would be more appropriate as: (i) the productivity target should be set at a level which reasonably allows NIE Networks to outperform. Setting the target at 0.8% would be nearer to the midpoint of the range identified by historical analysis and provides a more balanced likelihood of either underperformance or outperformance, which creates a more balanced performance regime; (ii) CEPA's expanded comparator set for the TFP used in RIIO-ED2 includes high productivity industries (such as the Information and Communications sector), which is significantly different to the sector that NIE Networks operates in, leading to a higher upper bound of the range; and (ii) the additional analysis conducted by CEPA that considers business cycles provides a more rounded view on historic productivity, as it assesses growth over a complete business cycle and consequently mitigates over or

<sup>14</sup> RP7 Business Plan, 8.56.

<sup>15</sup> DD, 5.16; DD, Annex C, 3.21.

<sup>16</sup> RPE and Productivity Report, p.9.

<sup>17</sup> RPE and Productivity Report, p.9-11.

under-estimating. It is also consistent with the CMA's approach in its determination of the RIIO-T2 and RIIO-GD2 appeals. Using this approach, CEPA's analysis indicates a lower range for historic productivity growth of 0.3% - 1%.

3.5 NIE Networks also considers that it would in practice be very challenging for NIE Networks to deliver a 1% productivity target:

- As set out in NIE Networks' Business Plan for RP7<sup>18</sup>, and as recognised in the DD<sup>19</sup>, NIE Networks' recent historic costs have been benchmarked against those of the GB DNOs and NIE Networks was found to be the most efficient operator. Given NIE Networks' existing levels of efficiency, the scope for NIE Networks to deliver further efficiency during RP7 to the extent required to meet a 1% productivity target is very limited. It is fair and reasonable for the UR to set a productivity target that takes this into account and therefore does not seek to "aim high".
- Further, NIE Networks intends to expand its internal workforce significantly over the course of RP7 to support delivery of its RP7 Business Plan.<sup>20</sup> The expansion of the workforce is likely to dampen NIE Networks' productivity levels during RP7 as the new staff are incorporated into the workforce.

3.6 Consequently, NIE Networks requests that the UR amend its DD proposals so that the actual productivity target is 0.8%.

**Conclusion: proposed approach for RP7**

3.7 NIE Networks considers that its proposed efficiency factor of 0.8% remains appropriate and requests that the UR adopt 0.8% as the efficiency factor in its Final Determination. NIE Networks anticipates that it would be able to deliver on a 0.8% productivity factor provided that the Final Determination sets out a balanced and reasonable outcome on allowances for the efficiency-driving projects proposed in its RP7 Business Plan.

<sup>18</sup> RP7 Business Plan, 2.76 and 7.275.

<sup>19</sup> DD, 3.4; DD, Annex B.

<sup>20</sup> RP7 Business Plan, 12.5.

## CHAPTER 6

### IT, DSO AND DIGITALISATION

#### SUMMARY

This Chapter relates to the UR's provisional determination in respect of allowances for NIE Networks' IT programme during RP7, including certain costs for the Enduring Solution (the IT systems and processes required to deliver a competitive retail electricity market).

NIE Networks' concerns, in summary, are that:

- The UR has indicated in the DD that it is minded not to allow or only to partially allow expenditure for particular projects which NIE Networks proposes to commence in the RP6 Extension year and the first two years of RP7, and that further consideration and evidence is required for certain projects in this period; and
- The UR has reduced the allowances requested by NIE Networks for costs incurred in respect of the Enduring Solution relating to: (i) market entry; and (ii) staff costs required for ES functional areas during RP7.

The UR's proposals with respect to NIE Networks' IT programme, including the Enduring Solution, contribute to one of NIE Networks' three main concerns with the DD – namely, that aspects of totex allowances are deficient. The cumulative effect of the UR's proposals is that the proposed allowances for NIE Network's IT programme will fall short of what is required for RP7 and/or may result in the delay of projects which NIE Networks consider are important to be implemented by the end of the second year of RP7 to enable the full IT programme to be delivered within RP7.

If the UR's proposals are carried over in its Final Determination, these issues will undermine NIE Networks' ability to deliver its IT programme for RP7, which will hinder its aims for RP7 to: (i) introduce greater digitalisation to make it easier for customers to do business with NIE Networks; (ii) ensure the NIE Networks business is prepared for the future and can transition successfully to the role of DSO; and (iii) deliver an increased network investment plan in an efficient manner. Reduced allowances in relation to market operations costs will hamper NIE Networks' ability to fulfil its important retail market obligations.

#### 1. INTRODUCTION

1.1 During RP7, NIE Network proposes to undertake significant investment in its IT programme. Investment in non-Network IT is planned to increase from £8.3m per annum in RP6 to £21.4 per annum in RP7 (across both core transmission and core distribution).<sup>1</sup>

1.2 As set out in the DD:

<sup>1</sup> RP7 Business Plan, Chapter 8, Tables 10 and 11.



*"in addition to the S/4HANA implementation requirement, there is a need to simultaneously digitally transform the business, build DSO capability, and deliver appropriate cyber security initiatives".<sup>2</sup>*

- 1.3 The UR recognised in the DD that this is a *"large, highly complex but also highly relevant RP7 IT programme"*.<sup>3</sup>
- 1.4 In the DD, the UR proposes to adopt a two-phase approach to the determination of allowances for certain IT, DSO and Digitalisation projects in RP7:
- Phase 1: projects which NIE Networks considered should take place in the RP6 Extension year and the first two years of RP7. The DD sets out an initial allowance for Phase 1 projects, although the UR has indicated that there are certain Phase 1 projects which require greater consideration or additional evidence before it can grant a final allowance. The UR has invited NIE Networks to provide further information in relation to all Phase 1 projects in advance of the Final Determination.
  - Phase 2: projects that NIE Networks considered could begin in years 3-6 of RP7 (i.e., the period April 2027 to March 2031). The DD does not set out allowances for Phase 2 projects to be commenced in years 3-6 of RP7 but the UR has proposed to include a mechanism in the final price control that will confirm the scope and cost for the remainder of the IT programme in advance of the start of year 3 of RP7.
- 1.5 NIE Networks notes that the proposed two-stage approach is likely to introduce risk in relation to NIE Networks' ability to plan for longer-term delivery and will require further resources for the Phase 2 process. Nevertheless, NIE Networks recognises the benefits of the approach proposed by the UR in managing the uncertainty of the evolving requirements of the energy market in NI during RP7. However, NIE Networks urges the UR to carefully consider the mechanism that will be applied in the Phase 2 process to ensure that the process builds properly upon the detailed information provided to date in the RP7 process and focusses only on considering the scale of allowances requested, based on the updated information available at that time.
- 1.6 NIE Networks welcomes the opportunity to provide further information in respect of Phase 1 projects, which it addresses in this Chapter.
- 1.7 NIE Networks also sought allowances for other aspects of its IT plan which were not part of this phased approach, including its Enduring Solution proposal. The UR has partially approved these allowances in the DD.
- 1.8 The remainder of this Chapter is structured as follows:
- Section 2 provides NIE Networks' response to the UR's provisional determination with respect to the projects that fall within the proposed phased approach; and

<sup>2</sup> DD, 6.4.

<sup>3</sup> DD, 6.5.

- Section 3 and 4 set out NIE Networks' response with respect to the DD's proposals for the Enduring Solution.

## 2. PROJECTS THAT FALL WITHIN THE PHASED APPROACH

2.1 A detailed response to the DD<sup>4</sup> is set out in Annex 6.1 to this Response. This sets out NIE Networks' principal observations on the Digital & IT elements of the DD and the key principles to be considered by the UR in developing its Final Determination. It also sets out the additional information requested by the UR:

- for the projects to be funded by the expenditure which the UR has stated in the DD it is minded to allow for Phase 1 of RP7, on a project-by-project basis;
- for the PRG01 project expenditure which the UR has stated in the DD it is minded to partially allow for Phase 1 of RP7;
- for the projects to be funded by expenditure which the UR has stated in the DD it is minded to disallow for Phase 1 of RP7, on a project-by-project basis; and
- for the recurring Digital & IT opex which the UR has stated in the DD it is minded to disallow for RP7, on a project-by-project basis.

2.2 As set out in Annex 6.1, in the period since publication of the DD, NIE Networks has revisited each of project briefs to confirm the scope of each initiative, undertake additional analysis in relation to the quantifiable and qualitative benefits, and confirm delivery priorities.

2.3 Following this further assessment, NIE Networks is proposing to re-phase a small number of projects from Phase 1 to Phase 2. However, NIE Networks is confident that the vast majority of all of the projects proposed for RP6 Extension and Phase 1<sup>5</sup> need to be progressed as planned if the overall programme is to be delivered within the RP7 timeframe. This proposal was focused upon:

- progressing mandatory expenditure needed to address vendor support and cyber security risks;
- ensuring that important foundational investments were progressed, allowing other projects to be delivered during Phase 2;
- ensuring that initiatives providing significant benefit at minimal cost and risk were progressed to maximise the benefits delivered during RP7;
- progressing procurement and pilot exercises to ensure that information needed for the Phase 2 reopener would be available; and
- minimising potentially nugatory spend by deferring expenditure to Phase 2 if possible.

<sup>4</sup> DD, Chapter 6 and Annex W.

<sup>5</sup> As set out in NIE Networks, RP7 Digital IT Business Plan Replan, October 2023.

- 2.4 The detailed responses for each project set out in Annex 6.1 explain further why the proposed investment is considered important during the RP6 Extension year and Phase 1 of RP7.
- 2.5 Failure to provide allowances for the Digital & IT Phase 1 investment described in Annex 6.1 will impact overall RP7 programme delivery and will significantly hamper NIE Networks' efforts to deliver its RP7 objectives.

### 3. **ENDURING SOLUTION: MARKET ENTRY**

- 3.1 In May 2012 NIE Networks introduced new IT systems and processes required to meet legislative and regulatory requirements for a fully competitive retail electricity market. These arrangements are known as the Enduring Solution ("**ES**").
- 3.2 NIE Networks operates major IT systems that are critical to the operation of the retail and wholesale electricity markets. These IT systems require on-going support which incurs operating costs associated with the hosting of IT infrastructure (servers and other hardware), software licences and other third-party costs as well as the provision under contract of technical managed services necessary for incident resolution and other technical support.
- 3.3 ES expenditure also includes costs relating to market entry. New entrants to the retail market must undertake a certification process to be able to operate. Costs associated with new supplier entry which include system installation, accreditation and re-accreditation are captured within this expenditure, as well as costs associated with the Supplier of Last Resort ("**SoLR**") process (which ensures that when supplier failure occurs, affected domestic customers are guaranteed continuity of supply).
- 3.4 This service also includes the facility under which established suppliers can become accredited for a particular market segment (e.g. the unmetered market segment) and annual market assurance is also completed for all suppliers to ensure adherence to the Market Registration Code.
- 3.5 In its assessment of associated market entry costs, NIE Networks used current actual costing information. This covered the annual statutory costs relating to annual market assurance and variable costs, which assumed that there will be one new market entrant per annum during RP7.
- 3.6 The company proposed market entry costs of £1.93 million for the full RP7 period.<sup>6</sup>

#### **The UR's provisional decision**

- 3.7 In its DD, the UR stated:

*" NIE Networks has stated that in relation to Market Entry Costs the RP7 plan has assumed that there will be one new market entrant per annum during RP7. There are currently 6 domestic electricity energy suppliers and 2 additional I&C only suppliers. In the last decade there has been 3 new market entrants, therefore proposing 1 new entrant per year is an ambitious target.*

<sup>6</sup> RP7 Business Plan, 'Market Operations RP7 Business Plan', p.35.

*We will therefore be proposing a reduction of the Market Cost line above to bring it into line with previous market entry trends."*<sup>7</sup>

- 3.8 The UR's proposed approach assumes that there will be two new entrants across the entire period of RP7. Based on the UR's approach, the company's proposed market entry costs are reduced to £0.64 million for the RP7 period.

#### **Concerns with the UR's provisional decision**

- 3.9 NIE Networks considers that the UR's data regarding the number of new market entrants is incorrect.
- 3.10 Based on NIE Networks' assessment (which does not distinguish between suppliers on the basis that NIE Networks performs the same or at least a similar level of work for all suppliers) there have been seven new market entrants in the last decade (2013 – 2022) and a total of 13 new market entrants in the 14 years since the NI retail market opened in 2011. This includes Share Energy, which will enter the retail market during 2024.
- 3.11 These numbers of entrants are consistent with NIE Networks' assumption of one new entrant per year. Table 6.1 below sets out all the new market entrants since 2011.

**Table 6.1: New entrants in the NI retail market since 2011**

<b>Supplier Name</b>	<b>ID</b>	<b>Market Entry Date</b>
Budget Energy	S40	05/07/2011
VAYU/Naturgy	S08	24/01/2012
Go Power/LCC	S41	09/02/2012
Click Energy	S43	08/10/2015
Open Electric	S42	06/10/2015
Gaelectric	S44	17/01/2017
3T Power	S46	10/04/2018
ElectroRoute	S73	10/04/2018
Brookfield	S10	03/07/2019
Bright Energy	SB8	21/10/2020
Statkraft Markets GmbH	SB9	05/04/2023
Orsted Onshore Green Energy NI LTD	S10	05/07/2023
Share Energy	SE1	TBC 2024

#### **Conclusion**

- 3.12 NIE Networks requests that the UR updates its assumption regarding new market entrants to reflect the numbers of new entrants provided by the company at paragraph 1.8.
- 3.13 The company requests that the UR amends the allowance for market entry costs to £1.93 million for the RP7 period.

<sup>7</sup> DD, Annex W, 6.23.

#### 4. **ENDURING SOLUTION: STAFF COSTS**

4.1 NIE Networks' market services include the following ES functional areas, which are critical to the management of market processes and data provision required for the operation of the competitive retail and wholesale markets:

- Market registration;
- Data aggregation;
- Supplier Billing;
- Meter data processing;
- Central Design Authority; and
- Market systems.

4.2 The retail and wholesale markets have evolved during the course of RP6 and new developments have resulted in additional requirements for ES resources. Examples include:

- I-SEM wholesale market arrangements established in October 2018;
- TIBCO System Separation in September 2021;
- Additional regulatory and external stakeholder reporting;
- Increased installation of low carbon technologies requiring more complex solutions;
- More flexible system solutions;
- Increased number of data requests; and
- New Microgeneration settlement processes.

4.3 In its RP7 Business Plan, NIE Networks carried out a comprehensive bottom-up analysis to determine the staff costs required for ES functional areas during RP7. It also included a detailed description of each of the ES functional at paragraph 2.1 to support its rationale for relating staff costs. The company assumed that 29 Full Time Equivalents ("**FTEs**") are required to carry out activities in these areas during RP7 (see Table 6.2 below).

4.4 Based on this assumption, the company requested £8.3 million for staff costs for ES activities during the RP7 period.<sup>8</sup>

<sup>8</sup> RP7 Business Plan, 'Market Operations RP7 Business Plan', p.36-41.

**Table 6.2: NIE Networks' RP7 Plan – Market Services staff numbers by main functional area**

ES Activity	FTE Resources
Market Registration	4
Data Aggregation	4
DUoS Billing	4
Meter data processing:	
- Metering Reading exceptions	4
- MV90	4
- CX111	2
Central Design Authority	2
Market Systems	
- Systems Management	3
- SAP Analyst	1
Market Services Manager	1
<b>Total RP7 request</b>	<b>29</b>

**The UR's provisional decision**

4.5 In its DD, the UR states the following:

*"While we do agree with the functional areas and the need for increases in FTEs in market services, at this time we are unconvinced that the quantification of numbers is justified across the Central Design Authority and the Systems Management areas."*<sup>9</sup>

*"In relation to the Central Design Authority functional area, further evidence is needed to understand how further workload resulting the [sic.] de-harmonisation of the market system in 2021 warrants to the need for an additional FTE."*<sup>10</sup>

*"In relation to the Market Systems (Systems Management), the further system changes that have resulted in NIE Networks request for an additional FTE are anticipatory. We require further evidence to demonstrate what these changes could be and how they warrant an additional FTE."*<sup>11</sup>

*"We have proposed to disallow 1 FTE from the Central Design Authority and 1 FTE from the Systems Management Functional Areas. Therefore, in total, we have provided an allowance of 27 FTEs (increasing from 23.5 FTEs) out of the proposed 29 requested FTEs in NIE Networks business plan."*<sup>12</sup>

4.6 Based on the UR's approach, the company's proposed allowance for staff costs relating to ES activities is reduced from £8.3 million to £7.8 million for the RP7 period.<sup>13</sup>

<sup>9</sup> DD, Annex W, 6.27.

<sup>10</sup> DD, Annex W, 6.28.

<sup>11</sup> DD, Annex W, 6.29.

<sup>12</sup> DD, Annex W, 6.30.

<sup>13</sup> DD, Annex W, 6.31.

### Concerns with the UR's approach

- 4.7 NIE Networks notes that the UR considers that further evidence is required:
- for the Central Design Authority functional area, to understand how further workload resulting from the de-harmonisation of the market system in 2021 warrants to the need for an additional FTE; and
  - for the Market Systems (Systems Management) functional area, to demonstrate the further system changes could be and how they warrant an additional FTE.
- 4.8 NIE Networks has provided further information below in response to the UR's queries.
- Central Design Authority
- 4.9 The company explained in its RP7 Business Plan that it has a governance role in respect of the Northern Ireland retail market procedures. It manages the Central Design Authority ("**CDA**"), a forum which enables electricity suppliers to raise current procedural issues and discuss possible market design changes including any impacts on IT systems or market procedures.
- 4.10 Since the baseline retail market procedures were introduced in 2012, there have been a number of changes implemented. Each implementation requires significant market engagement and co-ordination to ensure supplier readiness and to ensure all relevant documentation is updated accordingly and agreed.<sup>14</sup>
- 4.11 NIE Networks is forecasting enhanced workload and requirements in relation to its management of the CDA during RP7, which will require an additional FTE to provide support. De-harmonisation and other additional factors will contribute to the enhanced workload.
- 4.12 Firstly, de-harmonisation of the market systems in 2021 has meant that some of the co-ordinated functions previously led by the Retail Market Design Service ("**RMDS**") are now being solely carried out by NIE Networks through the CDA. Additional tasks include:
- Management of various additional processes and systems with an enhanced governance role, whereby NIE Networks is responsible for (i) keeping master records; (ii) solely managing schema changes; (iii) notifying all planned and unplanned system outages; and (iv) managing system workplans;
  - Management of the CDA SharePoint site which is used to facilitate communication between and provide updates to suppliers concerning Market Change Requests ("**MCRs**") pursuant to Schedule 5 of the Market Registration Code<sup>15</sup>; and

<sup>14</sup> RP7 Business Plan, 'Market Operations RP7 Business Plan', p.39.

<sup>15</sup> The Market Registration Code is available at: [25092021 MRC Final \(uregni.gov.uk\)](https://www.uregni.gov.uk/25092021-MRC-Final). It sets out in detail for market participants how the retail electricity market operates and is established in accordance with NIE Networks' Licence. A MCR is a formal process by which a supplier/stakeholder requests to change or alter a Code Procedure pursuant to Schedule 5 of the Market Registration Code.

- Sole responsibility for management and co-ordination of all discussion requests as well as analysing these in respect of their impact on the retail market.
- 4.13 Secondly, the Northern Ireland Energy Strategy has and will continue to drive the growth of Low Carbon Technologies ("**LCTs**"), microgeneration and energy storage solutions and these are expected to have a significant impact on the retail market which will necessitate significant and material changes to current procedures governed by the Market Registration Code in RP7. Examples include:
- An increase in the number/frequency of MCRs from suppliers and other stakeholders which will need to be assessed and analysed by CDA team; and
  - A significant increase in the complexity of the MCRs due to LCT technologies, which is potentially expected to result in a complete redesign of relevant procedures governed by the Market Registration Code, which will place a substantially increased workload on the CDA in order to analyse and facilitate and support these changes.
- 4.14 Thirdly, NIE Networks expects the various IT systems upgrades planned in RP7 (including SAP S4/HANA) to impact the current 'business as usual' ("**BAU**") market processes. This may require minor changes to be made to BAU market process or otherwise require additional testing of such processes. This will need to be managed and co-ordinated through CDA.
- 4.15 NIE Networks considers that maintaining only one FTE within CDA during RP7 will be insufficient, especially during this transformational period. Having only one FTE in this area could also result in a 'single point of failure' risk, which could have a severe detrimental impact on the market if an unforeseen event arises. The company considers that one FTE alone would be unable to:
- Comprehensively assess and analyse MCRs, which would risk delays or changes being made which could have unforeseen detrimental effects on the retail market; and
  - Effectively deploy changes within the retail market in a timely manner in order to adapt it to the needs and requirements of customers and stakeholders, which could result in impacts on net zero and decarbonisation targets.
- 4.16 NIE Networks therefore considers that an additional FTE is required for the CDA functional area at RP7.

#### Market Systems (Systems Management)

- 4.17 As explained in its RP7 Business Plan, NIE Networks' market systems staff are responsible for co-ordinating updates to market systems which have been requested and agreed by the market or which are required internally by the company in order to keep the systems up to date and supported by software vendors. Their focus is to ensure any changes are managed while minimising impacts on the service we provide to the market participants and other stakeholders.



4.18 This includes managing communications and project coordination with a range of external and internal stakeholders, prioritising system changes, and overseeing associated testing and commissioning. They are also responsible for the management of services provided by Atos and other third-party service providers to support the ES systems and critical keypad prepayment meter infrastructure.<sup>16</sup>

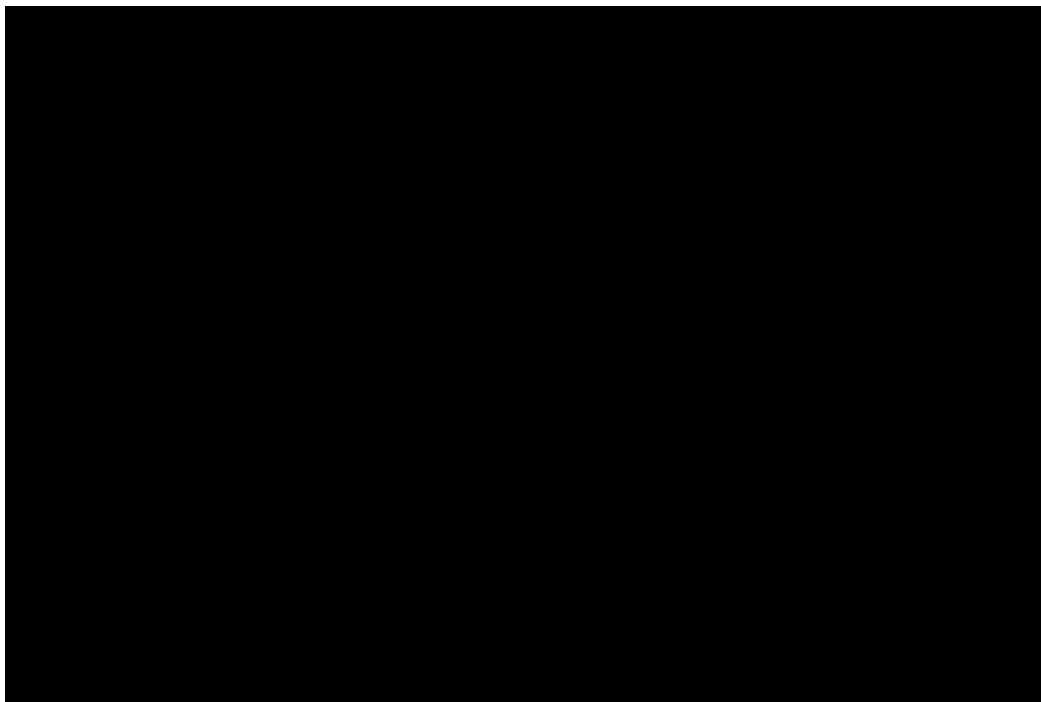
4.19 The company anticipates that a number of factors will contribute to system changes during RP7, which will require an additional FTE to provide support.

4.20 Firstly, [REDACTED]

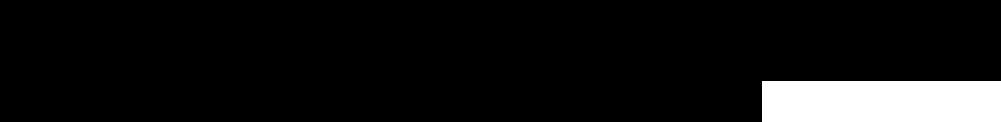
4.21 [REDACTED]

4.22 The workload in this area has increased due to increases in (i) [REDACTED] and (ii) the number of overall IT systems. Figure 6.1 below demonstrates that there are over [REDACTED] individual systems currently within scope of Systems Management team. New and additional IT Systems set to be implemented in RP7 will further increase this workload and requirement.

**Figure 6.1:** [REDACTED]



<sup>16</sup> RP7 Business Plan, 'Market Operations RP7 Business Plan', p.39.

- 4.23 Secondly, growth in the number of Keypad meters throughout RP6 has increased the workload in respect of the PRI Prepayment Meter Infrastructure Provider ("**PPMIP**") system. The company estimates that c. 400,000 of the total c.950,000 customers in the NI retail market now have Keypad meters. This has resulted in:
- Increased governance and co-ordination role in relation keypad/PPMIP functionality and settings (including Emergency Credit, Top-up values and overload parameters); and
  - Increasingly specialised requirements within the Keypad/PPMIP systems have necessitated the need for a dedicated role to effectively co-ordinate the various subject experts.
- 4.24 Similarly to the CDA functional area, the Northern Ireland Energy Strategy will continue to drive growth in LCTs, microgeneration and energy storage in RP7 and will therefore increase the workload of market systems staff:
- Additional LCT-related tariffs and/or changes in RP7, including to the retail market design, will need to be incorporated into the relevant systems, which will increase workload across the entirety of these systems; and
  - Specifically, the PPMIP/Keypad system settings are completely bespoke and any change, including to the retail market design regarding new tariffs, will need to be built, implemented and rolled out separately within the keypad system.
- 4.25 NIE Networks also anticipates that the rollout of its new IT systems/apps and the movement towards the greater digitalisation of its overall processes will result in an 'embedding' period. This will likely require the need for minor adaptations to BAU processes to ensure the full integration of new systems and upgrades. During this embedding period, the workload within the company's Systems Management team will increase. This is due to (i) the requirement to perform analysis and testing; and (ii) subsequent management and co-ordination of the rollout and implementation of any changes.
- 4.26 NIE Networks considers that maintaining only two FTEs within the Systems Management functional area during RP7 will be insufficient, especially given the significant IT projects and upgrades that are due in RP7. Having insufficient resources in this area could have a severe detrimental impact on the market. The impacts of having insufficient resources might include:
- 
  - An inability to effectively employ changes through the various IT systems such as PPMIP (Keypad) in a timely manner in order to adapt it to the needs and requirements of customers and stakeholders, which could result in impacts on net zero and decarbonisation targets; and
  - An inability to fully realise the benefits of new IT systems and digital processes, which will result in an (i) impact on customer service; (ii) costs to customers

as a result of inefficiency; and (iii) and inability to effectively meet the future needs of customers, including LCTs and net zero ambitions.

**NIE Networks' request**

- 4.27 In the Sections above, NIE Networks has sought to evidence the material need for additional FTE resource during RP7 to support changes in workload and requirements in both the (i) CDA; and (ii) Systems Management functional areas.
- 4.28 NIE Networks therefore requests that in its Final Determination, the UR allows one additional FTE for each of the CDA and Systems Management functional areas and grants the company its requested allowance of £8.3 million for the RP7 period.

## CHAPTER 7

### MARKET OPERATIONS

#### **SUMMARY**

This Chapter relates to the UR's provisional determination with respect to market operations (except for the Enduring Solution).

In the DD the UR has significantly reduced the allowances requested by NIE Networks in the RP7 Business Plan. This is principally based on the UR's assessment that the allowances requested by the company are in excess of the average outturn costs seen in RP6. NIE Networks considers that this assessment does not reflect the most recent cost and activity information for these services. Under the UR's proposed approach, NIE Networks would be inadequately funded to deliver its customer, market and legislative obligations.

NIE Networks' concerns, in summary, are that:

- The UR incorrectly relies on NIE Networks' historic RP6 costs to set the company's allowances for market operations;
- The UR's rejection of additional Low Carbon Technology (LCT) unit cost categories for metering services negatively impacts NIE Networks' customer service and obligations related to NI energy transformation ambitions; and
- Following the provision of further evidence by the company, the UR should take into account the company's actual material cost increases in its direct cost allowances for metering service in RP7.

The UR's proposals with respect to market operations contribute to one of NIE Networks' three main concerns with the DD – namely, that aspects of totex allowances are insufficient to allow full delivery of the RP7 plan.

If the UR's proposals are carried over to its Final Determination, the shortfall in allowances will undermine NIE Networks' ability (i) to ensure that its customers receive an expected level of service and (ii) to facilitate the decarbonisation of society.

#### **1. INTRODUCTION**

1.1 This Chapter sets out NIE Networks' response to the UR's provisional determination with respect to market operations.<sup>1</sup>

1.2 NIE Networks' market operations activities comprise:

- metering services including meter installation and certification services ("**metering**");
- meter reading; and

<sup>1</sup> See Chapter 7 and Annex O of the DD.

- the provision of metering data and registration services to support the operation of the retail and wholesale electricity markets. This includes the operation and management of major IT systems that are central to enabling wholesale and retail market competition.
- 1.3 These activities are unique to NIE Networks, in that they are not activities carried on by the GB DNOs.<sup>2</sup>
- 1.4 NIE Networks' market operations activities are driven entirely by NIE Networks' customer, market and legislative obligations. The company's forecast cost increases in this area in RP7 primarily reflect the increasing needs of our customers and their growing ambitions to engage in the energy transition through connection of low carbon technologies ("LCTs"), together with IT and digital requirements which are crucial to the company's market operations functions.<sup>3</sup>
- 1.5 In carrying out its market operations obligations, NIE Networks' primary objective is to ensure that the company provides customers with an excellent level of service and deliver all operations to the highest standards in relation to safety and quality.
- 1.6 There has been a notable change in the landscape for market operations activities during the later years of RP6. The landscape will continue to change significantly and have an increasing impact across market operations in the RP7 period. Some examples of this include:
- increases in customer expectations and the expected level of customer service since the Covid-19 pandemic;
  - considerable growth in the connection of LCTs to the electricity network which require specific metering arrangements in order to fully realise the benefits of LCTs for customers;
  - the expected introduction of smart metering during RP7; whilst NIE Networks' RP7 Business Plan did not provide for the introduction of smart metering in accordance with the approach requested by the UR, NIE Networks is very mindful that 'business as usual' metering during RP7 should, where efficiently possible, take account of the future introduction of smart metering. This includes measures such as the acquisition and retainment of appropriately skilled metering electricians who will be able to support a future smart metering rollout; and
  - increasing pressures on supply chain availability and prices of traditional (non-smart) meters due to the global rollout of smart meters.
- 1.7 NIE Networks has a number of concerns and/or points of clarification regarding the UR's approach to market operations in the DD, which would negatively impact on this objective. Such impacts include:

<sup>2</sup> In GB, these activities fall to other market participants.

<sup>3</sup> The costs associated with IT and digital requirements are included in Chapter 6 of this Response, in line with the approach taken in the DD.

- a significant adverse impact on NIE Networks' ability to deliver its customer and legislative obligations to currently established standards;
- a negative impact on current high levels of customer service for market operations activities;
- an adverse impact in relation to the realisation of customers' LCT ambitions, the achievement of which will be critical in delivering NI's energy transformation; and
- allowances that are at an insufficient level to allow NIE Networks to recover efficiently incurred costs and continue to efficiently deliver the company's services without compromising customer service, safety and quality.

1.8 These areas for concern or clarification are set out in this Chapter as follows:

- Section 2 concerns the UR's failure to use the most appropriate outturn costs to set allowances for metering;
- Section 3 concerns the UR's rejection of NIE Networks' proposal to introduce additional LCT-related unit cost categories for metering services;
- Section 4 considers the UR's recognition of NIE Networks' true cost increases in relation to meter purchasing costs and includes an update on such costs;
- Section 5 concerns the UR's approach to setting allowances for meter reading;
- Section 6 concerns the UR's approach to setting allowances for fault and overhead costs; and
- Section 7 clarifies NIE Networks' position on issues relating to smart metering, namely (i) the 'low regrets' approach to smart metering; and (ii) the impact of increased smart meter manufacturing on unit costs for traditional meters.

## 2. **SETTING THE BASELINE FOR METERING ALLOWANCES**

2.1 In its RP7 Business Plan, NIE Networks largely based its expenditure forecasts for market operations activities on a comprehensive bottom-up approach.

2.2 The company's forecast for average annual Metering costs in RP7 were higher than RP6, primarily to reflect the growing ambitions of its customers to engage in the energy transition of NI through connection of LCTs.

2.3 NIE Networks noted that the significant increase in LCT connections forecast for RP7 will *"impact across all of our market operations activities, including higher volumes and more specialised metering to facilitate the connection of LCTs, together with expected growth in retail market competition driven by the green economy."*<sup>4</sup>

<sup>4</sup> NIE Networks, RP7 Business Plan, 8.53.

- 2.4 Table 7.1 below illustrates NIE Networks' forecast expenditure for RP7 for each type of market operations activity costs, excluding Market Services (Enduring Solution) costs, which has been considered as part of IT expenditure.

**Table 7.1: NIE Networks' RP7 forecast expenditure for market operations**

<b>Market Operations</b>	<b>NIE Networks' RP7 Forecast (£m at 2021/22 prices)</b>
<b>Meter Reading</b>	25.56
<b>Metering (Direct Costs)</b>	33.38
<b>Metering (Indirect Costs)</b>	16.70
<b>Other Metering Costs</b>	4.12
<b>Fault and Overhead Costs</b>	47.81
<b>Total</b>	<b>127.58</b>

### The UR's approach

- 2.5 In its DD, the UR rejected NIE Networks' bottom-up approach and assessed the company's market operations allowances based on the company's average costs to date (March 2023) for RP6, with some adjustments.
- 2.6 In terms of metering direct costs:
- For meter installs/changes direct costs, the UR rejected the proposal by NIE Networks to include three additional categories in relation to LCT related metering in the unit cost categories (covered in Section 3 below) and set the allowance for LCT related metering using the three unit cost categories used at RP6 (Credit Meters, Keypad and Commercial).
  - The UR set its allowance for direct costs using NIE Networks' RP6 average unit costs to date, excluding the 2021 reporting year (April 2020 to March 2021). This was due to the 2021 outturn cost data being regarded as an outlier as a result of Covid-19 restrictions, which disrupted NIE Networks' metering work programme.<sup>5</sup>
  - For meter recertification and replacement direct costs (including the replacement for theft programme), the UR set the allowance for the three recertification programmes (Credit Meters, Keypad and Commercial) at the outturn average for RP6 to date, excluding the 2021 reporting year data.
  - For lower volume categories of recertification and replacement direct costs activities (e.g. for bespoke power station metering and for high voltage

<sup>5</sup> DD, Annex O, p.2 and 2.18.

customers), the UR accepted NIE Networks' proposed unit costs on the basis that they were largely in line with or lower than RP6 outturn.<sup>6</sup>

- Under this approach, the UR set an overall allowance of £26.49 million for the RP7 period.<sup>7</sup>

- 2.7 For metering indirect costs, the UR assessed the allowance based on the RP6 average outturn indirect cost per metering job and applied a pro-rata uplift based on NIE Networks' RP7 forecast for metering services volumes.<sup>8</sup> This approach set an overall allowance of £16.7 million for the RP7 period.<sup>9</sup>
- 2.8 For other metering costs, the UR assessed the allowance based on the RP6 average run rates. This approach set an overall allowance of £2.53 million for the RP7 period.<sup>10</sup>
- 2.9 For fault and overhead costs, the UR assessed the allowance based on the current RP6 run rate. This approach set an overall allowance of £41.31 million for the RP7 period.
- 2.10 The differences between NIE Networks' and the UR's forecasts are set out at Table 7.2 below.

**Table 7.2: NIE Networks versus UR DD forecast RP7 expenditure for market operations**

<b>Market Operations</b>	<b>NIE Networks' RP7 Forecast (£m at 2021/22 prices)</b>	<b>UR's DD RP7 Allowance (£m at 2021/22 prices)</b>	<b>Change +/- (£m at 2021/22 prices)</b>	<b>Change %</b>
<b>Meter Reading</b>	25.56	23.99	-1.56	-6.1%
<b>Metering Direct Costs</b>	33.38	26.49	-6.90	-20.6%
<b>Metering Indirect Costs</b>	16.70	11.55	-5.16	-30.8%
<b>Other Metering Costs</b>	4.12	2.53	-1.60	-38.8%

<sup>6</sup> DD, Annex O, 2.40.

<sup>7</sup> DD, Annex O, p.4, Table 3.

<sup>8</sup> DD, Annex O, 2.58.

<sup>9</sup> DD, Annex O, 2.60.

<sup>10</sup> DD, Annex O, 4.5.



<b>Fault and Overhead Costs</b>	47.81	41.31	-6.50	-13.6%
<b>Total</b>	127.58	105.86	-21.72	-17.0%

### Concerns with the UR's approach

- 2.11 NIE Networks considers that the UR's reliance on the company's historic RP6 costs is incorrect and results in the setting of allowances which are insufficient for the company to perform its activities in RP7. Setting allowances on this basis would:
- have a significant adverse impact on NIE Networks' ability to deliver its customer and legislative obligations to currently established standards;
  - negatively impact current high levels of customer service for market operations activities;
  - have an adverse impact in relation to the realisation of customers' LCT ambitions, the achievement of which will be critical in delivering NI's energy transformation; and
  - set allowances at an insufficient level to allow NIE Networks to recover efficiently incurred costs and continue to efficiently deliver the company's services without compromising customer service, safety and quality.
- 2.12 Early RP6 cost levels were unsustainable to continue to deliver NIE Networks obligations and to meet increasing customer needs throughout RP6, which is reflected in the company's necessitated cost increases in the more recent years of RP6 (2021/22 onwards). As a result, the average RP6 costs significantly underestimate the required allowances for RP7, and do not take account of the future needs and requirements of customers, particularly in relation to LCT uptake and expected standards of customer service.
- 2.13 NIE Networks acknowledges that its RP7 Business Plan was mainly based on a bottom up approach and used 2021/22 (which was the most recent reporting period at the time of the RP7 Business Plan) as a baseline.
- 2.14 However, NIE Networks recognises the merits of adopting an approach to setting allowances based on average cost over a number of years. NIE Networks would support an approach which assesses allowances based on an average of more recent costs (from 2021/22 onwards) as a baseline. The company believes that the average costs of these later years are more reflective of the costs required for RP7, rather than the historic averages over the full RP6 period.
- 2.15 NIE Networks sets out below in this section, its specific concerns with the UR's approach to setting the RP7 allowance for (i) metering direct costs; (ii) metering indirect costs; and (iii) other metering costs and the rationale for using an average of more recent years costs as the baseline for RP7. NIE Networks concerns with the

UR's approach to setting the RP7 allowance for meter reading and fault and overhead costs are set out at Sections 5 and 6 below.

- 2.16 NIE Networks notes that it has already presented the majority of the below concerns to the UR at a meeting in early 2024, following the publication of the DD.

Metering services – direct costs

- 2.17 NIE Networks considers that its direct unit costs for metering services in the early years of RP6 were unsustainable to continue throughout RP6 and do not reflect the current baseline unit costs necessary to deliver metering services to the required standards. This is demonstrated by the increase in metering unit costs in the later years of RP6. This has been driven by the company's additional investment in this area – in some cases in excess of existing RP6 allowances – to meet increasing customer needs. This emphasises the necessity of the current cost levels. The company therefore strongly believes that its more recent costs (from 2021/22 onwards) form a more accurate and sustainable baseline for setting the RP7 allowance. The key reasons for this are set out below:

*Enhanced customer service and engagement*

- 2.18 Metering Services is fully committed to providing an excellent level of service to customers including supporting customers to have appropriate metering arrangements to manage their energy costs. This has involved increased investment in recent years to enhance customer service and on-site customer engagement, including due to an increase in customer expectations since the Covid-19 pandemic. As a result, it has been necessary for NIE Networks to invest in better customer service and engagement to deliver on customer expectations including for the purpose of securing access to customer premises. The results of this investment are evident, as NIE Networks has experienced a 50% reduction in relevant customer complaints since the start of RP6 (as shown in Table 7.3 below). The following list provides examples of investments made by the company in customer service and engagement which has impacted on direct unit costs in recent years:

- Increased time allocated to on-site metering appointments with customers, in order to provide sufficient time to engage with customers, deal with customer enquiries and explain metering options available in accordance with NIE Networks' commitment to 'Support Customers with the Energy Transition'. Customers are taking an increasingly active interest in metering arrangements as a result of increases in energy costs and in support of their LCT ambitions. This is clearly reflected through a 50% increase in metering related customer enquiries since the start of RP6 and a 16% increase during 2023 as shown in Table 7.4 below;
- Increased training in customer service and engagement, for example, Customer Service Institute training and general promotion of enhancing the customer experience in accordance with NIE Networks' Think Customer Strategy;
- Increased time invested in relation to awareness and on-site engagement with vulnerable customers in accordance with the company's Vulnerable

Customer Strategy, including promotion of NIE Networks' Medical Customer Care Register (MCCR) and 'Just a minute' (JAM) card training to help identify customers who have additional requirements and may need extra support. Awareness and training for metering employees in relation to vulnerable customers will increase as we move into RP7 in line with NIE Networks overall commitments in this area as outlined in our RP7 Business Plan.

**Table 7.3: Numbers of metering/meter reading customer complaints between 2018 and 2023**

Metering/Meter Reading	2018	2019	2020	2021	2022	2023
No. of complaints	207	184	134	129	145	101

*Increased investment in service delivery*

2.19 Direct cost increases are also a result of NIE Networks' investment in recent years in other areas for the benefit of customers, such as enhancing the skills of its metering teams and strengthening working practices to ensure they continue to conform to the highest levels in respect of quality and safety best practices. Examples of this are outlined below:

- NIE Networks Metering Services has had a very strong focus on quality and safety practices during the latter years of RP6, to ensure that the health and safety of employees and customers continues to be the number one value at the core of all our operations. As part of its 'Safer Together' programme the company has invested in a number of initiatives in relation to its objective of delivering all metering activities to the highest safety and quality standards and on a 'zero harm' basis.<sup>11</sup> This included an increase in time allocations across all metering jobs to ensure that sufficient time is now provided to fully (i) adhere to all standards and initiatives and (ii) as outlined above, deal with increasing on-site customer engagement, including safety related matters.
- NIE Networks has invested heavily in the area of workforce renewal and resilience for metering services in recent years (in particular 2022/23). This has included (i) addressing development requirements for an increasing proportion of new employees in the business and (ii) providing the increased level of care required to maintain high levels of employee safety and wellbeing. This has included the establishment of an in-house metering training facility during 2021 and the provision of with extended time and training for new meter operatives to obtain the practice and experience required to deliver a high standard of service. This requirement for investment in workforce renewal will continue as the company grows

<sup>11</sup> See NIE Networks, RP7 Business Plan, 4.3 – 4.4.

its metering business. NIE Networks is continuing to recruit new staff in order to ensure the company can deliver on its obligations and meet customer expectations in RP7, including those required for NI's energy transformation.

- The company intends to provide increased training for its metering teams over the RP7 period, in order to continue to improve its overall customer service and to meet the future needs of customers, particularly in respect of net zero ambitions. This includes:
  - Increased training to upskill staff to carry out specialised metering configurations required to facilitate LCTs and to build a multi-skilled and resilient workforce that is able to meet ongoing future requirements; and
  - Increased training in respect of safety best practices to ensure the highest levels of safety for both staff and customers, which includes extended training periods for new staff and refresher training for all staff.

#### *Other factors*

- 2.20 In its DD, the UR commented that it expected *"variation in job mix would be accounted for in the existing outturn costs which span multiple years, therefore we do not consider the job mix as a reason not to rely on the outturn data."*<sup>12</sup>
- 2.21 This variation in job mix would be accounted for only in the more recent years of RP6 and has therefore not been accounted for in the UR's average of RP6 unit costs. NIE Networks has experienced some change in the job mix in the later years of RP6, resulting in increased average costs per job. An example of this is an increasing proportion of higher cost Bluetooth freedom units for prepayment meters, as compared to traditional freedom units.
- 2.22 Another factor that has contributed to the increase in unit costs in the later years of RP6 has been the diversion of metering electricians to generator and fault calls. When generators are provided to help vulnerable customers in the event of network outages, these generators are installed by NIE Networks metering electricians. An increase in the number of generators being provided for customers in line with NIE Networks' increased commitments to vulnerable customers in recent years has resulted in necessary disruptions to planned metering works and therefore increased unit costs.
- 2.23 Unit costs have also increased in recent years as a result of challenges in the recruitment of appropriate skills in specific areas of NI. This has necessitated resources to be redeployed from other geographic areas in NI to honour metering appointments for customers within the timeframes outlined in our guaranteed standards, often resulting in increased travel time and costs.

<sup>12</sup> DD, Annex O, 2.16.

- 2.24 Other factors have also contributed to the increase in direct costs over the RP6 period as a result of customer behaviours which are beyond NIE Networks' control. NIE Networks has experienced a growing trend of customer reluctance to provide access for Planned Meter Replacements ("**PMRs**"). This has also contributed to the increase in direct costs as a result of engineers experiencing unsuccessful visits meaning that they have had to make multiple return visits to carry out the PMR. This is despite an increasing level of engagement with customers to try to facilitate access.

Metering services – indirect costs

- 2.25 Similar to direct costs, NIE Networks considers that its indirect costs associated with performing metering activities in the early years of RP6 were unsustainable for the effective delivery of NIE Networks' metering obligations to customers and not reflective of current costs.
- 2.26 It is therefore not correct for the UR to adopt the RP6 average run-rate as proposed in its DD, given that only indirect costs reported in the later years of RP6 (from 2021/22 onwards) reflect an appropriate baseline for indirect costs required for RP7. Some of the key reasons for this rationale and cost increases in the more recent years of RP6 are set out below. The increases in indirect costs in the later years of RP6 have been predominantly driven by the company's investment in additional resourcing, to meet customer requirements even where not fully covered by RP6 allowances, which emphasises the necessity of the current resourcing levels.

*Customer service and engagement*

- 2.27 Similar to direct staff, NIE Networks' metering services business has invested significantly in customer service and engagement in relation to its indirect staff in recent years, in order to (i) provide an excellent level of service to customers and (ii) support customers to have appropriate metering arrangements to manage their energy costs. Examples of investments made by the company in customer service and engagement which has impacted on indirect costs in recent years include the following:
- Investment and training to enhance customer service and customer engagement, including Customer Service Institute training and general promotion of enhancing the customer experience including in relation to NIE Networks' 'Think Customer' and 'Vulnerable Customer' strategies, as outlined above. The results of these initiatives are clearly demonstrated in the reductions in metering related customer complaints over the RP6 period (as detailed at paragraph 2.18 above). Awareness and training for metering employees in relation to vulnerable customers will increase as we move into RP7 in line with NIE Networks overall commitments in this area as outlined in our RP7 Business Plan; and
  - Increased time and resources invested to engage with customers and deal with customer enquiries, including providing advice in relation to metering options available for customers. Increased customer enquiries have stemmed from an overall general increase in customer interest in electricity-related matters, including increases in energy costs and LCTs.

This significant increase in metering-related enquiries is shown in Table 7.4 below.

**Table 7.4: Customer enquiries concerning metering between 2018 and 2023**

Metering	2018	2019	2020	2021	2022	2023
No. of customer enquires	12,989	15,039	14,014	15,794	17,678	20,493

*Staff recruitment*

- 2.28 NIE Networks faced significant difficulties in recruiting staff in the earlier years of RP6, due to the challenging local market during that period, meaning that indirect staff costs were largely below the optimum levels during those years. These below optimum staffing levels unfortunately resulted in a lower level of customer service being provided which is evident from the higher number of customer complaints in that period as shown earlier in Table 7.3. Metering Services has since secured increased staff levels to ensure we can deliver our obligations and customer service at expected levels. However, this is only reflected in reported costs from 2022/23 onwards.

*Increased investment in service delivery*

- 2.29 NIE Networks Metering Services has had a very strong focus on quality and safety practices during the latter years of RP6, to ensure that the health and safety of employees and customers continues to be the number one value at the core of all our operations, and as part of our Safer Together programme<sup>13</sup> we have invested in a number of initiatives in relation to our objective of delivering all metering activities on a Zero Harm basis and to the highest safety and quality standards. This has necessitated increased investment in management and support staff, together with additional tools, equipment and Personal Protective Equipment to ensure all standards and initiatives are fully adhered to and that employee and customer safety remains our number one priority. This has included ensuring that new staff are given adequate time and training to obtain the practice and experience required to deliver the company's services to a high standard.
- 2.30 We have invested heavily in the area of workforce renewal and resilience for metering services in recent years (in particular 2023/24), including to address development requirements for an increasing proportion of new employees in the business and to maintain high levels of employee safety and wellbeing. The requirement for investment in this area will continue as we grow the metering business and continue to recruit new staff in order to ensure we can deliver on our obligations and meet customer expectations in RP7, and is also essential in building for the energy transformation.

<sup>13</sup> See NIE Networks, RP7 Business Plan, p.36.

- 2.31 The company intends to provide increased specialised and advanced training for its metering teams over the RP7 period, in order to improve its overall customer service and to meet the future needs of customers, particularly in respect of net zero ambitions. This includes:
- Increased training to upskill staff to facilitate LCTs and to build a multi-skilled and resilient workforce that is able to meet ongoing future requirements; and
  - Increased training in respect of safety best practices to ensure the highest levels of safety for both staff and customers.

- 2.32 Similar to direct costs, indirect costs have increased as a result of customer behaviours that are beyond the company's control. As stated above at paragraph 2.24, NIE Networks has experienced a growing trend of customer reluctance to provide access for PMRs. This has also contributed to the increase in indirect costs, due to increased re-scheduling and planning tasks by indirect staff following unsuccessful visits, and the facilitating of re-visits.

*LCT-related factors*

- 2.33 In its RP7 Business Plan, NIE Networks explained that the increase in indirect costs for RP7 in part reflects the increase in average job volumes between RP6 and RP7, and the increased need for indirect staff support due to changes in the nature and complexity of the work.<sup>14</sup>

- 2.34 In its DD, the UR stated that:

*"we would expect any changing nature and complexity of the metering services activities to be reflected more in the direct costs than indirect costs. However, if increased indirect support is required, we would expect NIE Networks to have made adjustments to ensure it meets these new realised demands, and therefore additional expenditure would be revealed in the current RP6 outturn costs."*<sup>15</sup>

- 2.35 NIE Networks considers that the changes in the nature and complexity of metering services will be accounted for only in the most recent years of RP6 and would therefore not be properly accounted for by using an average of RP6 indirect costs. As shown below in Table 7.6, NIE Networks has experienced a significant change in its job mix in the later (i.e. more recent) years of RP6 which has been driven by the increase in volume and variation of LCTs. This has increased demands for indirect staff support as well as for direct staff and due to its more specialised nature, LCT related metering requires a higher level of technical, administration and management support, compared to traditional metering. This should be reflected in RP7 indirect allowances to allow NIE Networks to properly support customers' LCT ambitions and contribute to Northern Ireland's energy transition.
- 2.36 For example, indirect staff are increasingly involved in providing remedial work support to customers and contractors and addressing safety issues related to LCT

<sup>14</sup> NIE Networks, RP7 Business Plan, 'Market Operations RP7 Business Plan', p.16.

<sup>15</sup> DD, Annex O, 2.53.

installation and other third party works. NIE Networks is aware of an increase in instances of LCT equipment being incorrectly placed in NIE Networks' metering cubicles and works being carried out by third parties affecting NIE Networks equipment, which does not conform to ESQCR legislation and Electricity at Work Regulations.<sup>16</sup> NIE Networks continues to report to and engage with the Health and Safety Executive Northern Ireland and other third parties to try to find solutions to mitigate the impact of this. However, the associated remedial work associated has necessitated an increase in support from management and technical support indirect staff, which is essential in addressing the safety risks these third-party activities pose to customers and staff.

#### *Volume forecasts*

- 2.37 In the DD, in the context of its decision to introduce an uplift based on the company's forecast work volumes for RP7, the UR acknowledged NIE Networks' limited control over volumes:

*"In determining the metering services indirect costs allowance we have noted the forecast increase in activity, both as result a growth in LCT related metering and reduced activity during RP6 as result of Covid. Using the average RP6 expenditure would restrict NIE Networks ability to support an increase in direct activities."*<sup>17</sup>

*"We have used NIE Networks RP6 volume of activity and outturn expenditure to calculate an average indirect cost per job. We have then applied the average indirect cost per job to NIE Networks' RP7 forecast volume to determine an indirect cost allowance. We expect our methodology provides a reasonable basis to determine an efficient level of indirect expenditure to support the direct activities."*<sup>18</sup>

*"We do have concerns over NIE Networks' forecast level of activity. The 2023 reporting year volume was a forecast in the RP7 business plan submission, and we subsequently received actual data in the annual report. We have noted that the actual volume of total metering services direct activities 74,291, was 6,422 lower than forecast. We will receive the 2024 reporting year actual data prior to the final determination, and we will assess this data against NIE Networks' forecast. As a result, we may revise the volumes we have used to determine the indirect costs allowance."*<sup>19</sup>

- 2.38 NIE Networks welcomes the UR's acknowledgement that using the average RP6 expenditure for the indirect cost allowance will restrict the company's ability to deliver metering obligations. The company also welcomes and agrees with the UR's provisional decision to include an uplift for indirect cost allowances to account for increasing volumes of metering services.

<sup>16</sup> The Electricity At Work Regulations (Northern Ireland) 1991.

<sup>17</sup> DD, Annex O, 2.57.

<sup>18</sup> DD, Annex O, 2.58.

<sup>19</sup> DD, Annex O, 2.59.



- 2.39 In response to the UR's concerns regarding NIE Networks' forecast level of activity, the company notes that the forecast 2023 reporting year volumes were higher than the actual volumes as a result of timing-related factors that have caused a lag in volume increases. The company believes that forecasts will catch-up to actual volumes in the 2024 reporting year and during RP7 due to increases in volumes of metering services. In particular:
- Actual LCT-activity volumes are lower than forecast due to factors including a slower than originally forecast uptake in LCT which may be partly driven by long lead times for electric vehicles in recent years, partly as a result of supply chain issues and insufficient electric vehicle charging infrastructure.<sup>20</sup> NIE Networks notes that its forecast cumulative total volumes of LCTs connected to the network by 2031 remain in line with its RP7 Business Plan;
  - Under mandatory requirements, the company commenced a programme in December 2023 to replace all half hourly meters due to the withdrawal of the Integrated Services Digital Network (ISDN) by BT/Openreach. The actual volume of meter changes to date has been lower than forecast due to unanticipated delays in the programme, however, given the mandatory nature of this programme, it will be necessary for these volumes to be 'caught-up' before the service is fully withdrawn at the end of 2025; and
  - Meter recertification volumes have been lower than forecast due to lower than forecast skilled resources available in this area. This is as a result of challenges in the local labour market as outlined above at paragraph 2.28 . Due to the requirement to replace meters at the end of their certified life, it will be necessary for these volumes to be 'caught up' in future periods.
- 2.40 NIE Networks also notes that the lower outturn volumes in the 2023 reporting year have resulted in indirect costs not increasing to the same extent as would be required if the forecast volumes had been fully delivered. As noted above, the company considers that outturn volumes will catch-up to, if not exceed, outturn volumes during RP7. This reinforces the criticality of setting a sufficient allowance for indirect costs in order for the company to meet all requirements during RP7.
- 2.41 Whilst NIE Networks welcomes the UR's provisional decision to apply an uplift based on the company's RP7 forecasts, for the reasons set out above, it maintains its position that it is not correct to set the company's indirect allowances using an average of historical RP6 costs as a baseline for RP7 costs.

*Comparison to RP6 allowances*

<sup>20</sup> See for example the UK Competition and Markets Authority (CMA)'s Electric vehicle Charging market study, Final report , 23 July 2021, ([https://assets.publishing.service.gov.uk/media/611fb14e8fa8f53dc4eb3153/EVC\\_MS\\_final\\_report\\_--\\_pdf](https://assets.publishing.service.gov.uk/media/611fb14e8fa8f53dc4eb3153/EVC_MS_final_report_--_pdf)). See also The Telegraph, 'Drivers face six-month wait for electric cars', 25 January 2023, (<https://www.telegraph.co.uk/money/consumer-affairs/drivers-face-six-month-wait-electric-cars/#:~:text=RAC%20spokesman%20Simon%20Williams%20said,down%20production%20of%20new%20vehicles>)., and This is Money, 'Electric car charger rollout is still stuck in the slow lane', 4 February 2024, (<https://www.thisismoney.co.uk/money/markets/article-13044135/Poor-access-public-charging-points-hits-electric-car-rollout.html>).

- 2.42 NIE Networks' view that the outturn indirect costs in the early years of RP6 were below sustainable levels is also supported by comparing the outturn costs in these years to the allowances for indirect costs as determined by the UR for RP6.
- 2.43 NIE Networks considers that the allowances in respect of metering indirect costs set by the UR in the Final Determination for RP6 were determined at an efficient and sustainable level. These allowances were set at c.£2 million per year across RP6.
- 2.44 However, the outturn costs in the early years of RP6 were considerably lower than the average annual allowance set by the UR, as evidenced in Table 7.5 below. NIE Networks therefore considers that the outturn costs in the early years of RP6 do not reflect a sustainable level of costs required to deliver metering obligations on an ongoing basis. Outturn costs have only reached levels similar to RP6 allowances in the later years of RP6 (from 2021/22) and in particular during 2023/24. This further supports NIE Networks' submission that only costs in more recent years are reflective of a reasonable and efficient level of costs to use as a baseline for setting RP7 allowances.

**Table 7.5: NIE Networks' outturn indirect metering costs for RP6**

	2018 (6 months)	2019	2020	2021	2022	2023	2024 <sup>21</sup>
<b>Total Indirect Metering Costs (£m)</b>	0.69	1.41	1.40	1.28	1.56	1.75	2.0

Other metering costs

- 2.45 NIE Networks' other metering costs consist of four cost/income lines, namely:
- Keypad operating costs: costs of operating the IT infrastructure supporting keypad meters as well as the Regulatory Instructions and Guidance ("RIGs") allocation of costs from business support functions to reflect their contribution to market operations activities;
  - Transactional services: costs of services to suppliers in support of the competitive retail market, namely (i) the direct cost of staff undertaking fieldwork; and (ii) the indirect cost of office-based administrative staff involved in organising activities and interfacing with suppliers and customers;
  - Transactional income: income in respect of transactional services is derived from charges applied to each supplier; and
  - Revenue protection: costs of detecting and deterring cases of electricity theft and collecting money owed for electricity theft, namely (i) the direct cost of the field staff dispatched to investigate reports of illegal abstraction

<sup>21</sup> Based on latest best estimate of the first nine months of FY2023/24.

or tampering with our equipment and to undertake any associated repairs;  
and (ii) the indirect cost of administrative and support staff.

2.46 NIE Networks considers that the UR's approach for setting other metering cost allowances (by using the average run rate of RP6 costs) would result in significant cost shortfalls and a detrimental impact on NIE Networks' ability to fulfil its critical role under the Energy Theft Code of Practice to ensure the safety of customers and staff, and to reduce electricity theft.

2.47 Similar to metering and meter reading activities, the company faced insufficient staffing levels for these other metering activities during the early years of RP6, due to difficulties in recruitment, which understated costs in those years.

#### *Keypad Operating Costs*

2.48 Keypad operating costs include administration staff involved in this function. As noted above in 2.28, NIE Networks faced significant difficulties in recruiting staff in the earlier years of RP6, meaning that these costs were largely below the optimum levels during those years. NIE Networks' metering services business has since secured increased staff levels for keypad administration to ensure the company can deliver its obligations and customer service at expected levels. However, this is only reflected in reported costs from 2022/23 onwards.

#### *Increased electricity theft activities*

2.49 The performance of revenue protection activities has been heavily disrupted throughout RP6 by a number of factors that have been outside of NIE Networks' control. In particular, the Covid-19 pandemic disproportionality affected revenue protection activities due to social distancing requirements, which prevented revenue protection field staff from carrying out house visits. This means that RP6 costs do not reflect the true level of costs required to perform the activities.

2.50 Other metering costs have increased in the later years of RP6 as a result of an increase in the detection of electricity theft from revenue protection leads. This is projected to increase in RP7, which will require additional revenue protection resource and costs to address increased activity, as compared to RP6. The rise in revenue protection leads is due in part to the following:

- Over the course of 2023, NIE Networks raised awareness of energy theft across its social media platforms and expects this engagement to continue;
- In June 2024, the company will launch its new 'Stay Energy Safe' initiative through its partnership with Crimestoppers; and
- The company has seen improvement in the quantity and quality of the company's leads received from the UK Revenue Protection Association (UKRPA) and via reports on NIE Network's reporting portal.

2.51 NIE Networks expects a continued increase in revenue protection activities during RP7. Rises in the cost of energy unfortunately increase the risk of illegal extraction of electricity through highly unsafe methods. This provides an increased need for revenue protection activities in RP7 in order to prevent and help ensure the safety of the company's customers, staff and the general public.

### *Transactional Services*

- 2.52 In its RP7 Business Plan, NIE Networks requested £2.7 million across RP7 for the costs of performing transactional charges work on behalf of suppliers. In its assessment of transactional charges, the UR stated that in its DD that:

*"It is also noticeable that the transactional income is not expected to cover the transactional charge. This is the opposite to what has been occurring in RP6. We are also of the view that as these services are for the benefit of suppliers, general electricity consumers should not be required to pay a proportion."*<sup>22</sup>

- 2.53 NIE Networks acknowledges and agrees that general electricity consumers should not be required to pay a proportion or cover any shortfall in the company's transactional income. However, similar to other areas of market operations covered in Section 2, NIE Networks assessed the costs relating to transactional services based on a comprehensive bottom-up approach. This approach reflects the company's actual requirements, as opposed to the RP6 run-rate proposed by the UR.
- 2.54 NIE Networks considers that its costs for transactional services in the early years of RP6 were unsustainable to continue throughout RP6 and do not reflect the costs of increasing staff levels necessary to deliver transactional services in RP7. This reflects the UR's statement that NIE Networks' requests for RP7 are the *"opposite to what has been occurring in RP6."*
- 2.55 NIE Networks also notes that it intends to review the rates charged to suppliers for transaction services in due course, with a view to ensuring that any shortfall in transactional income is reduced to mitigate the impact on general electricity consumers.

### *Customer service and engagement*

- 2.56 As for metering and meter reading activities, NIE Networks has invested in customer service and engagement in relation to other metering activities. This includes investment in ongoing and future initiatives (such as the awareness campaigns referred to above at paragraph 2.18) as well as any future potential commitments that may arise from the Revenue Services Group (RSG) or initiatives evolving from the Energy Theft Code of Practice.

### **Conclusion**

- 2.57 For the reasons set out above, NIE Networks submits that the UR's use of RP6 costs to set the company's allowances for (i) metering direct costs; (ii) metering indirect costs; and (iii) other metering costs is not correct.
- 2.58 In relying on early RP6 data, the UR has understated the costs required for NIE Networks for RP7 to the detriment of customers, which would:

<sup>22</sup> DD, Annex O, 4.4.

- have a significant adverse impact on NIE Networks' ability to deliver its customer and legislative obligations to currently established standards;
- negatively impact current high levels of customer service for market operations activities;
- have an adverse impact in relation to the realisation of customers' LCT ambitions, the achievement of which will be critical in delivering NI's energy transformation; and
- set allowances at an insufficient level to allow NIE Networks to recover efficiently incurred costs and continue to efficiently deliver the company's services without compromising customer service, safety and quality.

2.59 NIE Networks requests that the UR considers its statutory duties to consumers and environmental goals when making its Final Determination and, in so-doing:

- Set NIE Networks' allowance for metering direct costs by adopting either of the following approaches:
  - (i) use 2021/22 costs as a baseline in line with NIE Networks RP7 Business Plan and (ii) incorporate the additional LCT meter unit cost categories requested by NIE Networks in Section 3 below); or
  - use an average of 2021/22 to 2023/24<sup>23</sup> (rather than an average from the start of RP6) and (ii) incorporate the additional LCT meter unit cost categories requested by NIE Networks in Section 3 below. NIE Networks acknowledges that to take account of the additional LCT meter unit cost categories, the average unit costs from 2021/22 to 2023/24 should be adjusted to exclude the impact of LCT related metering jobs in these years.
- Set NIE Networks' allowance for metering indirect costs by adopting either (i) a bottom-up approach in accordance with NIE Networks RP7 Business Plan or (ii) a pro-rata approach. If a pro-rata approach is adopted, the UR should apply this to the most recent costs available (i.e. the average of 2021/22 to 2023/24). This approach would be consistent with that proposed above in relation to the use of an average of 2021/22 to 2023/24 for direct costs. This approach should also recognise that the change in the mix of jobs required in RP7 as a result of LCTs will have an impact on indirect costs; and
- Set NIE Networks' allowance for other metering costs either (i) using 2021/22 costs as the baseline in line with NIE Networks RP7 Business Plan or (ii) using an average of 2021/22 to 2023/24 (rather than an average from the start of RP6) as the baseline.

2.60 NIE Networks notes that the UR is aware that NIE Networks intends to provide the UR with its 2023/24 outturn metering related costs data prior to the publication of the

<sup>23</sup> NIE Networks has separately engaged with the UR regarding the availability of its outturn costs for 2023/24.

Final Determination, ahead of the RIGS reporting date for 2023/24, which is 31 July 2024. To the extent that NIE Networks is able to provide this data before the Final Determination, the company requests that it is taken into account by the UR, should the UR adopt the approach of using an average of NIE Networks' average costs for the later years of RP6 (i.e. from 2021/22 onwards).

### 3. LOW CARBON TECHNOLOGY CATEGORIES

3.1 In its RP7 Business Plan, NIE Networks explained that the company had experienced a growing demand from customers and suppliers to provide specialised metering configurations to accommodate LCTs and expected an increased demand from customers for this type of metering in RP7, such as multi-rate or multi-element meters.<sup>24</sup>

3.2 To facilitate the increasing volume and variation of specialised LCT metering jobs, NIE Networks proposed three new unit cost categories for RP7 in addition to the three existing RP6 categories for meter installs and changes (namely Credit Meters, Keypad and Commercial):

- "LCT Basic" – Typically a domestic or small-scale commercial customer who requires the installation of a basic two rate meter to facilitate a standard time of use (Day/Night) tariff;
- "LCT Higher" – Typically a domestic/small-scale commercial customer who requires a more specialised metering configuration, such as (i) a multi-element meter to facilitate more 'specialised' tariffs which include heat functionality (i.e. Economy 7); or (ii) a three-phase meter to accommodate increased loads from LCTs; and
- "LCT Advanced" – Typically a larger scale commercial customer who requires more specialised metering to facilitate larger scale LCT integrated technologies and advanced tariff configurations.<sup>25</sup>

3.3 The proposed unit costs for the new LCT categories in NIE Networks' RP7 Business Plan were determined by extracting the outturn costs of these types of jobs included within the existing unit cost categories in RP6, which were considered to be a reasonable basis for RP7 unit costs. NIE Networks noted that the company was experiencing an increasing requirement to install the likes of two-rate meters to facilitate the connection of LCTs, which it expected to continue into RP7.<sup>26</sup>

#### **The UR's approach**

3.4 In its DD, the UR has rejected NIE Networks' proposal for the three new metering categories:

*"NIE Networks also proposed three new metering categories, to capture LCT related metering specifications, such as multi-rate and multi element meters. We are not minded to include the new LCT meter categories. Additional unit*

<sup>24</sup> NIE Networks, RP7 Business Plan, 'Market Operations RP7 Business Plan', p.14.

<sup>25</sup> NIE Networks, RP7 Business Plan, 'Market Operations RP7 Business Plan', p.14.

<sup>26</sup> NIE Networks, RP7 Business Plan, 'Market Operations RP7 Business Plan', p.15.

*cost categories, and cost rate, for these specialised configurations may prove necessary when we complete our review of the connection charging methodology or as smart metering is implemented. However, pending the outcome of that work, we do not intend to make any specific provision for these changes in the RP7 price control. The existing licence already makes provision for additional meter categories and unit cost rates to be added as the need arises through a decision by UR.*<sup>27</sup>

- 3.5 The UR reallocated NIE Networks' forecast volumes for the new LCT metering categories to the existing metering categories based on outturn data provided and applied its DD unit rates across all the existing metering category volume forecasts.

#### **Concerns with the UR's approach**

- 3.6 NIE Networks maintains that the three new metering categories proposed by the company are essential to enable it to deliver LCT metering requirements in light of increasing volumes of LCT metering activities.
- 3.7 The UR's provisional forecast direct costs for metering services (which do not take account of additional LCT metering categories) are insufficient to cover the costs of customer driven LCT-related metering jobs, volumes of which have increased over the RP6 period and are projected to further increase significantly in RP7, as shown in the company's RP7 Business Plan.<sup>28</sup>
- 3.8 Table 7.6 below illustrates the exponential increase in volumes across the RP6 period of LCT-related metering service jobs for Service Order Scheduling and Appointment ("**SOSA**")<sup>29</sup> Credit Meters.

**Table 7.6: Actual and forecast volumes for SOSA Credit jobs (including LCT-related jobs)**

	Actual Volumes						Forecast
	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>SOSA Credit</b>	14,059	26,553	26,019	17,976	27,032	30,906	31,802
<b>SOSA Credit (LCT related jobs)</b>	296	461	599	695	2,784	5,077	9,086

<sup>27</sup> DD, 7.15.

<sup>28</sup> NIE Networks, RP7 Business Plan, 'Market Operations RP7 Business Plan', p.5.

<sup>29</sup> SOSA refers to NIE Networks' system of scheduling high volumes of customer appointments to undertake routine metering works.

<b>Proportion of LCT related jobs</b>	2.1%	1.7%	2.3%	3.8%	10.3%	16.4%	28.6%
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- 3.9 The new metering categories are necessary to enable customers to have the appropriate metering arrangements for their usage of LCT (such as electric vehicle owners requiring day/night rate meters). Supporting customers with their LCT usage will be fundamental in empowering customers to contribute towards NI's energy transformation ambitions and achieving NI's statutory climate change targets.
- 3.10 Unit costs for existing metering categories are not sufficient to cover LCT related metering works which incur higher unit costs than traditional metering works. This is due to both (i) higher specifications of meters required (for example, two rate meter compared to traditional single rate meter) and (ii) higher labour costs due to the time and skills required for these metering arrangements. NIE Networks has provided further details of the higher outturn unit costs for LCT related metering have been provided to the UR following the publication of the DD.
- 3.11 NIE Networks also notes the UR's comment that "*Additional unit cost categories, and cost rate, for these specialised configurations may prove necessary when we complete our review of the connection charging methodology or as smart metering is implemented.*"<sup>30</sup>
- 3.12 In discussions between the UR and NIE Networks,<sup>31</sup> the UR has now acknowledged that the Connections Charging Review ("**CCR**") is irrelevant for the purposes of metering. The CCR relates to the UR's review on how costs for new connections should be apportioned between customers and NIE Networks, which does not include metering costs. The timing of the smart metering roll-out remains uncertain and is likely to be well into the RP7 period. NIE Networks therefore considers that LCT-specific direct cost categories are required to be introduced well in advance of smart metering implementation.
- 3.13 NIE Networks further notes the UR's comment that "*[t]he existing licence already makes provision for additional meter categories and unit cost rates to be added as the need arises through a decision by UR.*"<sup>32</sup> This statement provides no guarantee that the UR will at any stage introduce new LCT-specific direct cost categories.
- 3.14 Since the publication of the DD, NIE Networks has engaged with the UR further regarding the introduction of the new LCT-specific unit cost categories. The company welcomes further opportunities to discuss with the UR the feasibility of requesting additional meter categories and unit cost rates through the licence provisions if the new LCT categories are not provided for in the Final Determination.

<sup>30</sup> DD, 7.15.

<sup>31</sup> Meeting between NIE Networks and the UR on 6 February 2024.

<sup>32</sup> DD, 7.15.



## Conclusion

- 3.15 The UR's rejection of the three additional LCT metering categories proposed by NIE Networks penalises the company to the detriment of customers and LCT stakeholders. Failing to provide sufficient allowances for higher direct and indirect costs for LCT-related metering service jobs has a detrimental impact on NIE Networks' customer service and obligations related to NI energy transformation ambitions.
- 3.16 NIE Networks therefore requests that in its Final Determination, the UR either:
- Adds the three new unit cost categories for LCT-related meters, as proposed by NIE Networks in its RP7 Business Plan (and supported by further information which the company has now been provided to the UR), to the direct cost allowance for metering services for RP7; or
  - At a minimum:
    - increases the allowances for the existing direct cost unit cost categories, in line with a weighted average calculation which reflects the increasing proportion of LCT jobs and the higher costs associated therewith; and
    - recognises that the change in the mix of jobs required in RP7 resulting from LCTs will have an impact on indirect costs and appropriately reflects this in RP7 allowances for indirect costs.

## 4. METER PURCHASING COSTS

- 4.1 In its RP7 Business Plan, NIE Networks explained that it was currently in the process of a procurement exercise for a significant proportion of its meter equipment requirements.<sup>33</sup>
- 4.2 NIE Networks' forecast for the uplift in material costs for metering services in RP7 was based on an estimate which took account of increasing costs of electronic components used in electricity meters and other supply chain costs as compared to historical out-turn costs.
- 4.3 NIE Networks explained that it expected that the procurement exercise would conclude during 2023, following which the company could provide updated actual material costs to the UR.<sup>34</sup>

### The UR's approach

- 4.4 In its DD, the UR has rejected NIE Networks' proposed uplift and included no allowance for increases in the cost of meters. In doing so, the UR has assumed that such potential cost increases would fall within the scope of its frontier shift adjustments:

*"NIE Networks included an estimated increase on its unit costs due to estimated material costs increases. At present we have not been provided*

<sup>33</sup> NIE Networks, RP7 Business Plan, 'Market Operations RP7 Business Plan', p.15.

<sup>34</sup> NIE Networks, RP7 Business Plan, p.15.

*with evidence and detail beyond NIE Networks estimations and commentary. We are also not convinced that any potential cost increases would fall outside the scope of our frontier shift adjustments. As a result, when determining unit rates, we did not account for NIE Networks' estimated material cost increases.*"<sup>35</sup>

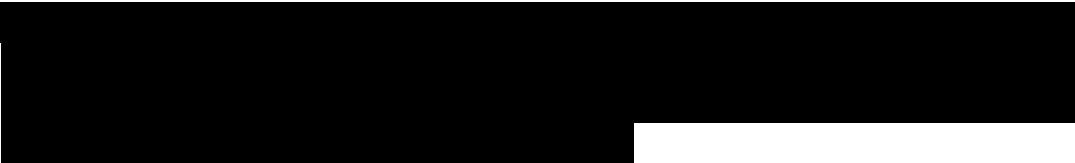
**Concerns with the UR's approach**

4.5 In its DD, the UR states that it was *"not been provided with evidence and detail beyond NIE Networks estimations and commentary"*.

4.6 NIE Networks noted in its RP7 Business Plan that it would provide updated actual material costs to the UR, following the conclusion of the meter procurement exercise. The company notes that the UR did not request any additional evidence or detail regarding the company's estimated material cost increases in advance of the publication of the DD.

4.7 

4.8 

4.9 

**Conclusion**

4.10 NIE Networks requests that in its Final Determination the UR takes the company's actual competitively procured material cost increases into account in its direct cost allowances for metering services in RP7.

<sup>35</sup> DD, Annex V, 2.34.

## 5. METER READING

- 5.1 For meter reading, the UR set its DD allowance by using the RP6 annual average of NIE Networks' metering reading costs to date. This set an overall allowance of £23.99 million for the RP7 period.<sup>36</sup>
- 5.2 NIE Networks considers that the UR's reliance on the company's historic RP6 costs is incorrect and results in the setting of allowances which are insufficient for the company to perform its activities in RP7. Setting allowances on this basis would:
- have a significant adverse impact on NIE Networks' ability to deliver its customer and legislative obligations; and
- negatively impact current levels of customer service for market operations activities.
- 5.3 NIE Networks believes that the proposed allowance for meter reading is insufficient to meet customer needs, since the RP6 outturn costs for meter reading do not reflect the level of cost needed to perform the meter reading requirements.
- 5.4 The company notes that the outturn costs for RP6 reflect lower than anticipated staffing levels as a result of difficulties in the recruitment of meter readers, accompanied by relatively high levels of staff turnover. The deficiency of staffing levels and costs has been a factor in the company's inability to meet OS7 meter reading targets (i.e. obtaining a firm meter reading) in recent years. This was, however, also driven by an increasing reluctance from householders to allow access for meter readings, which necessitated more visits. This is shown in Table 7.7 below.

**Table 7.7: OS7 Target versus Actuals**

	2018	2019	2020	2021	2022	2023
<b>OS7 Target</b>	99.50%	99.50%	99.50%	99.50%	99.50%	99.50%
<b>OS7 Actual</b>	99.52%	99.52%	99.52%	99.06%	99.14%	98.50%
<b>Variance</b>	0.02%	0.02%	0.02%	-0.44%	-0.36%	-1.00%

- 5.5 NIE Networks notes that it is addressing its staffing issues through a number of methods and intends to increase investment in such efforts during RP7. For example, the company is focussing increasingly on the direct recruitment of permanent meter readers, rather than the use of third-party agency and temporary workers. As well as efforts to recruit and retain permanent staff, NIE Networks is committed to fostering a supportive work environment, including a competitive and comprehensive benefits package. Recent actions include the introduction of private medical insurance for all company staff from January 2024.

<sup>36</sup> DD, Annex O, 1.12.

- 5.6 NIE Networks will also face increasing customer obligations in RP7. This is as a result of the company's continued growth in customer service and engagement. For example, NIE Networks' commitments to its customer service initiatives, such as its 'Vulnerable Customer' strategy, will result in a continued growth in customer engagement.
- 5.7 NIE Networks is also experiencing a 0.8% annual growth in its customer base (meaning there are more meters to be read), which is combined with an increasing volume of meter readings resulting from the growth in multi-rate meters (meaning there are more 'reads' per meter). Notwithstanding the increase in customer base, NIE Networks has requested the same headcount for meter readers in its RP7 Business Plan (114 FTE) as it did in its business plan submission for RP6.
- 5.8 The company notes that it has proposed to keep meter reading costs flat, despite the projected 0.8% annual growth in customer demand, lack of increase in headcount and the productivity factor (i.e., efficiency challenge) that the UR has proposed to apply across NIE Networks' entire business for RP7. However, this proposal would only be achievable with the bottom-up allowance for meter reading, as proposed by NIE Networks in its RP7 Business Plan.

### **Conclusion**

- 5.9 NIE Networks requests that the UR consider its statutory duties to consumers and environmental goals when making its Final Determination and sets NIE Networks' allowance for meter reading costs by adopting a bottom-up approach and using 2021/22 costs as the baseline.

## **6. FAULT AND OVERHEAD COSTS**

- 6.1 In its RP7 Business Plan, NIE Networks used a bottom-up assessment to forecast total expenditure for RP7 across its entire business. This total expenditure included fault and overhead costs.<sup>37</sup> The company then adopted the same rule allocations used for the preparation of its 2021/22 Regulatory Instructions and Guidance (RIGs) reporting to allocate costs across each of its businesses, namely (i) Distribution (ii) Transmission (iii) Market Operations and (iv) Connections.
- 6.2 Using this bottom-up assessment, and after allocating costs accordingly, the company forecast that the total expenditure for Market Operations fault and overhead costs for RP7 was £47.8 million.<sup>38</sup>

<sup>37</sup> Fault costs fall under the IMF&T cost heading, and overhead costs are indirect costs.

Demonstrating cost efficiency

- 6.3 As explained in further detail in Chapter 3 of the Response, to demonstrate and justify the efficiency of its forecast Indirect and IMF&T ("**I&IMFT**") expenditure, NIE Networks (supported by its economic advisors, NERA) benchmarked the expenditure of its Distribution business against that of the GB DNOs. The results from this exercise showed NIE Networks to be among the most efficient operators. This was also confirmed by the UR's benchmarking exercise (carried out by its economic advisors, CEPA) that informed the DD.
- 6.4 NIE Networks also attempted to benchmark the Transmission business against other suitable comparator companies. Due to a lack of suitable comparators, NIE Networks used the results from the Distribution business benchmarking as a proxy for the Transmission business, and thus followed the same approach to cross-checking its forecast expenditure for the Transmission business as for the Distribution business. The UR explicitly followed such an approach at RP6, and it is inferred from the UR's benchmarking exercise that it has accepted the same principle for RP7 in the DD.
- 6.5 NIE Networks considers that it would be entirely logical and appropriate for the UR to adopt a similar approach to determine allowances for fault and overheads for Market Operations.

**The UR's approach**

- 6.6 By contrast in its DD, the UR has assessed the company's Market Operations fault and overhead allowances based on the company's average costs to date over RP6. This approach set an overall proposed allowance of £41.3 million for RP7.<sup>39</sup>

Concerns with the UR's approach

- 6.7 NIE Networks considers that the UR's approach for setting this allowance is flawed. NIE Networks submits that by using an average expenditure to date over RP6 the UR has based the RP7 allowance on a considerably lower level of underlying costs.
- 6.8 As stated at above, including at paragraphs 2.28, and 2.48, NIE Networks faced significant difficulties in recruiting staff in the early years of RP6. As the cost allocation methodology is largely driven by headcount, it follows then that fault and overhead costs recorded in the early years of RP6 are not representative of an appropriate level of expenditure for Market Operations now and into the future. By way of example, the headcount for Market Operations has in more recent years increased meaningfully which in turn drives a higher allocation of costs. However, this is only reflected in NIE Networks' reported costs for 2022/23.
- 6.9 The UR's approach of using average expenditure in earlier years of RP6 results in an allowance which is insufficient. Furthermore, using the UR's proposed approach instead of a similar benchmarking proxy approach as adopted to determine allowances for the Transmission business' I&IMF&T expenditure is inconsistent and illogical.

<sup>39</sup> DD, Annex O, 4.10 – 4.11.

## Conclusion

- 6.10 For the Final Determination, NIE Networks requests that the UR sets the Market Operations fault and overhead allowance by either:
- using the company's submitted costs per the RP7 Business Plan; or
  - adopting a similar approach to that used to set allowances for I&IMF&T costs for its Distribution and Transmission businesses, as follows:
    - the UR should assume that the fault and overhead costs incurred by Market Operations in 2021/22 are efficient;
    - the UR should then apply the same uplift as applied to the Indirects baseline allowance, to account for the modelled efficiency gap<sup>40</sup>;
    - the UR should then apply a volume-based uplift. This is consistent with NIE Networks' request set out above at paragraph 2.59 in relation to its allowances for metering indirect costs; and
    - finally, the UR should add back in any applicable and allowed IT costs.<sup>41</sup>

## 7. SMART METERING

### **Clarification on low regrets option**

- 7.1 In the UR RP7 Final Approach document, the UR set out its position that smart metering would fall outside of the RP7 price control.

*"...[W]e expect NIE Networks to develop its Business Plan based on the current approach to metering. We also expect the company to include an outline assessment of the likely costs and savings of the introduction of Smart metering including any information provided to DfE to inform its Cost Benefit Analysis (CBA)."*<sup>42</sup>

*"We intend to include a re-opener mechanism in our RP7 price control to address additional costs and savings arising from future decisions on Smart metering. We would expect any additional costs determined through this re-opener to be in line with the costs identified within the CBA carried out. We would also seek to consider wider savings on network response and interventions as a result of the additional information available from Smart meters."*<sup>43</sup>

- 7.2 In its RP7 Business Plan, NIE Networks outlined that the company "may" have an opportunity to adopt a 'low regret' approach to metering during RP7, which may reduce overall metering costs in the event that smart meters are rolled out during RP7. The company noted that examples of this 'low regrets' approach would be in

<sup>40</sup> NIE Networks' position on the appropriate uplift to apply is set out in Chapter 3 of this Response.

<sup>41</sup> NIE Networks' position on the appropriate assessment of indirect IT-related costs is set out in Chapter 3 of this Response.

<sup>42</sup> UR, RP7 Final Approach Document, 6 July 2022, 3.152.

<sup>43</sup> UR, RP7 Final Approach Document, 6 July 2022, 3.153.

relation to meters for new supplies and meters which are due to reach the end of their recertification life and need to be replaced during RP7.

- 7.3 The company noted that under a 'low regrets' approach, *"it may be possible to install meters with smart functionality which could initially operate in 'non-smart' mode, but would have the capability for smart functionality to be turned on at a future date"*.<sup>44</sup>
- 7.4 In its assessment of NIE Networks' meter recertification and replacement direct costs, (which form part of the company's metering services direct costs), the UR states that:

*"NIE Networks propose that procuring and installing smart meters, even prior to smart systems availability, should be considered as that project progresses. It proposes that this is a low regrets option in comparison to continuing to procure and install traditional meters, which would subsequently be replaced by a smart meter"*.<sup>45</sup>

Clarification of NIE Networks' position

- 7.5 NIE Networks wishes to clarify that it has not explicitly proposed to procure and install smart meters with smart functionality as a low regrets option, rather that such an option *"may be possible"*. However, the company welcomes a discussion with the UR on this topic.

**Clarification on the impact of smart metering on meter unit costs**

- 7.6 As noted at paragraph 4.1, at the time of writing its RP7 Business Plan, NIE Networks was in the process of a procurement exercise for a significant proportion of its meter equipment requirements.
- 7.7 The company provided the UR with an uncertainty mechanism submission paper following the submission of the RP7 Business Plan, where it highlighted new and additional risks in relation to the availability and cost of procuring meters going forward. In this update, the company noted that:

*"Due to the rollout of smart meters in Europe and globally which has resulted in many meter manufacturers withdrawing from the traditional meter market in order to focus on the production of smart meters, there are a very limited number of meter manufacturers now operating in the traditional meter market for Northern Ireland. This limited number of meter suppliers is likely to reduce further as we progress through RP7 and more meter manufacturers switch to solely manufacturing smart meters and withdraw from the traditional meter market.*

*This reduction in availability of non-smart meters poses an increasing risk in relation to NIE Networks procurement of traditional meters in the absence of smart metering being introduced in Northern Ireland, as NIE Networks may need to either i) pay a premium above current meter prices*

<sup>44</sup> NIE Networks, RP7 Business Plan, 'Smart Metering: Supplementary Paper to NIE Networks RP7 Business Plan', p.9.

<sup>45</sup> DD, Annex O, 2.8.

*in order to secure supply of traditional meters or ii) be required to procure smart meters to operate in non-smart mode. Given that the costs of smart meters are significantly higher than the costs of traditional meters, each of i) and ii) will result in an increase in costs above those submitted in the RP7 Business Plan."*<sup>46</sup>

- 7.8 In its assessment of NIE Networks' meter recertification and replacement direct costs, the UR states:

*"We note NIE Networks' revised submission regarding potential increases in unit costs for credit meters as manufacturers focus on the provision of smart metering and the market of existing types of meters diminishes. Our initial view is that it is NIE Networks' responsibility to maintain a reliable source of meters from the market."*<sup>47</sup>

Clarification of NIE Networks' position

- 7.9 NIE Networks acknowledges its responsibility to maintain a reliable supply of meters from the market. The company has made significant efforts during the recent procurement exercise (which has now concluded) to source appropriate meters at the most competitive price against a backdrop of reducing availability for traditional meters.
- 7.10 However, NIE Networks considers that this responsibility can only be discharged within the confines of the meters available in the market. As NIE Networks highlighted to the UR (see paragraph 7.7 above), the number of manufacturers producing traditional type of meters is continuing to reduce due to increasing rollouts of smart meters globally, which is reducing availability and increasing costs for traditional meters. This change in market dynamics is beyond NIE Networks' control.

<sup>46</sup> NIE Networks, RP7 Uncertainty Mechanisms: Metering Update', August 2023, p.3.

<sup>47</sup> DD, Annex O, 2.22.



## CHAPTER 8

### INNOVATION AND INCENTIVES

#### **SUMMARY**

This Chapter relates to the UR's provisional determinations with respect to innovation funding, an incentive mechanism for Customer Minutes Lost ("**CML**") and an allowance to address worst served customers.

NIE Networks' concerns, in summary, are that:

#### Innovation

- a single mid-point reopener for the Network Innovation Fund will not allow for adequate flexibility for any further innovation projects in RP7, and certain prescribed requirements for the re-opener submission are not appropriate;
- ex-ante allowances for certain innovation projects have not been approved despite their stated benefits;

#### CML

- the UR's proposed planned CML incentive mechanism would perversely incentivise a ramp up in planned CMLs at the start of the RP7 period;
- the UR's proposed unplanned CML mechanism fails to take into account the company's performance level against GB DNOs and risks penalising the company unfairly; and

#### Worst Served Customers

- the UR has not approved an allowance for NIE Networks to address issues affecting worst served customers.

The UR's proposals with respect to innovation funding, CML incentives and worst served customers contribute to two of NIE Networks' three main concerns with the DD – namely, that (i) aspects of price control design could be improved to further achievement of shared objectives and (ii) aspects of totex allowances are deficient.

If the UR's proposals are carried over in its Final Determination, the shortfall in allowances will undermine NIE Networks' ability to deliver its plan for RP7 – including in particular its ability to ensure (i) that the company's customers continue receiving an excellent level of service and (ii) that the business is prepared for the future.

## 1. INTRODUCTION

1.1 This Chapter addresses the key concerns that NIE Networks has with three distinct areas of the DD:

- the UR's proposals for the regulatory treatment and quantum of innovation funding;<sup>1</sup>
- the UR's proposed changes to NIE Networks' reliability incentive framework for Customer Minutes Lost ("**CML**");<sup>2</sup> and
- the UR's rejection of an ex-ante allowance to address worst served customers.

### Innovation funding

1.2 NIE Networks requested a total of £19.1m to fund network innovation projects during RP7, split between:

- an ex-ante baseline allowance of £8.8m; and
- a re-opener that can be triggered in-period to release up to £10.3m of additional funding (the "**Network Innovation Fund**" or "**NIF**").

1.3 The requested ex-ante baseline allowance represents a 15% increase on the total allowance for innovation in RP6. This reflects the need to undertake investments that facilitate net zero through a flexible and integrated energy system and to meet the challenges presented by the energy transition.

1.4 Sections 2 and 3 of this Chapter set out NIE Networks' response to certain issues raised in the DD regarding the Network Innovation Fund. In particular:

- Section 2 addresses the timing and frequency of the re-opener window; and
- Section 3 addresses the reporting requirements for a re-opener submission.

1.5 Sections 4 to 10 set out NIE Networks' response to certain issues raised in the DD regarding the individual innovation projects underlying NIE Networks' ex-ante allowance request. In particular:

- Section 4 concerns the Data Analytics Project;
- Section 5 concerns the V2X Project;
- Section 6 concerns the DC Readiness Project;
- Section 7 concerns the Flexible Market Development Request;
- Section 8 concerns the Micro-Resilience Project;
- Section 9 concerns the Supporting Vulnerable Customers Project; and
- Section 10 concerns the CLASS Project.

<sup>1</sup> DD, Chapter 8 and Annex N.

<sup>2</sup> DD, Chapter 8 and Annex M.

- 1.6 Although not addressed directly in the RP7 Business Plan submission, NIE Networks recognises that the transition to net zero carbon will require a skills pipeline, technological advancement and innovation, which will benefit from close collaboration between academia and industry. NIE Networks intends to support local academic institutions in these areas but doing so will require a level of sustained funding that has not been factored into ex-ante baseline allowance proposals. NIE Networks would welcome the opportunity to discuss this further with the UR (together with local academic institutions), with a view to determining how collaborative programmes might operate in the context of RP7.

### **CML incentives**

- 1.7 In the DD, the UR proposed both:
- an unplanned CML incentive mechanism for outages that customers have not been warned of; and
  - a planned CML incentive mechanism for outages that customers have been warned of.
- 1.8 With respect to CML incentives, this Chapter is structured as follows:
- Section 11 concerns the UR's proposals for an unplanned CML incentive;
  - Section 12 concerns the UR's proposals for a planned CML incentive.

### **Worst served customers**

- 1.9 Finally, Section 13 concerns NIE Networks' requested ex-ante allowance to address worst served customers.

## **2. NETWORK INNOVATION FUND – THE RE-OPENER WINDOW**

- 2.1 As part of its recommended approach towards innovation funding during RP7, NIE Networks proposed the creation of a Network Innovation Fund, a flagship innovation fund visible to stakeholders. NIE Networks proposed that the NIF be valued at £10.3 million.
- 2.2 The NIF would emulate many of the features of GB innovation funds, functioning as a re-opener mechanism which is designed to flexibly address new needs and to support new and worthwhile innovation initiatives that emerge over the course of RP7, as well as to act as a guide for the direction and scale for network innovation being undertaken by NIE Networks.
- 2.3 As well as providing cost recovery for purely network related innovation activities, the NIF would also facilitate whole system innovation projects, providing greater opportunities to collaborate with SONI, academia and industry partners (which have increasingly expressed interest in working with NIE Networks on innovation projects). Stakeholders have highlighted the wider societal benefit of NIE Networks' collaboration on a small number of whole system innovation projects such as GIRONA and NIE Networks considers that the proposed NIF would allow this societal value to be scaled significantly across a wider range of projects. NIE

Networks is also acutely aware of the need to ensure a skills pipeline to deliver the energy transition and considers that increased collaborative innovation, in particular with academia, will facilitate this objective.

- 2.4 NIE Networks proposed an annual submission of project proposals to the UR for consideration with the option to submit proposals at any time where there is sufficient justification. The normal submission date would be the end of each financial year.

#### **The UR's provisional decision**

- 2.5 The UR does not have concerns with NIE Networks request to access additional funding through a re-opener.

- 2.6 The UR recognised that a process with an annual pre-determined application window is not unreasonable as *"it would allow UR to combine NIF funding with the wider annual revenue adjustment processes e.g. performance on incentives"*. However, according to the UR:

*"Such an approach risks being resource intensive."*

*"It is also difficult to align with a framework which seeks to allocate underspend from funded projects. This difficulty arises as funds could be sought after the first year of RP7, whereas baseline projects are typically expected to be implemented over a 3-4 year period."*

- 2.7 For these reasons, the UR indicated that it was minded to have *"one re-opener window for innovation at the mid-point of the price control"*. Submissions would be expected in August 2028.

- 2.8 As for the option to submit proposals outside of the annual process, the UR indicated that this could have advantages in specific circumstances but that these circumstances are unlikely to be relevant to innovation:

*"Should there be exceptional events that require urgent immediate investments (e.g. force majeure), allowing revenue variations outside of the annual process can be beneficial. This is not the case for innovation projects, that are by nature designed to address forward looking needs rather than to respond to emergencies."*

*"Allowing submissions "at any time, if there is sufficient justification" would beg the question as to what would constitute justification. NIE Networks has not elaborated on this point. As such, we would not propose that submissions can be made on an ad hoc basis."*

#### **Where NIE Networks agrees with the UR's provisional decision**

- 2.9 NIE Networks welcomes the UR's acceptance of the need for a NIF in NI with an indicated value of c. £4m (with no formal cap proposed). NIE Networks also agrees with the UR's comments on:

- The Innovation Council,<sup>3</sup> in particular that NIE Networks is responsible for its own allowances and licence obligations – NIE Networks will take the UR's commentary into consideration as it ramps up its innovation stakeholder engagement in RP7 and beyond.
- Match funding.<sup>4</sup> NIE Networks is already working closely with local academia in relation to current and future network issues and is committed to developing this relationship further, with the NIF providing the appropriate mechanism and an improved opportunity to do so.

### **Concerns with the UR's provisional decision**

- 2.10 NIE Networks strongly disagrees that a single mid-point re-opener is appropriate. A single re-opener window will not allow for adequate flexibility for innovation over the 6-year period between 2025 and 2031, and it will result in lost opportunities for additional innovation projects from the NIF.
- 2.11 The UR's proposed framework would likely provide less flexibility than is currently available in RP6, given that NIE Networks has been able to obtain cost recovery for innovation projects at several junctures throughout the RP6 period. The proposed framework would also significantly limit NIE Networks' ability to innovate and collaborate with other energy and whole system providers, academia and industry partners during RP7.
- 2.12 NIE Networks acknowledges and agrees that underspend from baseline innovation projects should be utilised to (partially or fully) fund further innovation projects. However, the UR's proposed framework appears to prioritise the allocation of potential underspend over providing flexibility in responding to new innovation opportunities. The UR's approach therefore overlooks the NIF's intended purpose and significantly diminishes its effectiveness. Furthermore, the proposed single mid-point re-opener places the UR at odds with the approach of OFGEM and CRU, as described in paragraph 3.27 of Annex N.
- 2.13 NIE Networks considers that the intended arrangements<sup>5</sup> for the end of the price control (i.e. deferral of allowances in next price control) coupled with new RP7 reporting arrangements described below, provide adequate mitigation to manage underspend and invites the UR to consider this further. If the UR disagrees, NIE Networks proposes that it may be more appropriate to introduce other measures at the end of the price control, such as the reconciliation of underspend, rather than limiting the frequency of the re-opener mechanism (and the requisite flexibility in funding).
- 2.14 As for the quantum and certainty of underspend, as part of the proposed new RP7 annual reporting arrangements, NIE Networks will report actual and forecast

<sup>3</sup> Paragraphs 3.64 to 3.74 of Annex N.

<sup>4</sup> Paragraph 3.73 of Annex N.

<sup>5</sup> NIE Networks notes that the licence modifications to implement this arrangement have not to date been implemented.

expenditure for each innovation project. This will highlight the anticipated underspend on an annual basis, which will provide a foundation for more frequent NIF submission decisions.

Delays to the commencement of new innovation projects

- 2.15 The NIF submission framework proposed by the UR is likely to significantly delay the commencement of new projects. Under this framework, a new project identified early in RP7 (e.g. July 2025), may wait three years, until July 2028, for potential funding at the mid-point re-opener. Similarly, a project identified in September 2028 may wait two and a half years until the commencement of RP8 in April 2031 for potential funding.
- 2.16 As was the case in RP6, any delays to funding and commencing innovation projects is detrimental to the delivery of those projects and realising anticipated benefits which, in light of upcoming 2030 decarbonisation targets, cannot be welcome.
- 2.17 The UR's proposed framework is particularly detrimental to NIE Networks' ability to collaborate with partners or leverage other sources of funding. A key objective in establishing a frequent re-opener is to allow for whole system projects with multiple partners e.g. academia and industry, and/or funding streams to emerge in their own time.

**Conclusion**

- 2.18 NIE Networks proposes that the NIF framework should allow it to submit project proposals annually during RP7. This will allow NIE Networks to flexibly and rapidly introduce new innovation projects where needed, and will allow NIE Networks to collaborate with other energy and whole system partners (see paragraphs 7.258-9 of the RP7 Business Plan which sets out the company's proposal for a '*light touch*' reopener mechanism) .
- 2.19 Responding to our RP7 consultation, stakeholders indicated strong support for innovation funding, specifically noting:
- RP7 will be a critical and challenging period for system transformation and much of the low hanging fruit has been taken. Therefore, innovation is essential.
  - Whole system, academia and industrial collaboration is essential and NIE Networks collaboration provides significant societal benefit.
  - Innovation funding should provide a positive return on investment, having a minimal or improved impact on consumer bills.
  - A Network Innovation Fund, administered by UR, is welcomed and is compatible with the promoted 'fast follower' approach.
  - The proposed £20m funding for innovation should be higher.
  - In addition to an upfront fund, there should be the ability to seek additional funding based on a case of need, during the price control period.

- 2.20 NIE Networks agrees with this feedback from stakeholders and considers that it emphasises the importance of having access to additional ad-hoc funding when innovation opportunities arise, to ensure that the benefits of innovation are delivered to customers.

### 3. NETWORK INNOVATION FUND – RE-OPENER REQUIREMENTS

- 3.1 The NIF acts as a re-opener that can be triggered in-period to release additional funds for innovation projects. NIE Networks proposed that it should make a formal submission to justify a NIF re-opener request and that this should be followed by a 'light touch' review by the UR.

#### The UR's provisional decision

- 3.2 The UR states at paragraph 2.15 of Annex N that a *"complete analysis of the RP6 innovation programme is not yet possible. Trials are not yet complete and reporting of specific project activity has been somewhat limited. This needs to be substantially enhanced for the RP7 regulatory period."*

- 3.3 At paragraph 3.76 of Annex N, the UR indicated that the presence of a re-opener request does not per se imply that new funds will be released:

*"NIE Networks will need to demonstrate the business case for the project. A high-quality submission will then be a necessary (but not sufficient) condition for the release of new funds and the lack of quality could lead to the rejection of proposals."*

- 3.4 Finally, the UR stipulated at paragraph 3.79 of Annex N that NIF submissions should contain the following information at a minimum:

- *a) Need case and urgency for the proposed project. This should clearly set out why the project cannot be funded as BAU and why it is needed in-period rather than at the next price control.*
- *b) Process utilised to identify the project as the preferred innovation project, given the needs case.*
- *c) A cost benefit analysis of the proposed project, using quantitative techniques where possible.*
- *d) A demonstration of how the proposed projects meets the criteria approved and the objectives stated in the RP7 framework decision.*
- *e) Technical features of project.*
- *f) Narrative over efficiency of project costs, their breakdown and the estimation methodology. Where a data table or spreadsheet is used, the data presented should be clearly labelled and any figures quoted in the core narrative should be specifically identified with the price base being used clearly stated.*

- *g) An audit trail of any underspend from the baseline innovation allowance or previously approved NIF projects used for reducing the size of this funding request.*
- *h) Governance structure of the project, including stage gate processes, milestones and in what timeframe.*
- *i) A clear audit trail of outturn benefits of each project approved in the past, so that they can be compared with the estimates put forward in previous years.*
- *j) Carbon emissions savings assumptions must be clearly identified.*

#### **NIE Networks' comments on the UR's provisional decision**

- 3.5 As for paragraph 2.15 of Annex N, NIE Networks is aligned with the UR that there should be greater reporting and transparency around innovation in RP7. NIE Networks acknowledges the UR's comments regarding additional information to be included in annual reporting. Following further development of the Evaluative Performance Framework, NIE Networks will consider the most appropriate method for reporting on innovation projects, in particular whether this is best achieved through the stakeholder engagement and reporting associated with the Evaluative Performance Framework, or through separate reporting.
- 3.6 As for paragraph 3.76 of Annex N, NIE Networks has noted the UR's comments and understands that there is no guarantee that new funds will be released. NIE Networks appreciates that the quality of its submissions will be a key condition for the release of new funds.
- 3.7 Lastly, NIE Networks broadly agrees with the UR's minimum requirements for a re-opener request set out in paragraph 3.79 of Annex N, except for subparagraphs (g), (i) and (j), which it responds to separately below.

#### **Concerns with the UR's provisional decision**

- 3.8 NIE Networks considers that the requirements in subparagraphs (g), (i) and (j) as currently drafted are not appropriate for a NIF submission. NIE Networks considers that these three reporting requirements are better suited to annual reports or post-project evaluation reports, and these requirements (as currently drafted) will place an unnecessary burden on NIE Networks if implemented.
- 3.9 NIE Networks is also concerned that the requirements in subparagraphs (g), (i) and (j) may become barriers for projects with lower Technology Readiness Levels, where the project pathways and benefits are less certain or where the risk is greater (this is a more pronounced issue in RP7). NIE Networks considers that its submissions for projects of this nature should not suffer accordingly.

#### Subparagraph 3.79(g)

- 3.10 Requirement (g) provides that NIE Networks must submit "an audit trail of any underspend from the baseline innovation allowance or previously approved NIF projects used for reducing the size of this funding request" to the UR.



- 3.11 NIE Networks agrees with the principle that any NIF submission should include consideration of the options for funding, which extends to underspend from previously funded innovation projects as well as funding from other funding sources (as encouraged in paragraph 3.81 of Annex N). NIE Networks plans to submit an annual innovation report during RP7 that includes project expenditure information that will highlight expected underspends or overspends.
- 3.12 However, NIE Networks considers that the requirement for a full audit trail of any underspend on other projects is overly burdensome and unnecessary, especially because this information will be provided in NIE Networks' annual innovation report.
- 3.13 NIE Networks proposes that requirement (g) be limited to a description of the options available for funding, including underspend for previously funded innovation projects and other funding sources, as encouraged by the UR in paragraph 3.81 of Annex N.
- Subparagraph 3.79(i)
- 3.14 Requirement (i) provides that NIE Networks must submit "*a clear audit trail of outturn benefits of each project approved in the past, so that they can be compared with the estimates put forward in previous years*" to the UR.
- 3.15 NIE Networks agrees that a NIF submission should include a narrative of relevant projects undertaken by NIE Networks and their benefits.
- 3.16 However, NIE Networks considers that the requirement for a full audit trail of outturn benefits from other projects is overly burdensome and unnecessary, especially because this information will be provided in post-project evaluation reports. NIE Networks intends to publish these reports and will include within each report the outcomes and benefits of the relevant project.
- 3.17 Furthermore, NIE Networks is concerned that requirement (i) puts too great an emphasis on previous projects' outturns, rather than requiring the UR to consider a new NIF submission in its own right.
- 3.18 NIE Networks proposes that requirement (i) be limited to a narrative assessment of similar projects undertaken by NIE Networks and their benefits in order to highlight any areas of overlap with the current submission.
- Subparagraph 3.79(j)
- 3.19 Requirement (j) provides that the "carbon emissions savings assumptions must be clearly identified" in any NIF submission.
- 3.20 NIE Networks is generally supportive of the UR's inclusion of carbon emissions savings and considers decarbonisation to be an important driver of the NIF.
- 3.21 However, not all innovation projects will have a carbon emission saving attached and it would be an error to judge all NIF submissions against this criterion. In NIE Networks view, innovation should not be limited to decarbonisation but should extend to other areas of network investment and operations, including asset management (i.e. monitoring and extending the lives of assets).

- 3.22 NIE Networks proposes that carbon emissions savings should not be reported as a separate requirement but should instead be included as an element of requirements (a) and (c) if appropriate. This would help to ensure that NIE Networks is not disincentivised in bringing forward innovation projects that are not primarily focussed on carbon emissions savings, but in any event will have a strong needs case and cost benefit analysis attached to them.

#### 4. DATA ANALYTICS PROJECT

- 4.1 One of the innovation projects proposed by NIE Networks under the ex-ante baseline allowance is a data analytics project. This project is intended to evaluate NIE Networks' existing data landscape compared with other network operators and to identify opportunities to derive additional value for NIE Networks and its customers. In particular, as part of this project, NIE Networks will review the latest techniques and innovation projects in the data analytics space in other jurisdictions and test and trial techniques to verify the suitability of each use case.

- 4.2 The key objectives of the Data Analytics project are to:

- study and analyse how data from network equipment and other data sets such as customer and network performance records could be used for the potential benefit of the network;
- review the latest techniques and innovation projects in the data analytics space in other jurisdictions and prioritise use cases;
- outline the scope for three data analytics initiatives that could be taken forward to promote greater investment efficiency, reliability and resilience within the network; and
- test and trial techniques to verify the use cases' suitability for NIE Networks.

- 4.3 NIE Networks has separately proposed, as part of its DSO Strategy and Digital and IT Business Plan, a Network Data Management & Analytics project, the purpose of which is to implement a data management and storage system that will collate network data from multiple BAU systems, analyse it and generate recommendations to assist in network planning and strategy decisions.

##### **The UR's provisional decision**

- 4.4 In the DD,<sup>6</sup> the UR elected to withhold the allowance for NIE Networks' data analytics project on the basis that it is "*somewhat questionable if this project should be categorised as an innovation scheme*" and because it is "*very similar*" to the Network Data Management & Analytics project under DSO13.

##### **Concerns with the UR's provisional decision**

- 4.5 While they address similar and interrelated issues, there is no overlap between this innovation project and the Network Data Management & Analytics project under

<sup>6</sup> Annex N, Table 4.2.

DSO13. The latter will implement the technology platform, tools and processes needed to collect, manage and analyse data. That does not include the application of advanced data analytics techniques, which is the focus of this innovation project. In short, the project under DSO13 will provide the tools, while this innovation project will inform how those tools are used.

- 4.6 Ultimately, any new algorithms and/or analytical techniques revealed by this innovation project can be implemented through the platform introduced by the DSO13 project, which will maximise the value that NIE Networks can derive from it.

#### **NIE Networks' requested allowance**

- 4.7 For RP7, the UR should provide the requested allowance for both this innovation project and the Network Data Management & Analytics project under DSO13.

### **5. V2X PROJECT**

- 5.1 NIE Networks has proposed an innovation project for V2X (Vehicle to Everything). The recent development of bi-directional electric vehicle ("**EV**") chargers has enabled energy from an EV's battery to be exported, either back to the grid (V2G) or to any application e.g. a customer's house or a particular appliance (V2X). NIE Networks' project is a test case that aims to develop understanding of the real-world behaviour of V2X technologies, including primarily how these technologies connect to and impact the distribution system, and the extent to which these technologies can support the electricity network, potentially alleviating stress on the network caused by the increased uptake of low carbon technologies ("**LCTs**").
- 5.2 As part of the V2X project, NIE Networks will carry out network trials to demonstrate that EVs can act as a battery energy storage system ("**BESS**"). NIE Networks intends to recruit a minimum of 10 V2X drivers in NI for this trial because, during the analysis of the trial data, information from several scattered, or potentially clustered, V2X users can be combined to simulate various network scenarios which could cause network congestion.
- 5.3 The trial will explore several techniques around V2X connections, charging and commercial/incentive structures for each option and connections facilitation. It is intended to build on NIE Networks' RP6 EV Managed Charging project, partnering with a charge management platform provider to install and manage V2X charging equipment and associated V2X controllers/home metering equipment, provide communications to enable dynamic charging/discharging control signals and collate all EV charging data through its platform.
- 5.4 NIE Networks acknowledged in the Project Business Case that a number of similar projects undertaken by other GB network operators had encountered some difficulties with V2X trials, including:
- participant recruitment;
  - obtaining sufficient data;
  - complex hardware installations; and

- maintaining communication with key partner organisations.

5.5 However, NIE Networks acknowledged these difficulties and, since it is aware of them, stated that it was better placed to deal with them should they arise in the current V2X project.

#### **The UR's provisional decision**

5.6 In the DD,<sup>7</sup> the UR did not provide an allowance for the V2X innovation project, stating that "*material concerns exist*". This is subject to NIE Networks providing additional information (see paragraph 5.7 below). In addition to citing the issues experienced by other GB network operators, the UR raised the following concerns:

- A trial with a minimum test base of 10 customers would not be enough to derive reliable conclusions for typical customer usage.
- The project would require customer training to use EV and V2X technology.
- The Dingle electrification project run by ESB Networks encountered a variety of issues including: i) communication outages; ii) Wi-Fi issues; iii) customer disconnections; iv) synchronised discharging causing potential voltage challenges; v) limited response available during the day when vehicles are not connected to the chargers.

5.7 The UR stated that NIE Networks had not addressed how these problems would be overcome and, given the "*limited nature of the trial and the risk*", questioned the value of funding the project. Therefore, the UR requested that NIE Networks demonstrate how these issues might be overcome, including how it "*expects to obtain actionable data from such a limited set of participants*", before it considers an allowance.

#### **NIE Networks' response**

5.8 NIE Networks welcomes the UR's recognition of the challenges associated with delivering a project of this nature, namely engaging with and introducing new technologies to domestic consumers.

5.9 NIE Networks notes that it has started to receive enquiries from customers regarding V2X and it expects the number of enquiries will increase as the technology becomes more mainstream and the associated capital costs reduce over time.

5.10 NIE Networks addresses the UR's requests for further information below.

#### Issues with previous V2X trials

5.11 As for the issues encountered by GB network operators and ESB in previous V2X trials, NIE Networks intends to derive learnings from these trials, which will help it to identify and mitigate previously identified risks. NIE Networks will also be able to draw on its own experience delivering the EV Managed Charging pilot for this purpose.

<sup>7</sup> Annex N, Table 4.5.

- 5.12 It should be borne in mind that previous trials were carried out a number of years ago and there have been notable improvements in relevant technologies and reductions to capital costs since then, which should further mitigate many of the issues identified in previous V2X trials.
- 5.13 Lastly, NIE Networks considers that it is part of the scope of the V2X project to address and overcome any remaining challenges, and NIE Networks cannot completely mitigate, or explain how it will mitigate, all potential challenges at the business case stage.

Limited number of participants

- 5.14 As for the proposed trial size, NIE Networks notes that the focus of the V2X project is to demonstrate the technical capabilities of V2X rather than to conduct a wider study of customer behavioural patterns which appears to be how the UR has interpreted its purpose. In NIE Networks' view, a technical demonstration does not require a large pool of participants.
- 5.15 As a technical demonstrator, the V2X project aims to:
- identify and remove technical barriers to customer uptake of V2X technologies (e.g. compliance of V2X equipment with applicable NI standards and NIE Network policies, interaction with other generation sources in the home (PV) and existing export control schemes); and
  - demonstrate how V2X technologies can be utilised to support efficient network operation including the technology and control systems, leveraging learning from our current EV managed charging pilot.

- 5.16 A future project may seek to explore customer usage in relation to V2X, building on the outcomes of this project, which may further contribute to the development and roll out of V2X.

Customer training

- 5.17 As for the UR's concern that this project will require customer training to use EV and V2X technology, NIE Networks could offer this training or arrange for it to be provided by appropriate project partners.

**NIE Networks' requested allowance**

- 5.18 In light of the information provided above, NIE Networks requests that the UR funds the V2X project to the amount originally requested i.e. £1.26M. Should the UR's concerns with the V2X project persist, NIE Networks would welcome further engagement on this matter.

## 6. DC READINESS PROJECT

- 6.1 NIE Networks proposed a direct current ("DC") readiness innovation project, which aims to investigate the possibility of integrating low voltage DC ("LVDC") infrastructure into new or existing distribution networks in NI, and to assess any resulting improvements in the performance of the network in terms of power capacity and controllability.
- 6.2 The use of DC technologies in distribution systems has significant potential to enable the deployment of LCTs. DC distribution systems have inherent enhanced controllability and increased power capacity capability. Therefore, interest in DC and LVDC has grown alongside the proliferation of LCTs such as solar panels, EVs, heat pumps ("HPs") and energy storage. The majority of these LCTs generate or consume DC power, thus there will be potential efficiency gains if DC supply is provided to a distribution network operator's customer.
- 6.3 The goal of this project is to enable the wider uptake of LCTs and the key objectives are to:
- research and document the technical and regulatory issues related to design and operation of new LVDC networks;
  - document the feasibility of leveraging existing alternating current ("AC") assets and the integration of LVDC networks into existing power systems; and
  - understand the performance and commercial viability of LVDC assets and networks.
- 6.4 NIE Networks' requested funding is for a feasibility study only, with no live trial phase.

### The UR's provisional decision

- 6.5 In the DD,<sup>8</sup> the UR stated:

*"This project is in the early stages and involves desktop-based feasibility studies to develop this innovative technology."*

*"The potential benefits are worth investigating."*

*"Labour costs of £0.5m however seem excessive for three feasibility studies."*

*"We are minded to support the project but with 20% less staff resource."*

*"For full allowance NIE Networks would need to explain the resourcing."*

- 6.6 In summary, the UR has reduced NIE Networks' requested allowance by 20%. The UR requested that NIE Networks explain the resourcing for this project before it would approve the full allowance.

### NIE Networks' response

<sup>8</sup> Annex N, Table 4.6.

- 6.7 In the Project Business Case,<sup>9</sup> NIE Networks stated that the "*DC Readiness project involves desktop-based feasibility studies only, which will involve project management and labour costs – split between NIE Networks' internal resourcing and consultancy support, as necessary*".
- 6.8 The high labour costs identified by the UR are largely attributable to consultancy fees, as NIE Networks does not have the requisite expertise for this project in-house and NIE Networks will require support from external consultants. Standard consulting rates were used in the preparation of NIE Networks' business case.<sup>10</sup> However, due to the specialised nature of LVDC networks, rates for the consultants engaged by NIE Networks may ultimately be higher.

#### **NIE Networks' requested allowance**

- 6.9 In NIE Networks view, funding at the knowledge building stage is crucial and should not be reduced on the basis of a labour costs estimate. In light of this and the information provided above, NIE Networks requests that the UR funds the DC Readiness project to the amount originally requested i.e. £0.5m.

### **7. FLEXIBLE MARKET DEVELOPMENT PROJECT**

- 7.1 NIE Networks has proposed a Flexible Market Development innovation project, which aims to implement a real-time flexibility market and evaluate the benefits of this activity. This will allow: (1) NIE Networks to procure flexibility services from customers in the weeks, days or hours before it is required, and (2) flexibility providers to update or refine their availability and prices to better reflect market conditions and changes in their asset portfolio.
- 7.2 During the RP6 FLEX project, NIE Networks procured flexibility services from customers approximately 6-months to 1-year ahead of delivery. NIE Networks has successfully procured both pre-fault and post-fault congestion management products. This project aims to build on the initial work but with a focus on greater real-time procurement (weeks, days or even hours ahead of need), which should result in more competitive flexibility markets.
- 7.3 The key objectives of the RP7 Flexible Market Development project are to:
- develop a detailed end-to-end market design, documenting functional and operational requirements;
  - investigate the functionality of existing commercial third-party platforms and determine if there is an off-the-shelf solution;
  - establish a market platform and successfully complete user acceptance testing;

<sup>9</sup> 5.302 RP7 Innovation Project Business Case DC Readiness.

<sup>10</sup> At a rate of £678.30 per day for a Senior Engineer.

- implement the closer to real-time flexibility market, procuring and utilising flexibility while ensuring settlement procedures are in place; and
- trial a variety of procurement and trading strategies in order to understand market behaviour

### **The UR's provisional decision**

- 7.4 In the DD,<sup>11</sup> the UR has indicated its support for this project and has agreed to the majority of the requested allowance (£0.82m out of a requested £0.88m). However, the UR is concerned that there is a potential overlap between this project and *DSO16 - Flexibility Services Enduring Solution* (which aims to implement an enduring system and interface to enable NIE Networks to utilise flexibility services) and has requested clarification on this.

### **NIE Networks' response**

- 7.5 NIE Networks welcomes the UR's acceptance of the needs case for this project and the recognition of its potential benefits.
- 7.6 The Flexible Market Development innovation project is focused on trialling arrangements and solutions that enable closer to real-time procurement of flexibility services i.e. weeks/days/hours ahead of delivery rather than years ahead (which is the current approach).
- 7.7 The DSO16 D&IT project is focused on implementing an enduring and integrated solution for managing flexibility services. The aim is to integrate a flexibility management solution within NIE Network's existing IT/OT environment. At the moment, that solution is based on the current model for procuring flexibility i.e. long-term procurement. The Flexible Market Development innovation project will enable NIE Networks to trial closer to real time procurement before incorporating it as part of the design for its enduring architecture in DSO16.
- 7.8 It is imperative that NIE Networks trials closer to real time procurement before incorporating it as part of the design for its enduring architecture and solution in DSO16 which should be considered as the business as usual realisation.

## **8. MICRO-RESILIENCE PROJECT**

- 8.1 NIE Networks proposed a micro-resilience innovation project, which aims to maintain and increase network resilience, especially for critical or vulnerable customers and those more susceptible to faults in rural and isolated areas.
- 8.2 The use of battery storage technologies, or Battery Energy Storage Systems ("**BESS**"), can improve the network's resilience, providing an alternative supply to a network for a period of time, delaying the onset of an outage, giving network operators an opportunity to resolve the fault while customers remain on supply.

<sup>11</sup> Annex N, Table 4.7.



- 8.3 BESS can store energy from the grid or local electricity generation for use when the grid connection is lost and support a section of the network in an islanded mode for a period of time. Therefore, in certain circumstances, implementing a BESS within local networks could offer a potential cost-effective alternative to network reinforcement. Implementing such a scheme could improve network performance, while minimising costs to customers and avoiding negative environmental impacts associated with fossil-fuel backup systems.
- 8.4 Although BESS solutions have been integrated in networks in Great Britain and Ireland, integration of BESS in the distribution network in NI, for the purpose of increasing the resilience of local networks, has not yet been examined and trialled.
- 8.5 The key objectives of the micro-resilience project are to:
- investigate the technical feasibility of safely deploying BESS to support islanded (independent) operation;
  - trial the proposed technical solutions with a view to implementation on a wider scale;
  - measure the ability of a Micro-Resilience solution to defer conventional network reinforcement and minimise customer bills; and
  - explore the development of a market-based framework for resilience as a service.

#### **The UR's provisional decision**

- 8.6 In the DD,<sup>12</sup> the UR indicated its support for the project, stating that it has a well-supported business case and a good rationale. However, the UR also requested further information:

*"However, the key concern is from a legal perspective. Unlike other GB Network operators, NIE Networks is also a certified TSO."*

*"As such, the company cannot have any generation or supply interests. In the absence of legislation, batteries are being licensed as generators."*

*"It is noticeable from the submission that as well as a back-up supply, BESS may be able to provide other services when connected to the grid."*

*"As these can be provided by the market, it is not clear if NIE Networks should be undertaking this activity."*

- 8.7 For the purposes of a final decision, the UR requested engagement from NIE Networks on the legal issue identified above.

#### **NIE Networks' response**

- 8.8 NIE Networks understands the UR's query relating to NIE Network's status as a certified TSO. NIE Network's Transmission and Distribution Licenses make clear

<sup>12</sup> Annex N, Table 4.9.

that NIE Networks is prohibited from participating in the supply or generation of electricity, except in specified circumstances.<sup>13</sup>

- 8.9 NIE Networks agrees in principle with the UR that this service could be provided by a market participant, however as NIE Networks has not undertaken this before we cannot confirm this, nor does NIE Networks have the framework or experience to procure this service. NIE Networks therefore views this project a stepping stone towards that outcome.
- 8.10 NIE Networks considers that the regulatory risk associated with this project, which is time-bound and limited in scale, is low and that any prevailing issues can be overcome.
- 8.11 On this basis, NIE Networks requests that the full allowance be approved to enable efficient project planning, design and delivery including appointing key project partners. While a staged approach to funding could be considered, this would introduce increased administration, promote inefficient procurement and would not be commensurate with the level of risk.
- 8.12 At the appropriate project stage, and if required subject to detailed design, NIE Networks would request appropriate regulatory approval, derogation or licence modification before technology deployment.
- 8.13 If during the project it becomes clear that NIE Networks cannot progress further, any remaining allowance could be managed in line with the agreed approach for treatment of underspend. Expenditure would be redirected to other innovation projects or, at the conclusion of RP7, returned to customers or used to pre-fund RP8 projects (see Section 2 above).

## **9. SUPPORTING VULNERABLE CUSTOMERS PROJECT**

- 9.1 NIE Networks has proposed a Supporting Vulnerable Customers innovation project, which will (i) explore how the definition of consumer vulnerability has changed and will change over time as customers in NI adapt to a net zero and digital future; and (ii) develop a strategy and action plan that supports vulnerable customers.
- 9.2 As NI progresses towards a smart, flexible and low carbon energy system, new opportunities are emerging like more dynamic time of use tariffs, aggregation, flexibility, and other digital and energy services. Customers with adequate means, skills and knowledge will be able to unlock benefits from these opportunities while those without are at risk of being left behind, missing out on financial benefits, incurring additional costs or being unable to access services thereby potentially reducing their quality of life.
- 9.3 The key objectives of the project are to:
- review and evaluate NIE Networks current vulnerable customers definition(s) and support strategies;

<sup>13</sup> Condition 12 and Condition 13, 4-5.

- examine the key changes that have already occurred and those that are expected to emerge during the net zero transition;
- identify how groups of customers may experience difficulties in accessing services or unlocking benefits through this transition;
- assess the barriers to groups of customers adapting to these changes or overcoming difficulties;
- design and evaluate strategies and actions to support customers with overcoming identified barriers; and
- update NIE Networks definition of vulnerable customers.

#### **The UR's provisional decision**

9.4 In the DD,<sup>14</sup> the UR has not recommended any of the required allowance and has provided the following reasoning:

*"This business case does not support the requirement for an innovation allowance."*

*"The actions listed are all those that would be expected of a reasonable and prudent network operator and BAU activity."*

*"We do not consider additional innovation allowance for this project is justified. Such activity should be undertaken as a matter of course."*

9.5 In order to consider any allowance, the UR requested that NIE Networks demonstrate why the objectives are innovative in nature.

#### **Concerns with the UR's provisional decision**

9.6 NIE Networks has noted the UR's focus on a just transition and vulnerable customers. While NIE Networks agrees that improving the experience of vulnerable customers is part of reasonable "business as usual" activity, this innovation project aims to go beyond that by offering to support an evolving group of vulnerable customers.

9.7 The vulnerable customers project will reasonably adopt the fast follower model, as with previous approaches and projects. The project will evaluate, recommend and implement best practice observed throughout the UK and other jurisdictions which may represent a step change for NIE Networks and its vulnerable customers. The focus for the project will be to trial practices that could be implemented on an accelerated basis for vulnerable customers – without impacting on the core BAU services that NIE Networks has committed to (and been funded to) provide for this customer group.

9.8 Particular themes that will be explored throughout this project include:

<sup>14</sup> Annex N, Table 4.10.

- how vulnerable customers can better participate in the provision of flexibility services and emerging technologies such as time of use tariffs and energy efficiency products, which provide costs savings for the customer;
  - how to decarbonise vulnerable customers' heating requirements; and
  - how to best support vulnerable customers during planned and unplanned outages
- 9.9 For example, one initiative undertaken in the UK involved customers with critical medical equipment having uninterruptable power supplies installed in their homes. NIE Networks would seek collaboration on a project of this nature with other organisations supporting vulnerable customers including the Consumer Council.
- 9.10 If the UR does not provide funding for the vulnerable customers project, NIE Networks would have to attempt to progress these initiatives as business as usual activities, potentially impacting other proposed plans. Ultimately, without a dedicated innovation allowance, the scale and ambition of implementing novel measures to support vulnerable customers will be diminished.

#### **NIE Networks' requested allowance**

- 9.11 In light of the further information provided above, NIE Networks requests that the UR allocates £0.36m to the vulnerable customers project as originally requested.

### **10. CLASS PROJECT**

- 10.1 NIE Networks proposed the Customer Load Active System Services ("**CLASS**") innovation project.
- 10.2 CLASS is a project originally delivered by Electricity North West ("**ENWL**") in Great Britain that leverages the relationship between voltage and demand to manage network congestion, support whole system balancing and reduce customer bills. Through the CLASS project, ENWL successfully demonstrated that, by optimising network voltages during peak demand periods, demand could be reduced on a temporary basis without materially impacting customers or without them noticing, otherwise known as conservative voltage reduction ("**CVR**").
- 10.3 ENWL leveraged this relationship to enable network reinforcement to be deferred, an approach that also formed the basis of NIE Networks' RP6 DRVC project ('Demand Reduction through Voltage Control') which has successfully replicated the technique. ENWL also leveraged this relationship and outcome to effectively provide ancillary services (operational reserves and response products) to National Grid Electricity System Operator.
- 10.4 The key objectives of this project are to:
- technically implement CLASS in a section of the network and integrate it into NIE Networks' systems;
  - demonstrate the successful provision of ancillary services to the TSO and the impact on customers;

- investigate ancillary service opportunities that CLASS offers, as well as customer energy savings and the impact on customer bills; and
  - integrate CLASS into the TSO's systems and market interfaces.
- 10.5 Since NIE Networks is precluded by its current licence obligations from providing services, it would require a derogation from the UR in order to proceed with the CLASS project.

#### **The UR's provisional decision**

- 10.6 In the DD,<sup>15</sup> the UR recognised that the benefits of reductions to customer bills is worth investigating. However, the UR is concerned that there are "*significant technical and regulatory challenges to the project*" that "*need to be investigated and determined*" before it can commence. In particular, the UR recognised that without derogations the project would not be able to proceed. For these reasons, the UR declined to fund this project.
- 10.7 In order to consider an allowance, the UR requested engagement from NIE Networks on the regulatory challenges and invited NIE Networks to make a case as to why derogations should apply.

#### **NIE Networks' response**

- 10.8 NIE Networks recognises that providing CLASS involves participating in TSO markets, and it is aware that it is prohibited by its licenses from participating in the supply or generation of electricity, except in specified circumstances.
- 10.9 NIE Networks considers that the regulatory risk associated with this project, which is time-bound and limited in scale, is low and that any prevailing issues can be overcome.
- 10.10 On this basis, NIE Networks requests that the full allowance be approved to enable efficient project planning, design and delivery including appointing key project partners. While a staged approach to funding could be considered, this would introduce increased administration, promote inefficient procurement and would not be commensurate with the level of risk.
- 10.11 At the appropriate project stage, NIE Networks would request appropriate regulatory approval, derogation or licence modification before technology deployment.
- 10.12 If during the project, it becomes clear that NIE Networks cannot progress further, any remaining allowance could be managed in line with the agreed approach for treatment of underspend in the manner set out in NIP144. Expenditure would be redirected to other innovation projects or, at the conclusion of RP7, returned to customers or used to pre-fund RP8 projects (see Section 2 above).

<sup>15</sup> Annex N, Table 4.11.

## 11. UNPLANNED CML INCENTIVE

- 11.1 In RP6, the UR introduced a new reliability incentive scheme relating to Customer Minutes Lost ("**CML**") to ensure that NIE Networks manage the trade-off between costs and reliability appropriately and in the best interest of customers.
- 11.2 A distinction is drawn between planned and unplanned CML. Unplanned CML relates to outages that customers have not been warned of.
- 11.3 In its RP7 Business Plan submission, NIE Networks proposed that the UR should restructure the unplanned CML incentive mechanism to adopt the approach taken by Ofgem in the RIIO-ED2 final determination.
- 11.4 The RIIO-ED2 mechanism applies a 0.5%, 2% or 4% year on year reduction of unplanned CML targets upon each of the GB DNOs. This reduction is based on their historic unplanned CML average versus their RIIO-ED1 benchmark. The mechanism utilises the current historic average as a starting point: the better performing DNOs are required to achieve a lower percentage improvement year on year than the worse performers.
- 11.5 When compared against the NIE Networks' RP6 weighted historic average starting point of 58.68 unplanned CMLs, the company's proposed RP7 weighted historic average of 43.02 CMLs (using data available up to 2021/22) is a 27% decrease on the original target, which makes NIE Networks one of the best performing UK DNOs over the period. On that basis, the company proposed that the application of the 0.5% year on year reduction to its unplanned CML target was the appropriate benchmark.<sup>16</sup>
- 11.6 As set out in its RP7 Business Plan, under NIE Networks' overall asset replacement strategy there are a number of proposed RP7 work programmes that have an additional net positive benefit in terms of unplanned CMLs.
- 11.7 The company therefore proposed that these savings are incorporated into its unplanned CML target prior to the financial incentive being applied. This approach has not been adopted by Ofgem in RIIO-ED2. This results in a comparatively more stretching target for NIE Networks, reflecting its commitment to continue to deliver significant and ongoing network reliability improvements for its customers.
- 11.8 NIE Networks' proposed approach in its RP7 Business Plan would result in the annual targets set out in Table 1.

**Table 1: NIE Networks' original proposed unplanned CML targets<sup>17</sup>**

Year	Start	25/26	26/27	27/28	28/29	29/30	30/31
<b>UR 0.5% Reductions</b>	43.02	42.80	42.59	42.38	42.17	41.96	41.75

<sup>16</sup> NIE Networks, EJP 1.801 'Network Performance Strategy', p.15.

<sup>17</sup> Based on 2021/22 unplanned CML data.

<b>NIEN RP7 Programme CML Savings</b>		0.00	0.46	0.89	1.34	1.78	2.24
<b>Unplanned CML Target</b>	43.02	42.80	42.13	41.49	40.83	40.18	39.51

#### The UR's provisional decision

- 11.9 In its DD, the UR agreed with NIE Networks' proposal to restructure the unplanned CML incentive and proposed to adopt the target reduction mechanism used by Ofgem for RIIO-ED2.
- 11.10 The UR has also incorporated the company's proposed unplanned CML savings into the unplanned CML target prior to the financial incentive being applied.
- 11.11 However, the UR proposed to adapt Ofgem's target setting methodology so as to:
- update the start point to account for the latest available year data (2022/23);
  - use a 4-year average to calculate the start point; and
  - impose year-on-year reductions to the CML target of 2% per annum.<sup>18</sup>
- 11.12 This approach results in the annual targets set out in Table 2.

**Table 2: UR proposed unplanned CML targets**

<b>Year</b>	<b>Start</b>	<b>25/26</b>	<b>26/27</b>	<b>27/28</b>	<b>28/29</b>	<b>29/30</b>	<b>30/31</b>
<b>UR 2.0% Reductions</b>	39.23	38.44	37.67	36.92	36.18	35.46	34.75
<b>NIEN RP7 Programme CML Savings</b>		0.00	0.46	0.89	1.34	1.78	2.24
<b>Unplanned CML Target</b>	39.23	38.44	37.21	36.03	34.84	33.68	32.51

- 11.13 In justifying its proposed approach, the UR stated that:

*"Using the latest available data is uncontroversial. This just represents a timing difference between the draft determination and the business plan submission."*<sup>19</sup>

<sup>18</sup> DD, Annex M, 2.17.

<sup>19</sup> DD, Annex M, 2.18.

*"For calculation of the start-point we recommend use of a 4-year average. This has the benefit of using the most recent and pertinent data, whilst avoiding the risks of an atypical year performance. We would also note that unplanned CML performance has been relatively consistent in this period."*<sup>20</sup>

*"The most significant departure from the company proposal is the year-on-year reductions. Whilst it is accepted that NIE Networks has outperformed in RP6, in absolute terms the company performance in unplanned CMLs still lags that compared to most GB DNOs."*<sup>21</sup>

*"This might be expected to some extent given the higher proportion of overhead lines (OHL) and greater risk of adverse weather impacts. However, the absolute performance suggests scope for improvement still exists. This is also demonstrated by GB DNOs who have a comparable proportion of OHL but much lower levels of unplanned CMLs."*<sup>22</sup>

**Concerns with the UR's provisional decision**

- 11.14 NIE Networks agrees with and welcomes the UR's provisional decision to adopt Ofgem's unplanned CML incentive mechanism used for RIIO-ED2.
- 11.15 The company also agrees with the UR's proposal to update the start point to account for the latest available year data. NIE Networks notes that the UR refers to 2022/23 as the "latest available year data". However, as NIE Networks will publish the updated data for 2023/24 in its annual Condition 19 Transmission and Distribution System Performance Report in May 2024, the company considers that the UR should use this data for the start point. The UR has itself stated that using the latest available data is "uncontroversial" and using the 2023/24 data will account for the timing difference between the DD and the UR's Final Determination. NIE Networks notes that it has engaged with the UR on this issue and it understands that the start point will be updated in the Final Determination to take into account NIE Networks' updated 2023/24 data.
- 11.16 Based on estimates of its 2023/24 data, NIE Networks has provided a revised version of its proposed unplanned CML targets at Table 3 below.

**Table 3: NIE Networks' revised proposed unplanned CML targets**

Year	Start	25/26	26/27	27/28	28/29	29/30	30/31
<b>UR 0.5% Reductions</b>	41.53	41.32	41.12	40.91	40.71	40.50	40.30
<b>NIEN RP7 Programme</b>		0.00	0.46	0.89	1.34	1.78	2.24

<sup>20</sup> DD, Annex M, 2.19.

<sup>21</sup> DD, Annex M, 2.20.

<sup>22</sup> DD, Annex M, 2.21.



<b>CML Savings</b>							
<b>Unplanned CML Target</b>	41.53	41.32	40.66	40.02	39.37	38.72	38.06

- 11.17 Importantly, NIE Networks disagrees with the UR's proposals to (a) introduce a 4-year average to calculate the start point (b) impose year-on-year reductions to the CML target of 2% per annum and (c) take into account CML savings associated with planned work programmes in the proposed CML targets.
- 11.18 For RIIO-ED2, Ofgem allocated a 0.5%, 2% and 4% year on year improvement factor based on GB DNOs' weighted average performance against a benchmark. The best performing DNOs were awarded a 0.5% improvement factor, which acknowledged the increasing difficulty for DNOs to deliver significant future CML benefits where significant historic CML benefits have already been achieved.
- 11.19 NIE Networks is on target to achieve a 29% reduction in weighted average CMLs between the start of RP6 and start of RP7, which would place it amongst the best performing DNOs in the UK. However, the UR has not awarded NIE Networks with the corresponding 0.5% year on year improvement factor.
- 11.20 Moreover, the aggregate impact of the UR's approach noted at paragraph 11.17 above results in a CML target for NIE Networks which is 17%<sup>23</sup> (6.7CMLs) higher than the CML target of a comparative GB DNO.
- 11.21 NIE Networks considers that the UR's proposed CML target is not set at an appropriate level and that the onerous nature of the target could ultimately detract resources from delivering on critical net zero investment programmes. NIE Networks sets out its concerns in further detail below.

Use of a 4-year average for start point

- 11.22 The adoption of a straight 4-year average of unplanned CMLs diverges from established industry practice.
- 11.23 For both RP6 and RIIO-ED2 (as well as previous Ofgem price controls), a weighted average has been used: this uses a 4-year average for each of LV and HV (6.6/11kV) CML statistics, and a 10-year average for EHV (33kV) CML statistics. The use of a longer period for EHV data is justified as EHV faults occur less frequently but have a high CML impact. Therefore, industry best practice is to smooth out their effect.

<sup>23</sup> Comparison made between (0.5% year on year reduction + weighted average starting point + no CML savings included from planned work) vs (0.2% year on year reduction + 4 year average starting point + CML savings included from planned work).

Imposition of 2% year-on-year reduction to CML target

- 11.24 The UR acknowledges that NIE Networks has outperformed its RP6 targets for unplanned CML. However, it proposes to apply a higher improvement factor<sup>24</sup> of 2% year-on-year based on absolute performance for RP7. This is in contrast to the Ofgem model, which recognises the variances between GB DNOs' network compositions and customer bases and therefore does not compare absolute performance between the DNOs. Instead, Ofgem allocated the 0.5%, 2% and 4% improvement factors based on DNOs' weighted average performance against a benchmark.
- 11.25 NIE Networks is on target to achieve a 29% reduction in weighted average CMLs between the start of RP6 (58.68 CMLs) and start of RP7 (41.53 CMLs) when the latest estimate for 2023/24 data is utilised as proposed by NIE Networks. In light of NIE Networks' expected excellent performance, the company considers that this would warrant application of a 0.5% year-on-year reduction, based on Ofgem's RIIO-ED2 methodology, rather than the UR's proposed 2% year-on-year reduction.
- 11.26 Indeed, the UR has generally misrepresented NIE Networks' performance level against the GB DNOs, by drawing comparisons on absolute terms. In its DD, the UR has compared NIE Networks' absolute performance for RP6 against that of Western Power Distribution (South Wales) ("**SWALES**") and (South West) ("**SWEST**"), and Scottish Hydro Electric Power Distribution ("**SSEH**"). In any case, NIE Networks considers that only SSEH is a comparable DNO to the company based on OHL versus underground ratio and also customer numbers. This is illustrated in Table 4 below, which is based on 2018 data:

**Table 4: DNO comparisons based on 2018 asset data and customer numbers**

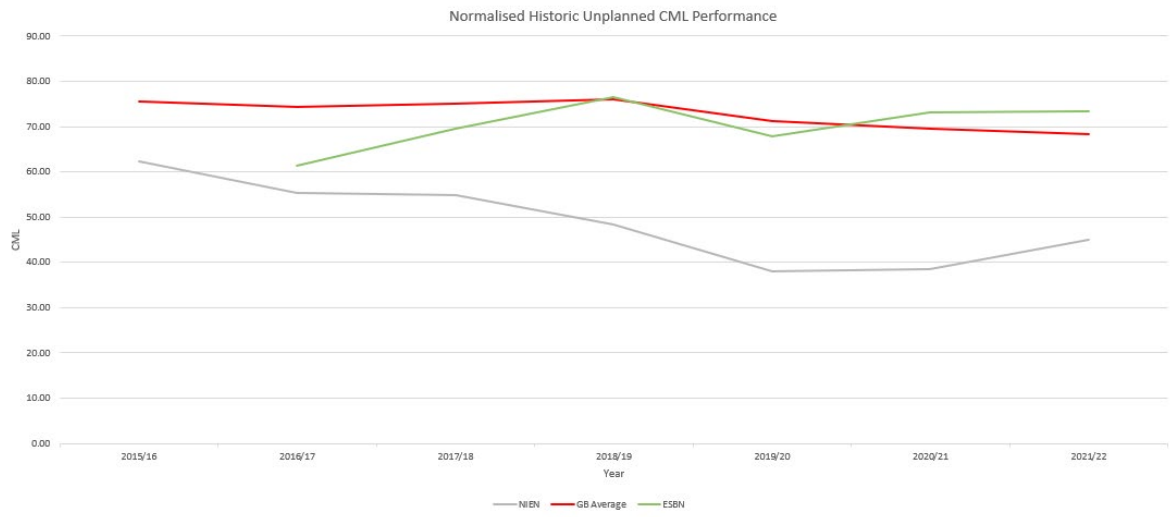
<b>DNO</b>	<b>OHL v underground (%)</b>	<b>Customer numbers (million)</b>	<b>21/22 CML</b>
<b>NIEN</b>	64:36	0.88	40
<b>SSEH</b>	63:37	0.77	48
<b>SWALES</b>	50:50	1.13	19
<b>SWEST</b>	55:45	1.61	29
<b>ESB Networks</b>	86:14	2.35	100

- 11.27 Furthermore, when the GB average data is normalised against NIE Networks' network topology ratios and customer numbers, it is clear that NIE Networks is

<sup>24</sup> i.e. a reduction in the unplanned CML target.

actually below the GB average (as demonstrated in Figure 1 below). Figure 1 also includes the normalised performance data of ESB Networks in the same format.

**Figure 1: Normalised historic unplanned CML performance (2001 – 2022)**



#### Inclusion of CML savings associated with planned work programmes

- 11.28 As an additional point and as noted above at paragraph 11.10, the UR has also incorporated NIE Networks' unplanned CML savings into its unplanned CML target prior to the financial incentive being applied. This approach differs to that of RIIO-ED2 where Ofgem allocated the improvement factors on the DNOs without taking consideration of each DNO's investment programme.
- 11.29 By combining the 0.5% improvement factor proposed by the company with NIE Networks' CML investment plan savings, this already equates to a c. 1.6% year-on-year reduction. However, when applied to the UR's proposed 2% year-on-year improvement factor, this produces a c.3.3% year-on-year reduction. This results in a year-on-year reduction which is closer to that imposed by Ofgem at RIIO-ED2 on the worst performing DNOs (4%), despite NIE Networks' outperformance of CML targets during RP6 being comparable to the best performing GB DNOs.

#### **Conclusion**

- 11.30 NIE Networks welcomes the UR's provisional decision to adopt Ofgem's planned CML incentive mechanism used for RIIO-ED2. However, it considers that the UR's proposal to use a 4-year average to calculate the start point; and impose year-on-year reductions to the CML target of 2% per annum is wrong.
- 11.31 NIE Networks believes that the proposed incentive will be difficult, if not impossible, for the company to meet. NIE Networks is concerned that it will be forced to divert funding and resources away from planned work on a frequent basis (at the expense of core objectives of the RP7 Business Plan), to avoid being penalised for failing to meet CML targets. Such funding will undoubtedly outweigh the amount of incentive available under the proposed mechanism.

11.32 NIE Networks requests that the UR changes the unplanned CML incentive in its Final Determination so that it:

- includes a weighted average starting point, which reflects the approach adopted by Ofgem in RIIO-ED2;
- uses 2023/24 data for the start point; and
- imposes a 0.5% year-on-year reduction, which takes account of NIE Networks' calculated CML savings arising from its RP7 investment programme (as proposed in the company's RP7 Business Plan).

## **12. PLANNED CML INCENTIVE**

12.1 Planned CML relates to outages that customers are notified about in advance.

12.2 In its RP7 Business Plan, NIE Networks proposed that no planned CML incentive is established for RP7. Instead, the company proposed that planned CMLs, and specifically customer perception of their impact, should be incorporated into the newly proposed Evaluative Performance Framework ("**EPF**"). The company proposed this for the following reasons:

- The company has outperformed its planned CML target in each of the four years since the CML incentives were introduced as part of the RP6 Final Determination;
- The scale and type of planned work in RP7 (HV and LV overhead line refurbishment) in RP7 will have a negative impact on planned CML performance, such that application of historic averages would not be appropriate for target setting;
- Applying an incentive mechanism to planned CML would expose customers and the company to significant risk due to expected uncertainty in demand and volumes of delivery during RP7, including in relation to connections (i.e. new public electric vehicle charging points and small-scale generation growth) and the new HV rebuild programme;
- Stakeholder engagement demonstrated significant support for the increased work programme and appreciated that this would result in a rise in planned CMLs to deliver the programme and that the impact of planned CMLs was more manageable with advanced notice.<sup>25</sup>

### **The UR's provisional decision**

12.3 In its DD, the UR accepted that NIE Networks' larger capital programme could negatively impact planned interruptions and CMLs, and that a flat rate target (as adopted in RP6) is not appropriate.

<sup>25</sup> NIE Networks, EJP 1.801 'Network Performance Strategy', 5.1–5.3.

- 12.4 However, the UR rejected NIE Networks' request to remove the separate planned CML incentive and instead proposed to adopt the approach taken by Ofgem in RIIO-ED2<sup>26</sup>, whereby the targets are calculated annually using a rolling three-year average with a two-year lag. Performance against targets would be reported on an annual basis. Given the level of uncertainty, the UR has recommended that the percentage of revenue exposed to the planned CML target is lowered to 20% to reduce the risk faced by the company for declining performance.
- 12.5 In justifying its proposed approach, the UR stated that:
- The proposed approach *"takes account of historical performance and imposes penalties for deterioration"* and *"ensures that focus on this metric continues but allows flexibility for changing capital programmes"*;
  - It is *"unclear"* what is meant by NIE Networks' proposal to incorporate planned CMLs into the EPF and it is *"uncertain how this would be measured and incentivised"*; and
  - It would welcome feedback from NIE Networks as to why planned CML deterioration in NI is not expected to be matched in GB.<sup>27</sup>

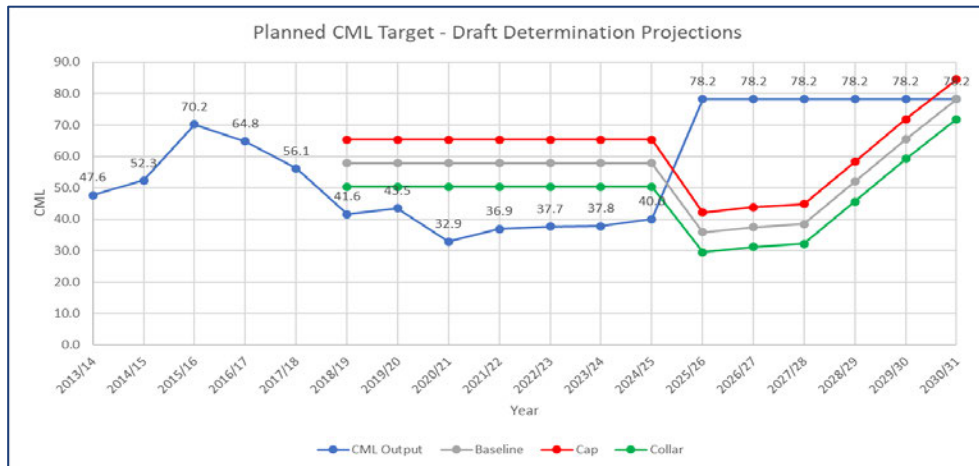
#### **Concerns with the UR's provision decision**

- 12.6 NIE Networks does not agree that the RIIO-ED2 planned CML incentive is appropriate for use in NI because of the fact that the network programme planned for GB in RIIO-ED2 is different to that planned for NI in RP7..
- 12.7 The proposed mechanism will generate a significant concern for NIE Networks in the planning of its programme for RP7, as it will encourage NIE Networks to either restrict its work delivery or incur higher than normal planned CMLs in the first few years of RP7 to create a scenario where a positive incentive payment could be earned in the final years.. This is demonstrated in Figure 2 below, which illustrates the scenario where should NIE Networks increase planned CMLs to the level expected (the blue line), the lagging nature of the proposed incentive will only catch up to the level of output in the final year.

<sup>26</sup> Ofgem, RIIO-ED2 Final Determination, 'Core Methodology Document', 6.125.

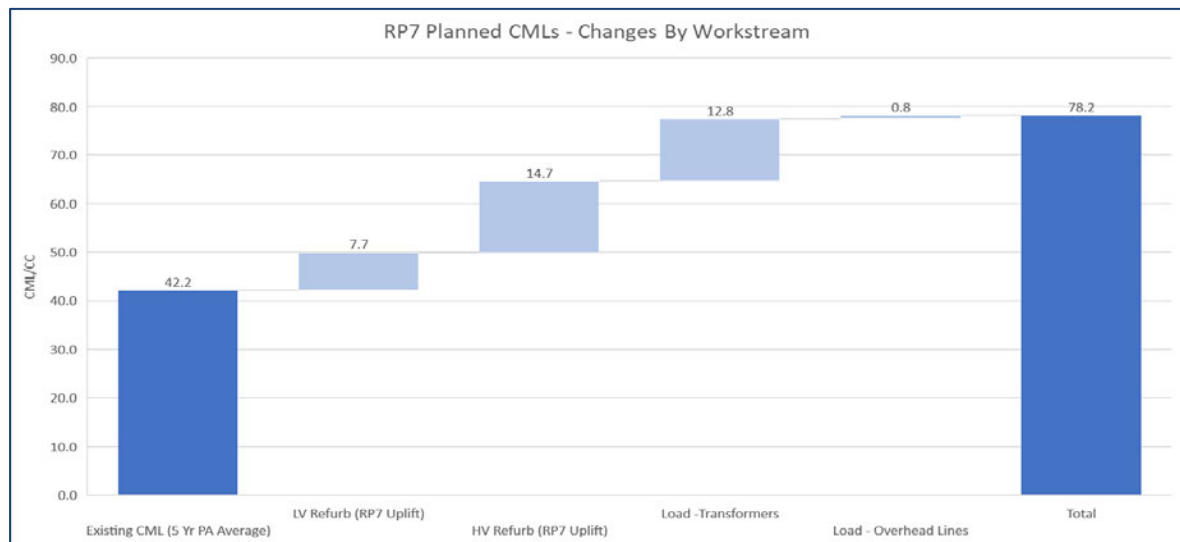
<sup>27</sup> DD, Annex M, 2.27–2.36.

**Figure 2: Planned CML Target – Draft Determination Projections**



12.8 In its provisional decision, the UR has also failed to recognise the differences between NI and GB with respect to planned CMLs. In NI, planned CMLs are forecast to almost double from 42.2 CMLs per annum in RP6 (i.e. on average across the RP6 period) to 78.2 CMLs per annum in RP7<sup>28</sup> as a result of its commitments to overhead line asset replacement (as demonstrated at Figure 3 below).

**Figure 3: RP7 Planned CMLs – Changes By Workstream**



12.9 In comparison, GB DNOs have committed to a significantly lower amount of 11kv and LV network build as part of their network configurations during RIIO-ED2. GB DNOs have also performed these types of overhead line activities in previous price control periods, whilst NIE Networks has not. NIE Networks recognises that the UR's proposed mechanism may be suitable for GB DNOs, where more modest increases in work programmes could be expected during RIIO-ED2. However, this is not the

<sup>28</sup> NIE Networks, EJP 1.801 'Network Performance Strategy', p.23, Figure 11.

case in NI where a significant increase in work programmes is expected during RP7, as part of the company's efforts to achieve net zero targets.

- 12.10 NIE Networks acknowledges that the UR proposes to implement a weighting whereby the percentage of revenue exposed to the planned CML target is lowered to 20% to mitigate uncertainty caused by the UR's proposed target setting, as noted at paragraph 12.4 above. However, NIE Networks does not consider that arbitrarily diluting the planned CML incentive is in its customers' best interest. Planned network outages remain an issue of significant importance to customers. They will become increasingly important to customers as a result of increased use of electricity in home heating and transportation.
- 12.11 The company submits that the EPF is a strong and appropriate mechanism to incentivise the company to improve its performance with respect to planned CMLs. The proposed EPF is addressed in further detail in Chapter 10 of this Response.
- 12.12 NIE Networks considers that planned CMLs would appropriately fall within the role of customer service quality under the EPF mechanism, as part of the wider 'planned network outages' group of issues. Planned CMLs form only one component of customer experience during planned outages and do not alone provide sufficient evidence of customers satisfaction with respect to the company's communication and engagement regarding planned outages. Considering planned CMLs within the EPF allows for the wider customer experience to be considered with respect to planned outages (e.g. engagement and notifications) and not just the duration that customers are off supply.

### **Conclusion**

- 12.13 NIE Networks considers that the UR's proposed planned CMLs mechanism risks creating a perverse incentive, which encourages an excessive ramp up in planned CMLs at the start of the RP7 period in order to provide a financial benefit at the later stages of the RP7 period. The company also considers that the proposed incentive fails to take account of the differences between NI and GB with respect to planned CMLs, including the respective historic levels of investment by GB DNOs and NIE Networks and their respective future network investment commitments.
- 12.14 For the reasons set out above, the company considers that the proposed EPF mechanism provides a strong and appropriate incentive framework under which planned CMLs can be assessed.
- 12.15 NIE Networks requests that, in its Final Determination, the UR removes the proposed planned CML mechanism set out in the DD and instead incorporates a qualitative assessment of planned CMLs as part of a wider customer service element within the EPF mechanism.

### 13. WORST SERVED CUSTOMERS

#### Introduction

- 13.1 For RP7, NIE Networks proposed an ex-ante allowance of £3m to address some of the issues affecting worst served customers ("WSCs")<sup>29</sup> by targeting some of the worst performing high voltage circuits. In the majority of cases the investment will take the form of automatic sectionalising links.<sup>30</sup>
- 13.2 NIE Networks proposed that these investments would reduce the volume of WSCs by 50% during RP7.

#### The UR's provisional decision

- 13.3 The UR stated that it "welcomed NIE Networks proposals to address WSCs" but "did not consider it necessary to provide a specific ex-ante fund" and accordingly disallowed the funding proposed for WSCs.<sup>31</sup>
- 13.4 The UR considered that the allowance it has approved for high voltage overhead line works during RP7 (c. £195m) provides sufficient funding and flexibility to allow the company to deliver its WSC aspirations.<sup>32</sup>
- 13.5 The UR separately indicated that:

*"WSC numbers should be monitored and reported against as part of the annual cycle, either via the annual regulatory instructions and guidance submission or the system performance report".*

*Further consideration can be given by NIE Networks to ensure they deliver best in class service for these customers within the Evaluative Performance Framework."*<sup>33</sup>

#### Concerns with the UR's provisional decision

- 13.6 NIE Networks has a number of concerns with the UR's provisional decision:
- The works funded by the high voltage overhead line allowance are unlikely to provide WSC benefits or flexibility;
  - The EPF is not the appropriate mechanism for measuring performance as regards WSCs;
  - The UR has indicated its support for reducing the volume of WSCs but has left funding unchanged since RP6; and

<sup>29</sup> The UR has agreed to adopt the definition of WSC as used in the Great Britain RII0-ED2 price control: a customer who experiences 12 or more unplanned HV interruptions to supply in 3 years, with 2 or more interruptions in each 12-month period.

<sup>30</sup> A self-contained device that, when used in conjunction with either an upstream autorecloser or a multi-shot circuit breaker, sectionalizes and isolates the network thereby reducing the number of customers disconnected due to permanent faults.

<sup>31</sup> DD, 8.15.

<sup>32</sup> DD, Annex P, 3.238.

<sup>33</sup> DD, Annex M, 5.5.



- Ofgem has provided funding for WSCs improvements in Great Britain.

#### High voltage overhead line works

- 13.7 The mechanistic nature of the price control means that NIE Networks has an efficient unit cost against which it must deliver an agreed specification of work, including the overhead line works. This is a well-established principle and it is therefore not appropriate to expect NIE Networks to carry out additional work beyond the relevant specification in the absence of additional funding.
- 13.8 While NIE Networks accepts that there is some overlap with the overhead line works, its analysis shows that on average only 30% of faults on WSC circuits are related to age and wear (and only a smaller subset of these would be improved by overhead line works). NIE Networks expects that it will take up to three price controls for the full programme of overhead line works to be completed, which means that any resulting benefit for WSCs will not be fully realised for up to 15 years. Furthermore, the overhead line works are unlikely to have a proportionate effect on the reduction of WSC numbers, since a 30% improvement in age and wear-related faults does not equate to a 30% reduction in WSC numbers (this is because there may be multiple drivers affecting any given circuit, and therefore any given WSC, such that removing only age and wear-related faults will not necessarily be sufficient to remove a WSC).
- 13.9 For these reasons, NIE Networks considers that bespoke funded solutions are required to reduce the volume of WSCs.

#### EPF

- 13.10 NIE Networks does not consider the EPF to be the appropriate mechanism for lowering volumes of WSC. The EPF, while not finally approved, is intended only to apply to programmes for which funding has been approved.<sup>34</sup> Furthermore, a WSC initiative would be one of a number of activities to be considered by the EPF panel. This means that any financial incentive or penalty from the EPF would be diluted making it difficult for NIE Networks to justify expenditure on this one specific item. By way of illustration, the maximum EPF incentive is currently £3m per year. This is spread across four roles, each comprising multiple initiatives. Therefore, performance in an WSC initiative would only account for a small percentage of the total available £3m EPF incentive, and such amount would therefore contribute very little against the cost of delivering the WSC works.

#### No changes since RP6

- 13.11 The UR has indicated its support for reducing WSC numbers without providing funding. Achieving this objective will require significant investment however, and it is unreasonable to expect NIE Networks to be able to carry out this work without an appropriate mechanism for recovering its costs. For this reason, NIE Networks considers the UR's position to be inconsistent.

<sup>34</sup> See Chapter 10.

- 13.12 As for the requirement that WSC numbers should be monitored and reported against as part of the annual cycle, NIE Networks notes that it already records these numbers and reporting can be readily integrated into its annual System Performance report. However, reporting on WSC numbers will not in itself have any impact on reducing WSC numbers. NIE Networks queries the usefulness of such data where the UR has not allocated the requested funding.

Ofgem's funding in Great Britain

- 13.13 In the RIIO-ED2 price control, Ofgem allocated £94m across all GB DNOs to carry out WSC improvements. Ofgem recognised that “without a specific mechanism, there could be a barrier to WSC receiving service improvements”. NIE Networks considers the same reasoning applies in NI.
- 13.14 In addition, Ofgem imposed no target on DNOs other than the requirement of annual reporting on progress made. For comparison, the SSEN<sup>35</sup> region (the closest comparator to NIE Networks in terms of customer numbers and the proportion of overhead lines) is receiving an allocation of £21m. By contrast, NIE Networks' requested allowance is just £3m (14% of £21m) in return for a proposed 50% reduction in WSCs (equating to approx. £1600 per WSC).

**NIE Networks' requested allowance**

- 13.15 Without a separate allowance, NIE Networks will have no funding to make targeted, bespoke and in-time improvements to the network to reduce the volume of WSCs, and the overhead line works will only deliver marginal improvements for WSCs.
- 13.16 For the reasons given above, NIE Networks requests that the UR approve £3m in ex-ante funding for a separate programme to reduce the volume of WSCs on the network.

<sup>35</sup> Scottish and Southern Electricity Networks.

## CHAPTER 9

### PENSIONS

#### 1. INTRODUCTION

- 1.1 This Chapter sets out NIE Networks' comments on the UR's provisional determination with respect to pensions.<sup>1</sup>
- 1.2 In its RP5 price control determination, the Competition Commission<sup>2</sup> concluded that the 'Focus' (i.e. defined benefit ("**DB**")) section historic deficit should be split into historic and incremental deficits using the Ofgem Pension RIGs methodology - the cut-off date for the historic deficit being 31 March 2012. The historic deficit is funded by customers with any incremental deficit being funded by NIE Networks. The UR has maintained this principle in the DD.<sup>3</sup>
- 1.3 The UR has accepted NIE Networks' proposal to set the regulatory fraction at 100% for RP7.<sup>4</sup> NIE Networks agrees that this is appropriate and will simplify calculations going forward.
- 1.4 Overall, the proposed allowance in the DD in respect of pensions is in line with NIE Networks' RP7 submission.
- 1.5 There are, however, a number of aspects of the UR's DD that NIE Networks wishes to bring attention to in its Response:
- Section 2 sets out NIE Networks' request for the UR to update the company's allowance based on updated calculations for the pension deficit recovery allowance;
  - Section 3 sets out NIE Networks' comments in respect of Early Retirement Deficiency Contributions ("**ERDC**");
  - Section 4 sets out NIE Networks' comments in respect of scheme expenses;
  - Section 5 sets out NIE Networks' comments in respect of the current funding status of the 'Focus' section of the NIE Pension Scheme ("**NIEPS**"); and
  - Section 6 sets out NIE Networks' comments in respect of the Pension Monitoring Framework.

#### 2. UPDATED CALCULATIONS FOR THE PENSION DEFICIT RECOVERY ALLOWANCE

- 2.1 NIE Networks notes that, subsequent to its RP7 Business Plan submission, its allowance request has been updated based on the Pensions BPT and latest inflation indices.

<sup>1</sup> DD, 3.19 – 3.29 and Annex F.

<sup>2</sup> Competition Commission, RP5 Final Determination, 12.22-12.29.

<sup>3</sup> DD, Annex F, 6.3.

<sup>4</sup> DD, Annex F, 4.53.

- 2.2 Pension deficit recovery payments were made by NIE Networks over the RP6 period with the aim of eliminating the historic pension deficit. NIE Networks ceased making these payments on 30 September 2023, when the requirement to make them ended in line with the recovery plan agreed with the Trustees for the 31 March 2022 actuarial valuation of the Scheme. This generated an over recovery of pension entitlement allowances for the 2022/23 to 2024/25 periods as the pension deficit recovery allowances granted were greater than actual / forecast payments made by NIE Networks during that period.
- 2.3 NIE Networks proposes to refund this over recovery in the first year of the RP7 period. Based on the latest inflation indices, the refunded amount will be £15.8 million for Distribution and £4.7 million for Transmission. NIE Networks requests that the UR updates the allowances based on these updated calculations in the Final Determination.

### 3. **EARLY RETIREMENT DEFICIENCY CONTRIBUTIONS (ERDC)**

- 3.1 In its DD, the UR states that:

*"The NIE Networks submission reflects that, due to deficit repair payments (c.£19-20m a year paid over the period 31 March 2020 to 30 September 2023) and improvements in market returns, the historic deficit will be eliminated by the commencement of the RP7 period. In the RP7 Business Plan, the company has proposed a refund in pension allowances during the first year of the RP7 period (split between £19.8 million distribution, and £6.1million for transmission, a c.75%/25% split, which the UR is content with). There is no amount requested for Early Retirement Deficiency Contributions (ERDC) disallowance (compared to a £30 million request for RP6). We do not believe this approach is unreasonable, or have reason to review further, at this stage."*<sup>5</sup>

- 3.2 NIE Networks notes the UR's acknowledgement that no amount is requested for ERDCs in RP7 and that this approach was not deemed unreasonable.
- 3.3 NIE Networks further notes that other commentary throughout the DD, including Annex F, suggests that the ERDC allocation should be retained in its current format. As outlined in its RP7 Business Plan, NIE Networks has calculated and tracked movements in the ERDC balance<sup>6</sup> in line with the approach agreed with the UR and is satisfied that the disallowance has now been addressed in full, prior to the end of RP6. There is therefore no need to even consider the ERDC mechanism for RP7 because the historic unfunded ERDCs have now been fully funded before the end of RP6.

<sup>5</sup> DD, 3.25.

<sup>6</sup> NIE Networks, 'RP7 Business Plan, Pension BPT reporting workbook', Table P1b and 'RP7 BPT Pensions Commentary, 2.4.4.

#### 4. SCHEME EXPENSES

- 4.1 NIE Networks notes the UR's comments<sup>7</sup> in relation to the NIEPS administration expense costs. Comparisons of scheme specific expenses and published surveys are difficult due to the range of factors that may be included in any individual piece of analysis. It is not clear to NIE Networks how this analysis has been carried out for the DD. NIE Networks remains committed to monitoring scheme expenses and will engage with the Trustees as appropriate.

#### 5. FUNDING STATUS

- 5.1 In its DD, the UR refers to NIE Networks' knowledge of the current funding status of the 'Focus' section of the NIEPS at the time of making its RP7 submission:

*"NIE Networks states they do not have an approximate funding update since the valuation at 31 March 2022, however we note that previously they appear to have been monitoring the funding position closely following the 2020 valuation, identified an improved funding position at 31 March 2022, and negotiated and carried out a full valuation by February 2023. It is surprising that the Company are not aware of an indicative funding position given large market changes, change of investment strategy, and the approach adopted in the previous year where the Company requested an out of cycle review."*<sup>8</sup>

- 5.2 NIE Networks receives a formal annual update from the Trustees in relation to the funding status of the 'Focus' section of the scheme as at 31 March, via the Scheme Actuary's annual actuarial report. This update is typically received by the September following the relevant scheme year end and the 31 March 2023 update was therefore not available either at the time of completing the RP7 submission nor when addressing queries raised by the UR. The company has since received the funding update as at 31 March 2023 which confirms that the funding level was broadly in line with the projections of the March 2022 triennial valuation.
- 5.3 In addition to the formal funding updates received via the Scheme Actuary's annual actuarial report, NIE Networks also monitors developments in funding informally during intervening periods taking account of changes to market conditions over time.

#### 6. PENSION MONITORING FRAMEWORK

- 6.1 In the DD the UR has proposed retaining the Pension Monitoring Framework that was introduced for RP6<sup>9</sup>.
- 6.2 NIE Networks notes that in the DD, the UR has referenced 70% and 110% as the thresholds for downward and upward triggering events respectively. However, the thresholds that were included within the RP6 Final Determination were 75% and 105% respectively.

<sup>7</sup> DD, 3.23.

<sup>8</sup> DD, Annex F, 4.29.

<sup>9</sup> DD, Annex F, 7.1.

- 6.3 NIE Networks is however of the view that retaining the Pension Monitoring Framework is not appropriate for the reasons set out below.
- 6.4 If a funding deficit arises at a future actuarial valuation, the trustees will be obliged under the new DB Funding Regulations (published in January 2024<sup>10</sup>) to ensure that any deficit is addressed within a very short timeframe given the scheme's significantly mature status. This creates a risk that NIE Networks is required to make significant deficit contributions payable over a compressed period in advance of receiving a regulatory allowance, with any such contributions that are attributable to the established deficit being passed on to consumers at the start of RP8.
- 6.5 The scheme liabilities at the latest triennial valuation were in excess of £1.2 billion. Under the existing Pensions Monitoring Framework, a deficit of c.£300 million would need to arise before the 75% lower threshold is reached, which would trigger NIE Networks' engagement with the UR to review allowances for the remainder of RP7. The likelihood of a deficit as high as this arising is considered to be extremely low given the de-risking and hedging strategies that are in place in the scheme.
- 6.6 This effectively means that under the new DB Funding Regulations, and depending on how the funding position of the scheme evolves at future actuarial valuations, NIE Networks may have to fund new deficit contributions of up to c.£300 million several years in advance of receiving regulatory allowances. This is a very significant amount for the company to have to fund.
- 6.7 As well as impacting the overall financing of the company, any deficit repair contributions funded in advance of regulatory allowances would then be payable in the first year of RP8, creating an issue of intergenerational fairness between RP7 and RP8 consumers.
- 6.8 The UR has also proposed assessing the scheme funding level at future valuation dates using the 2022 valuation basis updated for market conditions<sup>11</sup>.
- 6.9 NIE Networks is of the view that it would be more appropriate to assess developments in the funding position the valuation based on the technical provision assumptions agreed at the most recent valuation. Adopting this approach would better reflect the prevailing circumstances at each valuation such as investment strategy, employer covenant strength and demographic profiles; with these factors all driving the contributions that NIE Networks would be required to pay at that time. Further, this approach is more cost effective, saving on the expense of having to run an additional set of calculations at future valuation dates reflecting assumptions from the 2022 valuation.

Overall, NIE Networks is of the view that an appropriate framework must afford the company an opportunity to engage with the UR upon completion of a triennial valuation in respect of any material or other matters that may be relevant to both

<sup>10</sup> The Occupational Pension Schemes (Funding and Investment Strategy and Amendment) Regulations 2024 ("**DB Funding Regulations**").

<sup>11</sup> DD, Annex F, 7.8.

parties at that time. This would be consistent with Ofgem's current approach for energy utilities under its regulation.

- 6.10 NIE Networks agrees with the UR's position that any such engagement would not be a simple mechanism for automatic action. Accordingly, action would need to be taken as appropriate in light of the circumstances at the time, including the materiality of any additional contributions, the financing impact on NIE Networks and the ultimate impact on consumers.

## CHAPTER 10

### EVALUATIVE PERFORMANCE FRAMEWORK PRINCIPLES AND GUIDANCE

#### SUMMARY

This Chapter relates to the UR's proposals for the introduction of an Evaluative Performance Framework ("**EPF**") that will supplement NIE Networks' regulatory framework from RP7.

The UR proposed the introduction of the EPF for RP7 following the introduction of an EPF for SONI in its 2020 Price Control. The SONI EPF was directed at incentivising SONI to engage in actions and behaviours which contributed to outcomes that may benefit customers but which, in many cases, were not subject to numerical targets or within the full control of SONI.

NIE Networks has already had positive engagement with the UR on how the novel and untested EPF could be applied in the context of the more detailed RP7 price control. However, further practical engagement between NIE Networks and the UR is required to ensure that the proposed EPF operates as anticipated by both parties.

It is important the EPF is structured to aligned with its objectives and that its scope is clearly defined in the early years of RP7.

NIE Networks' concerns, in summary, are that:

- The impartiality and independence of the EPF Panel risks being undermined by the UR's proposal that the Panel should draw on the evidence and views of the UR when making its assessments;
- The EPF provides insufficient opportunities for NIE Networks to review and comment on the EPF Panel's evaluations;
- The UR fails adequately to define the scope of areas that fall to be assessed by the EPF Panel; and
- The UR's proposal to adopt a symmetrical structure for positive and negative incentive amounts under the EPF is inconsistent with regulatory precedent and undermines the company's incentive to invest in areas within the scope of assessment.

The UR's proposals with respect to the EPF contribute to one of NIE Networks' three main concerns with the DD – namely, that aspects of the price control design will inhibit NIE Networks' ability to deliver its plan for RP7. In particular, the UR's proposals with respect to the design of the EPF undermine NIE Networks' ability to be as ambitious as possible at this critical juncture of the energy transition and to unlock significant customer value.



## 1. INTRODUCTION

- 1.1 This Chapter concerns the UR's proposals for an Evaluative Performance Framework ("**EPF**") and its associated guidance (the "**EPF Guidance**") as set out the DD.<sup>1</sup>
- 1.2 The UR proposed the introduction of the EPF in its RP7 Final Approach Document, following its introduction of an EPF for the SONI 2020 price control.<sup>2</sup> The aim of SONI's EPF was to ensure that SONI was incentivised to engage in actions and behaviours which contributed to outcomes that could benefit customers, but which may not be subject to quantitative targets or within SONI's full control.
- 1.3 The UR's proposed EPF for NIE Networks will form a new addition to NIE Networks' regulatory framework from RP7. The purpose of the EPF is to incentivise NIE Networks to take advantage of new opportunities, proactively progress initiatives in areas that will bring the greatest benefit to NI customers and ensure that the company continually adapts to the emerging energy landscape. A key element of the EPF is to bring additional skills, insights and knowledge to the UR's review of NIE Networks' performance.
- 1.4 Under the proposed EPF, NIE Networks will appoint and maintain an evaluation panel (the "**EPF Panel**"). The company will engage with the UR and CCNI on the development of a EPF Panel appointment criteria. NIE Networks will develop and publish an annual forward plan ("**Forward Plan**") and, separately, a report on its performance following the conclusion of each financial year (the "**Performance Report**"). The EPF Panel will evaluate these publications against specified evaluation criteria and determine a grade that will form a recommendation to the UR. The UR will take account of this recommendation when deciding whether to apply a financial reward or penalty to NIE Networks in accordance with a specified calculation methodology.
- 1.5 This Chapter is structured as follows:
- Section 2 concerns the risk to the impartiality and independence of the EPF Panel should it draw on evidence and views provided by the UR when makings its assessments under the EPF;
  - Section 3 concerns the absence of an opportunity for NIE Networks to review and comment on the EPF Panel's evaluations;
  - Section 4 concerns the areas to be assessed under the EPF; and
  - Section 5 concerns the UR's proposal for a symmetric incentive mechanism for the EPF.
- 1.6 NIE Networks provides at Annex A10.1 marked-up version of the UR's proposed RP7 EPF Guidance document. This mark-up forms part of the company's Response and should be read alongside this Chapter 10.

<sup>1</sup> See DD, Chapter 10 and Annex V.

<sup>2</sup> UR, RP7 Final Approach Document, 3.55-3.56.

## 2. NIE NETWORK'S ENGAGEMENT IN THE EPF PROCESS

### The UR's approach

2.1 The UR sets out in the draft EPF Guidance the proposed step-by-step process and timeline for evaluating NIE Networks' performance under the EPF for each financial year, as summarised below:

- 'Step 1' & 'Step 2': NIE Networks will prepare and publish the Forward Plan by the end of October;
- 'Step 3': Stakeholders will have an opportunity to provide submissions on the Forward Plan to the EPF Panel and to engage with NIE Networks;
- 'Step 4': The EPF Panel will produce an evaluation report on the Forward Plan within two and a half months of its publication (i.e. by mid-January);
- 'Step 5': The UR will provide NIE Networks with its decision on the Forward Plan incentive amount by the end of February, which it will then publish;
- 'Step 6': NIE Networks will prepare and publish its annual Performance Report by the end of April;
- 'Step 7': Stakeholders will have an opportunity to provide submissions on the Performance Report to the EPF Panel and the UR;
- 'Step 8': The EPF Panel will produce an evaluation report on NIE Networks' performance and a recommended grade within two and a half months of its publication (i.e. by mid-July), with an opportunity for additional engagement between NIE Networks, the UR and the EPF Panel on this process; and
- 'Step 9': The UR will provide NIE Networks with its decision on the performance incentive amount (and the overall combined effect of the Forward Plan incentive amount and performance incentive amount) by the end of August.<sup>3</sup>

### Concerns with the UR's approach

2.2 As stated above, NIE Networks will develop and publish an annual Forward Plan and, separately, a Performance Report. During previous engagement with the UR on the development of the EPF principles and guidelines, NIE Networks had an opportunity to provide feedback to the UR on an initial draft of the EPF Guidance. As part of this engagement, NIE Networks raised concerns<sup>4</sup> that the proposed EPF process and timeline did not provide an opportunity for the company to review and, where necessary, challenge the outcomes of the evaluation and assessment stages of the EPF. NIE Networks requested that the EPF provides NIE Networks with an opportunity to:

- Review the EPF Panel's assessment of the Forward Plan prior to publication of the panel's evaluation of the Forward Plan;

<sup>3</sup> DD, Annex V, 3.1–3.19.

<sup>4</sup> Email from [REDACTED] (NIE Networks) to [REDACTED] (UR), 'RE: draft EPF guidance document (including principles) issued 13 Sep 2023', 21 September 2023.

- Review the EPF Panel's assessment of the Performance Report prior to publication of the panel's evaluation of the Performance Report; and
  - Engage with the UR prior to publication of the UR's determinations of the Forward Plan incentive amount and performance incentive amount.
- 2.3 In the UR's proposed step-by-step process and timeline set out above at paragraph 2.1, the UR has rejected NIE Networks' requests to engage with the EPF Panel and UR at the following stages of the UR's proposed timeline for the EPF process:
- 'Step 4': The EPF Panel's evaluation report of the Forward Plan;
  - 'Step 5': Determination of the Forward Plan incentive amount;
  - 'Step 8': The EPF Panel's evaluation report on performance; and
  - 'Step 9': Determination of the performance incentive amount.
- 2.4 NIE Networks acknowledges that the proposed process does include some opportunities for the company to engage with the EPF Panel and UR. At 'Step 8', the UR proposes that:
- "the panel, NIE Networks or the UR may consider there is value in a workshop or meetings to support different stages of the process. If this is the case this will be accommodated...To inform the evaluation, the UR and the panel may seek clarifications and raise queries on the annual performance report. NIE Networks will respond to any queries promptly and line with the general guidance."<sup>5</sup>*
- 2.5 Whilst NIE Networks welcomes the inclusion of this proposal, the company believes that it does not provide a sufficient safeguard against the potential for errors by the EPF Panel (or the UR), especially considering the novelty of the EPF process and EPF Panel.
- 2.6 The company considers that under the EPF process as currently proposed, there is a risk that misinterpretations or oversight by the EPF Panel (or the UR) could lead to errors in the EPF assessment, which NIE Networks would have no opportunity to correct. This in turn could have negative financial consequences for NIE Networks due to unwarranted lower grades in the EPF Panel's evaluations that lead to a lower incentive or a higher penalty amount. It could also lead to NIE Networks receiving an unwarranted higher grade, which in turn could result in negative financial consequences for customers.
- 2.7 NIE Networks welcomes further engagement with the UR to discuss the practicalities of the EPF timeline, particularly with respect to its alignment with the annual tariff approval process.

#### Conclusion

- 2.8 To mitigate against the risks outlined above, NIE Networks requests that the UR modifies its EPF Guidance in the Final Determination to provide an opportunity for NIE Networks to:

<sup>5</sup> DD, Annex V, 3.16-3.17.

- Review the EPF Panel's evaluation of the Forward Plan prior to publication, and to provide feedback where errors have occurred;
- Review the EPF Panel's evaluation of the Performance Report prior to publication and to provide feedback where errors have occurred; and
- Engage with the UR prior to publication of the UR's determination of the Forward Plan incentive amount to understand the UR's preliminary position and reasoning, and to provide feedback where errors have occurred; and
- Engage with the UR prior to publication of the UR's determination of the performance incentive amount to understand the UR's preliminary position and reasoning, and to provide feedback where errors have occurred.

2.9 It should be emphasised that these proposals are not intended to afford NIE Networks the opportunity to submit new evidence to the assessment process, nor to enable NIE Networks to challenge the evaluations and decision-making of the EPF Panel and UR respectively. Rather, they are intended as a safeguard against possible errors in a new regime that represents a novel addition to the company's regulatory framework.

### 3. **FUNCTION OF THE EPF PANEL**

#### The UR's approach

3.1 The UR sets out its proposals for the functions of the EPF Panel:<sup>6</sup>

*"NIE Networks will establish the EPF Panel to include up to 5 members (4 independent expert panel member, plus 1 independent expert panel member chair). The panel will independently assess performance annually under two phases: an assessment of NIE Networks' Forward Plan (how it is going to perform) and an assessment of its performance (how it has performed). The EPF Panel will provide recommendations to UR under each phase. In doing so, the EPF Panel will also draw on evidence and views provided by UR, NIE Networks' customers, consumers, their representatives and other stakeholders (or stakeholder groups) in making its evaluation as part of each phase. ... As an independent expert, the EPF panel member will:*

- *Challenge and impartially assess NIE Networks' performance based on a range of evidence.*
- *Score and provide a recommendation according to UR guidance and evaluation criteria based on this assessment.*
- *Work well within a team of other panel members and stakeholders, and be able to engage in a way, which clearly and constructively challenges NIE Networks.*

<sup>6</sup> DD, Annex V, 6.2–6.3.

- *Provide independent judgement and an external perspective which is disaggregated from any other organisation which they have an affiliation."*

#### Concerns with the UR's approach

- 3.2 NIE Networks submits that the functions of the EPF Panel, as proposed by the UR, prevent the EPF Panel from being truly independent and threatens the impartiality of the EPF process.
- 3.3 NIE Networks supports the proposal that the EPF Panel would draw on evidence and views of stakeholders when making their evaluations of NIE Networks' annual Forward Plan and annual Performance Report. However, the company considers it inappropriate for the EPF Panel to draw on the evidence and views of the UR as part of its evaluation. Such an approach negates the core purpose of the EPF Panel, which is for it to be an *"independent expert"* that *"independently"* and *"impartially"* assesses NIE Networks' performance.
- 3.4 If the EPF Panel were to draw on evidence and views of the UR, the company considers that this would damage the integrity of the EPF process. Such an approach could risk diluting of the views and evidence of other stakeholders and ultimately lead to lower engagement in the EPF process.
- 3.5 NIE Networks believes that the EPF Panel should not draw on the evidence and views of the UR as part of its evaluation of NIE Networks' annual Forward Plan and annual Performance Report. The company considers that the UR is already given sufficient opportunities to be involved in key steps in the EPF process, namely:
- The key assessment criteria for the EPF panel's evaluation of the annual Forward Plan includes an assessment of the *"extent to which the new initiatives and areas of focus presented in the plan are aligned with...the Service Priorities set out by the UR."*<sup>7</sup>
  - The UR's Consumer Engagement Advisory Panel will *"discuss and provide feedback on inputs"*<sup>8</sup> into NIE Networks' annual Forward Plan and Performance Report prior to publication.
- 3.6 Most importantly, it is the UR that will make the final determination on the outcomes of the EPF panel's evaluation of NIE Networks' annual Forward Plan and Performance Report. The EPF panel holds no decision-making powers and rather its evaluation forms only a *"recommendation that goes to the UR"*. Indeed, the UR may accept the grade determined by the panel but can also determine the grade itself. As such, the UR holds the ultimate decision-making power under the EPF. It is therefore not necessary for the EPF panel to consider the evidence and views of the UR in its evaluations.

#### Conclusion

<sup>7</sup> DD, Annex V, Table 4.1.

<sup>8</sup> DD, Annex V, 4.27.

- 3.7 To preserve impartiality and independence in the EPF process, NIE Networks requests that the UR modifies its EPF Guidance in the Final Determination so that the current wording at paragraph 6.2 of Annex V to the DD is amended as follows (amendments are shown in red):

*"NIE Networks will establish the EPF Panel to include up to 5 members (4 independent expert panel member, plus 1 independent expert panel member chair). The panel will independently assess performance annually under two phases: an assessment of NIE Networks' Forward Plan (how it is going to perform) and an assessment of its performance (how it has performed). The EPF Panel will provide recommendations to UR under each phase. In doing so, the EPF Panel will also draw on evidence and views provided by ~~the UR,~~ NIE Networks' customers, consumers, their representatives and other stakeholders (or stakeholder groups) in making its evaluation as part of each phase."*

#### 4. SCOPE OF ASSESSING PERFORMANCE

##### The UR's approach

- 4.1 In its DD, the UR has not expressly limited the areas that fall to be assessed under the EPF to those which are already subject to regulated allowances. Rather, the UR proposes that:

*"Areas that may come under the panel's consideration as part of its assessment include:*

- *DSO transition and whole system collaboration*
- *Innovation*
- *Sustainability*
- *Customer service quality.*<sup>9</sup>

##### Concerns with the UR's approach

- 4.2 NIE Networks considers that the current scope of assessment under the EPF is ambiguous. The company considers that the scope of assessment should clearly extend to those areas which the EPF Panel can assess based on quantitative and/or qualitative data (such as where quantitative data is not available) which are already subject to regulated allowances.
- 4.3 As previously proposed, NIE Networks considers that these areas should be restricted to DSO Transition and Whole System Collaboration, Innovation, Sustainability and Customer Service Quality *only*. Under an undefined scope, the list of areas of consideration can expand on an annual basis, which will dilute the incentive mechanism under the EPF. Such an approach would undermine the certainty of, and long-term decision making by, the company in terms of its performance under, the EPF.

<sup>9</sup> DD, Annex V, 2.16.

- 4.4 Conversely, limiting the scope of the assessment to these areas will provide the company with a clear and focussed incentive to deliver service improvements and will provide clarity to NIE Networks, stakeholders, the EPF Panel and the UR on what should be considered as part of the baseline expectations<sup>10</sup> of the company's service performance under the EPF. Such an approach is particularly important, given that the EPF concerns new and emerging areas, for which there are limited internal or external references for the EPF Panel to draw from.
- 4.5 NIE Networks considers that an assessment of areas that are not subject to regulated allowances would create uncertainty for all stakeholders, potentially leading to inappropriate and erroneous EPF assessments. Areas with no regulatory allowances should, in theory, have no baseline expectations. Therefore, any improvements delivered by the company in this area are technically a net positive and would be subject to a positive incentive. The company does not consider that this is in the interests of, and undermines the UR's duty to, customers.
- 4.6 NIE Networks notes that the UR's proposed methodology for the EPF Panel to evaluate and grade the company's Forward Plan and performance will apply a "*relevant weight*" which is multiplied against each role assessment grade.<sup>11</sup>
- 4.7 NIE Networks accepts the UR's proposal to apply weightings to each role assessed. However, such weightings should be set and apply for the entirety of the RP7 period. Such an approach would provide certainty to NIE Networks in its long-term investment decisions relating to its performance under the EPF. If such weightings were susceptible to change throughout RP7, this would also undermine the certainty of, and long-term decision making by, the company in terms of its performance, under the EPF.

#### Conclusion

- 4.8 NIE Networks requests that, in its Final Determination, the UR modifies its EPF Guidance to:
- make clear that the scope of assessment for the EPF is restricted to roles which are already subject to regulated allowances; and
  - apply fixed weightings for the entire RP7 period as part of the EPF Panel's assessment of each of the roles covered under the scope of assessment.

### 5. **CALCULATION OF INCENTIVE AMOUNT**

- 5.1 The DD sets out the UR's proposed methodology for calculating the incentive amount that NIE Networks will be exposed to in relation to an evaluation of NIE Networks' Forward Plan, and performance against the Forward Plan.

#### The UR's approach

- 5.2 At paragraphs 5.5 to 5.7 of the DD, the UR sets out the proposed methodology for calculating the overall incentive amount that NIE Networks will be exposed to:

<sup>10</sup> See DD, Annex V, 2.23–2.24.

<sup>11</sup> DD, Annex V, 4.14 and 4.26.

"The overall grade is an average of the Forward Plan grade and the performance report grade. This grade will be used to calculate the overall incentive amount.

The overall incentive amount will be calculated as follows:

- If the overall grade is above 3, then the incentive amount will be calculated as the overall grade minus 3, multiplied by £1,500,000. This will be a positive number, indicating a financial reward under the incentive scheme.
- If the overall grade is below 3, then the incentive amount will be calculated as the overall grade minus 3, multiplied by £1,500,000. This will be a negative number, indicating a financial penalty under the incentive scheme.
- If the overall grade is 3, the incentive amount will be zero.

The incentive amounts are subject to caps on the maximum financial upside and maximum financial downside in relation to each financial year and is symmetrical as demonstrated in Figure 5.1 below.

		Performance Grade				
		1	2	3	4	5
Forward Plan Grade	1	-£3,000,000	-£2,250,000	-£1,500,000	-£750,000	£0
	2	-£2,250,000	-£1,500,000	-£750,000	£0	£750,000
	3	-£1,500,000	-£750,000	£0	£750,000	£1,500,000
	4	-£750,000	£0	£750,000	£1,500,000	£2,250,000
	5	£0	£750,000	£1,500,000	£2,250,000	£3,000,000

**Figure 5.1: Incentive Caps"**

Concerns with the UR's approach

- 5.3 NIE Networks notes that the UR's proposed methodology for calculating the incentive amount diverges from recent regulatory practice. The UR has adopted a symmetrical structure for positive and negative incentive amounts, rather than a positive asymmetrical structure (whereby positive incentive amounts for outperformance are greater than negative incentive amounts for underperformance).
- 5.4 A positive asymmetrical structure was adopted by the UR in the EPF included in the regulatory framework for SONI's activities as the Northern Irish Electricity Transmission Systems Operator ("ETSO").<sup>12</sup> A positive asymmetrical structure was also adopted by Ofgem in RIIO-2 when it introduced a similar incentive framework

<sup>12</sup> See UR, Final Determination for SONI Price Control, 21 December 2020, Section 4 and Annex 2.



into the regulatory framework for National Grid Electricity System Operator ("NGESO").<sup>13</sup>

- 5.5 NIE Networks considers that a positively asymmetrical mechanism for the incentive award under the EPF should also be followed for NIE Networks in RP7.

*The roles assessed under the EPF are emerging and result in a greater degree of uncertainty and risk*

- 5.6 Notwithstanding the company's position above at paragraphs 4.2 to 4.8, the areas that may come under the EPF Panel's consideration are generally new and emerging; they are not embedded within NIE Networks' current operations as baseline expectations. These areas are characterised by having limited historical data to benchmark them against, and therefore result in a greater degree of uncertainty than standard operations and a greater degree of risk in the company delivering service performance improvements in these areas.

- 5.7 NIE Networks considers that a positive asymmetrical incentive would encourage the company to adopt a proactive approach to delivering service performance improvements, rather than a conservative approach. It would also incentivise the company to deliver significant investment and resourcing required to increase the service performance beyond baseline expectations in these emerging areas.

- 5.8 NIE Networks also notes that for the EPF in SONI's regulatory framework, the scope of areas of assessment includes new and emerging roles. The company notes that UR adopted a positively asymmetrical incentive for SONI's EPF in its Final Determination, having adopted a symmetrical incentive at the Draft Determination stage.<sup>14</sup>

- 5.9 NIE Networks considers that it is inconsistent with regulatory precedent for the UR to revert to a symmetrical incentive for NIE Networks having adopted a positive asymmetrical incentive for SONI's EPF.

*The EPF is a novel mechanism in the regulatory framework for NIE Networks' activities*

- 5.10 The EPF is new for RP7; it has not previously formed part of NIE Network's regulatory framework. As such, there are no examples of previous iterations of the EPF assessment that the company can use to measure the scope of its proposals and performance.

- 5.11 In the early stages following the introduction of the EPF, there is a heightened risk of misaligned expectations between NIE Networks and the EPF Panel, including in relation to the assessment of the company's service performance baseline expectations. Such a misalignment in expectations may impact the efficacy of NIE Networks' EPF proposals, both in terms of the content of the proposals and how they are interpreted by the EPF panel, stakeholders and the UR. As a result, the

<sup>13</sup> Ofgem, RII0-2 Final Determinations – Electricity System Operator (Revised), 3 February 2021, ([https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final\\_determinations\\_-\\_eso\\_annex\\_revised.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final_determinations_-_eso_annex_revised.pdf)), Section 2.

<sup>14</sup> See UR, Final Determination for SONI Price Control (21 December 2020), Annex 2, 2.24–2.35.

EPF Panel may be less likely to attach a higher level score to NIE Networks' proposals. NIE Networks acknowledges that the EPF will be non-monetary in its first year of operation and will provide neither a financial penalty nor an incentive to the company. Whilst this may mitigate some risk of misaligned expectations during the infancy of the EPF, NIE Networks considers that this risk will remain in the years that follow, as the EPF (including the assessment of the EPF Panel) becomes more entrenched.

- 5.12 Indeed, in RIIO-2, Ofgem considered a positive asymmetric award mechanism to be appropriate in light of the novelty and risk of uncertainty arising from the incentive framework introduced, and to encourage NGESO to be proactive. Ofgem stated the following in its Draft Determination:

*"[...] an asymmetric upside scheme helps ensure the price control provides an overall fair bet to the ESO and offsets the low probability asymmetric downside risks. This recognises that the arrangements are relatively novel and there may be some uncertainty in how they are implemented. This will mean the ESO has more to potentially gain than potentially lose from stretching itself in more novel areas. We consider this is a beneficial incentive to create at this point in time when we need the ESO to be proactive and ambitious."*<sup>15</sup>

- 5.13 Ofgem reiterated these points in the Final Determination:

*"An asymmetric upside scheme recognises that the price control is relatively novel and there may be some uncertainty in how it is implemented.[...] We consider this is a beneficial incentive to create at this point in time when we need the ESO to be proactive and ambitious to facilitate Net Zero."*<sup>16</sup>

- 5.14 NIE Networks therefore requests that the UR recognise the value of a positive asymmetrical award structure in light of the novelty and risk of uncertainty created by the implementation of the EPF.

*A positive asymmetrical reward will increase the incentive for NIE Networks to exceed baseline expectations*

- 5.15 NIE Networks submits that a positive asymmetrical award structure under the EPF will incentivise the company to exceed the performance baseline expectations under the EPF structure in order to deliver value for customers.

- 5.16 The role of the electricity networks is crucial to NI's energy transition and reaching the net zero legislative target of 2050. On that basis, NIE Networks considers it reasonable to expect that the additional activities covered under the scope of assessment under the EPF would have a positive impact on society.

- 5.17 Indeed, at paragraph 2.3 of Annex V to the DD, the UR recognises, in consideration of the principles of the EPF, that *"NIE Networks has the potential to add significant*

<sup>15</sup> Ofgem, RIIO-2 Draft Determinations – Electricity System Operator, 9 July 2020, ([https://www.ofgem.gov.uk/sites/default/files/docs/2020/07/draft\\_determinations\\_-\\_eso.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2020/07/draft_determinations_-_eso.pdf))2.74.

<sup>16</sup> Ofgem, Decision – RIIO-2 Final Determinations – Electricity System Operator (Revised), 3 February 2021, 2.58.

*value given its influence within [the evolving energy system].*" As a key facilitator of these benefits, it is important that the EPF is structured to incentivise NIE Networks to exceed the baseline expectations, by rewarding the company to a greater degree for exceeding expectations, rather than penalising them for not delivering them.

5.18 NIE Networks has provided examples to illustrate the societal benefits that will be delivered by NIE Networks under the roles that are within the scope of the EPF's assessment. These are summarised below.

5.19 'Flexibility First' activities:

- NIE Networks adopts a 'Flexibility First' approach to managing the network and making investment decisions whereby the company will test the market first before committing to major conventional reinforcement schemes. This allows the company to defer network investment where this is in customers' best interest. Activities under the Flexibility First approach are relevant for the 'DSO transition and whole system approach' activities that may come under the EPF Panel's consideration as part of its assessment.
- Through a combination of its Flexibility First activities, NIE Networks estimates that it will be able to defer £25 million<sup>17</sup> of reinforcement work beyond the RP7 period, at a cost of £0.5 million.<sup>18</sup>

5.20 Reduction in carbon emissions:

- NIE Networks aims to reduce its carbon emissions by 50% by 2030 relative to its 2019 baseline, which corresponds to a reduction in NIE Networks' annual carbon emissions from 285 kilotons of carbon dioxide equivalent in 2019 and 143 kilotons of carbon dioxide equivalent in 2030. Activities under NIE Networks' carbon emission reduction plans are relevant for the 'sustainability' activities that may come under the EPF Panel's consideration as part of its assessment.
- Adopting a carbon price of £292.6 per tonne of carbon dioxide equivalent (which is consistent with the assumption used by the company for other RP7 estimates), the 50% reduction in carbon emissions by 2030 has a monetary value of £42 million in 2030 or £194 million across the RP7 period.
- NIE Networks considers it evident from these figures that the expected annual societal benefits from these activities are significantly higher than the proposed incentive amount under the reward scheme.

5.21 Increased renewable generator connections:

- NIE Networks intends to further explore the use of managed generation connection arrangements which will have a benefit of expediting the

<sup>17</sup> This estimate is based on the approach that the deferral profile varies depending on the specific reinforcement project and solution adapted by NIE Networks.

<sup>18</sup> This refers to both (i) the roll-out of smart solutions for the network and (ii) demand-side response activities.

connection of some generators to the electricity network. This was outlined in EJP1.102:

*“With uncertainty in volume and location of future generation appearing on the network and adopting the approach of investment in areas with existing constraints only, the need for further network intervention may be required during RP7 as additional generation seeks to connect. The required investment will be sought through a reopener mechanism when the needs become apparent, however as constraints begin to emerge the use of managed connections will be utilised to facilitate additional generation capacity being connected whilst we are progressing the longer term permanent conventional reinforcement.”<sup>19</sup>*

- This activity is relevant to the 'DSO transition' and 'customer service quality' roles that may come under the EPF panel's consideration as part of its assessment.
- The company estimates that connecting a 250kW wind turbine to the grid a year earlier than planned will create carbon savings equivalent to approximately £50,000.<sup>20</sup> This benefit will be replicated across NIE Networks' network for numerous renewable generation connections.

5.22 NIE Networks notes that a similar rationale of considering the societal benefits resulting from offering asymmetric rewards in excess of potential penalties was adopted by Ofgem for the comparable incentive scheme introduced for NGEN in RIIO-2. In its Draft Determination, Ofgem stated that:

*“[...] the potential costs of payments to and/from the ESO will be significantly outweighed by positive changes in the ESO's behaviour which has the potential to impact £billions wider energy system costs.”*

5.23 Having regard to the points noted above at paragraphs 5.19 to 5.21, NIE Networks considers that service performance in the activities within the scope of the EPF will deliver significant societal benefits and value for NI customers. The EPF incentive mechanism should therefore incorporate a positive asymmetrical award structure to reflect this societal benefit whilst acknowledging the minimal corresponding social loss from delivering only baseline expectations.

5.24 Moreover, the incorporation of a positive asymmetrical award structure would acknowledge that NIE Networks otherwise has limited financial incentive to unlock this significant societal value. Initiatives which seek to deliver increased performance as part of the EPF (such as the 'Flexibility First approach, DSO transition and innovation) will not drive growth in capex and additional returns to the same extent as NIE Networks' conventional approach to network investment. In fact, many of these initiatives will result in lower levels of capex compared to the alternative and

<sup>19</sup> NIE Networks, RP7 Business Plan, EJP 1.102 'Distribution Primary Network – Reverse Power Flow', p.8.  
<sup>20</sup> This estimate is based on data on the emissions of the NI power generation sector (in kilotons of carbon dioxide equivalent) and electricity consumption (in GWh), NIE estimates the current emissions intensity of the power sector (in grams of carbon dioxide equivalent per Kwh). The calculations (i) assume that the power generated by a wind farm is associated with no emissions; and (ii) use the carbon price of £292.6 per tonne of carbon dioxide equivalent (as used for all calculations in the company's RP7 submissions).

therefore lower levels of returns for the company. A positive asymmetrical awarded structure would help counter this effect and incentivise NIE Networks to invest in initiatives under the EPF.

### Conclusion

5.25 NIE Networks considers that the symmetrical incentive mechanism for the EPF proposed in the DD does not adequately incentivise the company to undertake the significant investment and resourcing required to increase performance in the new and emerging areas identified as being in the scope of assessment under the EPF. For customers, this ultimately would result in fewer performance improvements which are over and above baseline expectations.

5.26 NIE Networks requests that the UR includes the following amendment in the Final Determination to the current paragraph 5.6 and 5.7 of Annex V to the DD:

*"5.6 The overall incentive amount as a percentage of annual revenue will be calculated as follows:*

- If the overall grade is above 3, then the incentive amount will be calculated as the overall grade minus 3, multiplied by 0.5. This will be a positive number (between 0 - 1), indicating a financial reward under the incentive scheme.*
- If the overall grade is below 3, then the incentive amount will be calculated as the overall grade minus 3, multiplied by 0.3. This will be a negative number (between 0 - 0.6), indicating a financial penalty under the incentive scheme.*
- If the overall grade is 3, the incentive amount will be zero.*

*5.7 The incentive amounts should be subject to caps on the maximum financial upside and maximum financial downside in relation to each financial year. The maximum annual financial upside is £3,500,000, and the maximum annual financial downside is -£2,000,000."*

## CHAPTER 11

### OTHER MATTERS

#### **SUMMARY**

This Chapter relates to a number of matters that are not included within other Chapters of this Response, in relation to additional changes proposed for inclusion in the RP7 licence modifications and the proposed return for the connection of housing sites with 12 or more dwellings and clusters in RP7.

NIE Networks' concerns, in summary, are that there are a number of areas where additional amendments to the RP7 licence modifications beyond those set out in the DD should be considered, including to enable the recovery of certain costs which the UR had indicated would be recoverable but which are not currently permitted under the relevant licences.

#### **1. INTRODUCTION**

- 1.1 This Chapter addresses a number of matters that are not included within the other Chapters of NIE Networks' Response, including additional changes proposed for inclusion in the RP7 licence modifications and the proposed return for the connection of housing sites with 12 or more dwellings and clusters in RP7.

#### **2. POTENTIAL AMENDMENTS TO NIE NETWORKS' LICENCES**

- 2.1 Modifications to the Northern Ireland Electricity Ltd Participate in Transmission Licence and Electricity Distribution Licences (the "**Licences**") will be made to reflect the outcome of the RP7 Determination. These draft modifications are set out in Annex S to the DD. The following paragraphs set out some additional licence modifications that NIE Networks requests the UR considers during the licence modifications process. The list is not exhaustive and other items may arise as NIE Networks go through the RP7 Licence Modification process.

##### **Licence Condition 2: Preparation of Accounts**

- 2.2 NIE Networks is responsible for preparing Regulatory Accounts for compliance with Condition 2 of the Licences.
- 2.3 NIE Networks is required under the Licences to prepare Regulatory Accounts for each financial year which present fairly the assets, liabilities, reserves and provisions of, or reasonably attributable to, the separate businesses as defined for that purpose in the Licences and of the revenues, costs and cash flows of, or reasonably attributable to, those businesses for that period. These regulatory accounts separately show information for Transmission, Distribution and Landbank.

##### Proposed change

- 2.4 NIE Networks would welcome the opportunity to engage with the UR to discuss the current format of the regulatory accounts. In particular, NIE Networks requests that the UR considers removing the requirement for a split of information between

Transmission, Distribution and Landbank and that NIE Networks prepare regulatory accounts showing consolidated figures only, given other submissions / data are available which provide the required information. Transmission and Distribution data is provided in the Financial Data Regulatory Instructions and Guidance ("RIGs"), and Landbank information is provided in the annual Landbank Report. The data in the regulatory accounts is not used for setting Entitlement / Tariff figures but is instead based on RIGs information.

### **Licence Condition 3: Availability of Resources and Undertaking of Ultimate Controller**

2.5 Licence Condition 3 paragraph 5 of NIE Networks' Licences states:

*'the Licensee shall use its best endeavours to obtain and submit to the Authority with each certificate provided for in paragraph 2 [the availability of resources certificate] a report prepared by the Auditors and addressed to the Authority stating whether or not the Auditors are aware of any inconsistencies between, on the one hand, that certificate and the statement submitted with it and, on the other hand, any information which they obtained during their audit work.'*

2.6 In September 2023, NIE Networks submitted to the UR the Availability of Resources certificate but without an accompanying auditor certificate due to circumstances related to the changeover of NIE Networks' auditors from PwC to Deloitte. The UR wrote to NIE Networks indicating that it did not consider that NIE Networks had completed all required steps in the absence of an auditor certificate and requested that NIE Networks submit a report with further details and explanation regarding the matter.

2.7 NIE Networks responded in December 2023 stating that the same issue: (i) arose in 2017 when the company changed auditors; and (ii) will likely arise again in future when the company has to change auditors (as is good practice to do periodically) due to the timing of audit work and the required submission date for the Availability of Resources certificate, unless steps are taken by both NIE Networks and the UR to remedy the situation.

#### Proposed change

2.8 NIE Networks requests that the UR consider the following alternative proposals:

- The UR removes the requirement to submit the Availability of Resources certificate. NIE Networks is of the view that there are other overarching requirements on the company to ensure that it meets the aims of Licence Condition 3. These are namely the requirements to prepare statutory and regulatory accounts on a going concern basis, maintenance of an investment-grade credit rating and ongoing engagement with the UR on price control and operational matters; or
- The UR amends the submission date stated in Licence Condition 3 to June of each year, in order to avoid a recurrence of the issue when NIE Networks next changes its auditors.





- Annex 1 paragraph 3.1: the date should be amended to 1 April 2025 to reflect the commencement of the RP7 period. The date in the licence currently states from 1 October 2014;
- Annex 1 paragraph 5.1 a): this paragraph could be removed as this was only relevant for the RP5 price control period;
- Annex 1 paragraph 5.1 b) APSORt-1 term: the statement regarding the £12m decrease can be removed as this was only relevant for the RP5 price control period;
- Annex 1 paragraph 6.17: this relates to the publication of historical data on NIE Networks' website and in its accounting statements. NIE Networks currently publish this detail in both its regulatory accounts and as a separate document on its website. As this data is currently provided on the website, NIE Networks considers that there is no need to include it again within NIE Networks' regulatory accounts, so this requirement could be removed to avoid duplication; and
- Annex 1 para 7.4 (b) – Landbank Disapplication: the date should be amended as it currently states 30 September 2017. The UR has noted in the DD<sup>1</sup> that it agrees the disapplication needs to be updated.

**Annex 2, Licence Condition 12: Information to be provided to the Authority in connection with the Distribution Charge Restriction Conditions**

Paragraph 12.14 (Restriction of Distribution Charges)

- 2.15 Annex 2 paragraph 12.14 (b) of the Licences and paragraph 6.14 (b) of Annex 1 of NIE's Distribution Licence states:

*'Not later than six weeks after the commencement of each Regulatory Tariff Year, the Licensee shall send to the authority a statement as to:*

*b) the Licensee's best estimate as to the cumulative over or under-recovery at the last day of the most recently ended Regulatory Tariff Year.'*

- 2.16 When providing the information required under this licence condition, an integral component in the calculation of regulatory entitlement for a tariff year is the use of K factors at 31 March. As the information relating to K factors at 30 September is not currently used in the tariff setting process, it is no longer applicable.

*Proposed change*

- 2.17 NIE Networks requests that the UR consider either a change to this licence requirement to make it more relevant or to consider removing it.

Paragraph 12.18 (Publication of RIGs Data)

- 2.18 Annex 2 paragraph 12.18 of the Licences states:

*'The Licensee shall, publish on the Licensee's website, the information supplied in accordance with paragraph 12.18, subject to the minimum redactions*

<sup>1</sup> DD, Annex S, 5.6.

*considered necessary by the Authority to protect commercially sensitive information.'*

2.19 This paragraph relates to the provision of RIGs data. The information that NIE Networks currently provide to the Authority comprises:

- Financial Data RIGs which show actual data against various defined licence terms within both the Licences and provide reconciliations to the Transmission and Distribution opex, capex, income and pensions figures within NIE Networks regulatory accounts;
- Network Investment RIGs which show actual direct expenditure, volumes and unit costs for each asset category;
- Cost and Volume RIGs which show actual cost and volume data for both the Distribution and Transmission businesses across a number of reporting headings, cost types and cost categories; and
- Metering RIGs which show actual direct costs, volumes and unit costs for Metering and Meter Reading activities across a number of reporting headings, cost types and cost categories.

2.20 During RP6, NIE Networks sought permission from the UR not to publish RIGs information on the grounds that it contains confidential and commercially sensitive information which could cause a detriment to NIE Networks if made public. For example:

[REDACTED]

2.21

[REDACTED]

*Proposed change*

2.22

[REDACTED]

. There is also currently no relevant precedent for these types of disclosures to be published:

- The GB DNOs do not publish their RIGs information and not all of them have even agreed to provide their data privately to allow NIE Networks to benchmark their historic costs, despite requests from NIE Networks and the UR
- At a local level, NI Water publish Annual Information Returns ("**AIR**") which is its equivalent to RIGs reporting. However, the nature of the information disclosed in AIR is not comparable to RIGs. AIR focus on regulatory accounts,

volumes and performance reporting and there is no unit data (with one minor exception).

Paragraph 12.23 (Historical data used to calculate Maximum Regulated Revenue)

2.23 Annex 2 Paragraph 12.23 of the Licences states:

*'The Licensee shall, for the period from 1 October 2017, publish, on the Licensee's website and in the Licensee's accounting statements referred to in Condition 2 of the Licence, the data referred to at 12.22.'*

2.24 Paragraph 12.22 requires NIE Networks to show all historical data used to calculate Maximum Regulated Revenue as set out in the formulas in the annex.

2.25 NIE Networks currently includes this data within Appendix 1 of its regulatory accounts which are published on its website. NIE Networks also currently publishes the information contained in Appendix 1 separately on its website, which means that the publication of the information on the website is duplicative.

*Proposed change*

2.26 NIE Networks requests that the UR consider the removal of the requirement to publish this information in the regulatory accounts to avoid the need for duplication of data.

Paragraph 12.25 (Forecast Network Investment)

2.27 Annex 2 Paragraph 12.25 of the Licences states:

*'The Licensee shall, on an annual basis submit to the Authority the Licensee's estimate of the expected investments, volumes and projects for the RP7 price control period.'*

2.28 NIE Networks would welcome a meeting with the UR to discuss this requirement.

Paragraph 12.35 (Information on tax)

2.29 Annex 2 Paragraph 12.35 of the Licences states:

*'The Licensee shall, no later than 12 months after the end of each Regulatory Reporting Year, prepare and submit to the Authority an annual report, in a form to be approved by the Authority, setting out: a) audited tax reports that enable a full reconciliation between (i) information submitted to HMRC on the Licensee's tax affairs; and (ii) information used for the calculation of the tax element of the Licensee's Maximum Regulated Distribution Revenue.'*

2.30 The requirement for NIE Networks to prepare and submit an audited tax report was introduced by the Competition and Markets Authority (formerly the Competition Commission) during RP5 and carried forward by the UR into RP6.

*Proposed change*

2.31 NIE Networks requests that the UR considers whether the requirement to audit the tax reports needs to remain or if this could be removed going forward.

2.32 A significant amount of time, cost and effort is undertaken to complete the audit of the tax reports which NIE Networks considers adds little value to the process and delays publication of the report. The reconciliations within NIE Networks' annual reports

(Regulatory vs Statutory tax) should give the UR appropriate assurance without the need for preparation of audited tax reports.

- 2.33 NIE Networks also requests that the UR extends the twelve-month provision of the report to thirty months. This is due to the fact that statutory tax is calculated on a calendar basis in line with Statutory accounts and is submitted 12 months after the December year end. For example, in order to complete the tax report for the regulatory reporting period 2021/22 (April 2021 to March 2022), information is needed for the Statutory tax year ended December 2022, but this is not available until after December 2023 at the earliest. This means that NIE Networks is only able to produce the 2021/22 tax report after that period and if there is a requirement to audit the report this delays the process even further.

### 3. ANNEX 2 – OTHER POINTS

- 3.1 NIE Networks note that some of the points raised below are addressed in the DD<sup>2</sup> but are included below for convenience.

#### “Logged up” costs from RP6

- 3.2 There a number of areas where NIE Networks incurred additional and unexpected opex costs during RP6, which the UR had signalled would be recoverable via the price control. However, as there was no direct mechanism in the conditions in the Licences through which the UR could grant cost recovery, it was agreed with the UR that these costs would be “logged up” and added to the opening position of RP7.

- 3.3 This relates to:

- opex costs in respect of the Use of Shared Asset Charge ("**UoSAC**") at the Agivey cluster substation;
- opex costs in respect of enhancing the scope of contestability in connections; and
- opex costs in respect of procuring and installing LV monitors during RP6.

#### Proposed change

- 3.4 NIE Networks requests that appropriate terms are added to the Licences to allow the above items to be granted funding.

#### **UoSAC charge**

- 3.5 Part-way through RP6, NIE Networks was liable to pay a UoSAC in respect of the Agivey cluster substation. The conditions in the Licences for RP6 contain a provision which permit cost recovery for the capex element of the charge, but there is no equivalent provision for the opex element.

<sup>2</sup> DD, Annex S.

Proposed change

- 3.6 NIE Networks proposes that the equivalent opex provision is introduced for RP7, and the outstanding opex amount of £50k (2021/22 prices) from RP6 is granted to NIE Networks via this provision.
- 3.7 NIE Networks notes that the UR agrees with this proposal in the DD and has stated<sup>3</sup> that a new term can be introduced at RP7 which would be the equivalent of the CCSA\_Xt term at Paragraph 4.21 of Annex 2, i.e. adding an equivalent opex term as the existing capex term. This new term should be inserted into section 6 of Annex 2.

**Enhancing the scope of contestability**

- 3.8 During RP6, working in conjunction with the UR and ICPs operating in the Connections market, NIE Networks commenced a project to enhance the scope of contestable connections activities. Operating costs were incurred by NIE Networks as part of this project, which the UR indicated would be recoverable.

Proposed change

- 3.9 NIE Networks proposes that a new Licence provision is introduced for RP7, which would allow the UR to grant additional allowances if/when changes are required to be made to the contestable aspects of the connections market. NIE Networks would then submit a claim for costs incurred via this provision.
- 3.10 NIE Networks notes that the UR agrees with this proposal in the DD and has stated<sup>4</sup> that a new term should be introduced at RP7 in the opex section of Annex 2 of the Licences.

**LV monitors**

- 3.11 During RP6 NIE Networks sought additional allowances to procure and install LV monitors across its network. LV monitors, when combined with data analytic initiatives will enable greater visibility of NIE Networks' ground-mounted substations which forms part of NIE Networks' plans to deploy flexibility and manage its network efficiently.
- 3.12 In February 2023, the UR approved a capex allowance of £10.057m (2022/23 prices) in respect of the procurement and installation of LV monitors under paragraph 4.36 of Annex 2 of the NIE Networks Distribution Licence. This was based on a formal submission provided to the UR by NIE Networks in November 2022 and in the subsequent query process. In the November 2022 submission, NIE Networks also requested an operating cost allowance of £565,000 (2022/23 prices) but the UR stated in its approval letter dated 22 February 2023, that it was unable to approve this as there was no mechanism in the current licence to increase RP6 opex allowances. The UR gave assurances when approving the additional capex for the LV monitors during RP6, that the opex for same would be forthcoming once a term could be added to the Licence.

<sup>3</sup> DD, Annex S, 5.7.

<sup>4</sup> DD, Annex S, 5.8.

Proposed change

- 3.13 NIE Networks proposes a new Licence provision is introduced for RP7, which would allow the UR to grant the additional requested opex allowance.
- 3.14 Real time and granular LV network monitoring is now the minimum standard and offers a wide range of benefits, including access to asset condition data and supporting community energy schemes. LV monitoring is essential for NIE Networks to implement in RP7 its transformative four-step approach to facilitate net zero through a flexible and integrated energy system (the four steps being Forecast, Monitor, flexibility first and touch the network once). The RP7 Network Investment Plan was developed with as much efficiency-capture in mind and the LV monitors are part of this plan, directly impacting on its 'flexibility first' approach.<sup>5</sup> Without LV monitoring NIE Networks will not be able to implement its four-step approach which will result in:
- Congestion on NIE Networks' secondary and LV networks being missed, presenting a risk to system security and customer safety; and
  - Where congestion is identified, planners taking a more conservative approach and missing opportunities to use smart and flexible solutions to address it, ultimately increasing customer costs.
- 3.15 LV monitoring also allows for a more targeted and scaled back RP7 LV cable replacement programme. Without LV monitoring a larger RP7 ex-ante LV cable replacement programme would be required.

**Other proposed amendments to Annex 2**

- 3.16 The following are examples of other minor amendments which NIE Networks considers are required to Annex 2.
- Annex 2, para 3.5,  $P_t$  term should reference paragraph 7 not paragraph 4.
  - Annex 2, page 177, the reference to '*6.14 Allowed opex other amount – AOO<sub>t</sub>*' at the top of the page could be removed.
  - Annex 2, page 177, formatting required to paragraph 6.21.
  - Annex 2 paragraph 12.2. The 6 at the end of the paragraph could be removed.
  - Annex 2 paragraph 12.4 c) Currently contains an Error message, reference should be to paragraph 12.15, same for paragraph 12.4 d) iii.
  - Annex 2 paragraph 12.4 f) i. This should reference paragraph 12.22 instead of paragraph 12.20.
  - Annex 2 paragraph 12.4 g) i. This should reference paragraph 12.34 instead of paragraph 12.33.
  - Annex 2 paragraph 12.4 g) j. This should reference paragraph 12.37 instead of paragraph 12.36.
  - Annex 2 paragraph 12.18. This should reference paragraph 12.16 instead of 12.18.

<sup>5</sup> RP7 Business Plan, 12.7.

- Annex 2 paragraph 12.21. It is not clear if this paragraph is required (see paragraph 12.22)
- Annex 2 paragraph 12.28 contains an error message.
- Annex 2 paragraph 12.31 – paragraph reference missing.

#### **4. PROPOSED RETURN FOR THE CONNECTION OF HOUSING SITES WITH 12 OR MORE DWELLINGS AND CLUSTERS IN RP7**

- 4.1 In RP6, the costs associated with connecting housing sites with 12 or more dwellings and clusters are added to the RAB and contributions received from customers are deducted from the RAB, referred to as the connections charge pass-through. NIE Networks is required to set connection charges at a level which will enable it to recover a reasonable rate of return, in accordance with the Statement of Connection Charges.<sup>6</sup>
- 4.2 In the RP7 Business Plan, in order to earn a reasonable return on these works, NIE Networks proposed to retain the RAB pass through mechanism for housing sites with 12 or more dwellings and clusters, retain the housing standard connection charge and set charges equal to estimated costs plus a mark-up equivalent to the agreed RP7 Weighted Average Cost of Capital. This would require an amendment to the current Licence wording.<sup>7</sup>
- 4.3 This proposal was not addressed by the UR in the DD. However, following clarification through the query process, the UR indicated it would need to initiate a detailed investigation into all connections costs, which it had not considered doing at this time.
- 4.4 NIE Networks does not wish to pursue this proposal at present, however it may potentially revisit this in the future.

<sup>6</sup> RP7 Business Plan, 11.7.

<sup>7</sup> RP7 Business Plan, 11.8.

## CHAPTER 12

### PRICE CONTROL DESIGN

#### SUMMARY

This Chapter relates to the UR's provisional determination of uncertainty mechanisms that will apply during RP7.

NIE Networks' concerns include, in summary, the following:

- the design of certain uncertainty mechanisms inhibits the company's ability to invest to enable delivery of long-term net zero ambitions, even if this investment is ahead of shorter-term need in RP7, by placing too much risk on NIE Networks (e.g. through scope for clawbacks), thereby encouraging the company to delay investment to mitigate that risk;
- the proposed materiality thresholds for several uncertainty mechanisms are too high and are likely to incentivise over-scoping of projects in order to benefit from triggering an uncertainty mechanism or de-prioritisation of projects that do not hit the materiality threshold;
- the proposed mechanics (including timing) of certain uncertainty mechanisms introduce unnecessary delays that are likely to push up costs and delay essential investment; and
- notwithstanding the availability of uncertainty mechanisms, an expedited review of the NI transmission infrastructure approval process is required to ensure the achievement of 2030 renewable targets (and beyond).

The UR's proposals with respect to uncertainty mechanisms contribute to one of NIE Networks' three main concerns with the DD – namely, that aspects of the price control design will inhibit NIE Networks' ability to invest to enable delivery of long-term 2050 net zero ambitions, even if this investment is ahead of short-term need in RP7. The risk of clawbacks in particular will act as an incentive to delay investment until the latest possible time, in order to achieve greater certainty that the cost will be allowed.

If the UR's proposals are carried over in its Final Determination, these features will undermine NIE Networks' ability to deliver its plan for RP7 and impact on its ability to facilitate NI's journey to net zero.

#### 1. INTRODUCTION

- 1.1 The proposals set out in NIE Networks' RP7 Business Plan were derived by using the best information available to the company at the time of developing the proposals. However, there are areas of uncertainty which require additional funding mechanisms due to the external nature of the uncertainty and its potential impact.
- 1.2 Several uncertainty mechanisms were included within the RP6 Final Determination. In its Business Plan submission, NIE Networks proposed that many of these are



retained, either as they are or with some modifications. The company also proposed some new mechanisms, most of which were intended to address inherent uncertainties surrounding the pathway and timing for transitioning to net zero.

- 1.3 In its DD<sup>1</sup>, the UR set out its proposals for the design of the RP7 price control and how it builds on the design of the RP5 and RP6 price controls. It also provided its response to NIE Networks' requests for amended and/or new price control mechanisms.
- 1.4 NIE Networks welcomes that the UR has accepted the great majority of the company's proposed uncertainty mechanisms for RP7. It has however identified issues with a number of the UR's proposed mechanisms where they do not adopt the design proposed by NIE Networks in its Business Plan submission.
- 1.5 This Chapter sets out NIE Networks' concerns with the UR's proposals for the design those price control mechanisms and provides further evidence in support of its position. It is important that the UR addresses these concerns in its Final Determination to ensure that the correct price control mechanisms are in place for RP7.
- 1.6 This Chapter 12 is not exhaustive with respect to NIE Networks' concerns with the UR's proposals for the design of the RP7 price control. Other concerns are raised elsewhere in this response, namely Chapter 3 (which sets out NIE Networks' request for an additional reopener allowance for indirect costs at paragraphs 4.11 to 4.21 of that chapter) and Chapter 4 (which sets out NIE Networks' request for a unit cost midpoint re-opener for the company's network investment plan at paragraphs 3.37 to 3.40).
- 1.7 This Chapter is structured as follows:
  - Section 2 concerns the Primary Network;
  - Section 3 concerns Secondary Network Reinforcement;
  - Section 4 concerns Looped Services;
  - Section 5 concerns Net Zero;
  - Section 6 concerns Environmental;
  - Section 7 concerns Creosote Poles;
  - Section 8 concerns Business Rates;
  - Section 9 concerns Non-Recoverable Alterations;
  - Section 10 concerns Capex Asset Replacement;
  - Section 11 concerns the D5 Mechanism;
  - Section 12 concerns Severe Weather.

<sup>1</sup> DD, Chapter 12 and Annex S.

## 2. PRIMARY NETWORK

- 2.1 The primary network in NI consists of approximately 4,200km of 33kV overhead lines/underground cables and 217 primary substations (33/11kV and 33/6.6kV). Whereas historically power flow through substations has been from higher voltage side to the lower voltage (“**forward power flow**”), power can now also flow from the lower voltage side to the higher voltage – this is referred to as “**reverse power flow**”. Forward power flow requirements are driven by demand growth, whereas reverse power flow requirements are driven by generation growth at lower voltage levels.

### Forward power flow

- 2.2 NIE Networks' ex-ante allowance request in respect of forward power flow is based on its "best view" Low Carbon Technology ("**LCT**") update scenario. NIE Networks has deliberately taken a prudent approach to its network modelling to limit the risk of under-utilising the requested ex-ante allowance but as a result there is a risk that this funding will not be sufficient to meet forward power flow requirements during RP7.
- 2.3 In addition, NIE Networks has adopted a "flexibility first" approach in its plan. If the flexibility market does not materialise as expected, then it would need to revert to more costly conventional solutions.
- 2.4 In view of these factors, in addition to the requested ex-ante allowances NIE Networks proposed a re-opener mechanism to apply where NIE Networks expects to incur additional expenditure above a materiality threshold due to either growth exceeding forecasts, flex market failure, or where there is a strong case to invest in a whole system solution.

### Reverse power flow

- 2.5 NIE Networks' primary network is subject to reverse power flow constraints as a result of having a high volume of distributed generation connected. Most of the latent network generation capacity on its primary network has been exhausted.
- 2.6 Customers have said that NIE Networks needs to invest further in its network in order to achieve a target of 80% energy generated from renewable sources (“**RES-E**”) by 2030. In particular, investment will be needed to adapt to the potentially more dispersed nature of renewable energy generation.
- 2.7 A key source of uncertainty in this area is the number and location of small-scale generators that will seek to connect to the distribution network in RP7. In order to avoid becoming a hindrance to renewables and LCTs, NIE Networks needs to be able to anticipate and adapt to the needs of customers. For this the company needs an appropriate uncertainty mechanism that reflects the lower volume but higher variable cost of primary network investment (as compared with secondary network investment).
- 2.8 As such, NIE Networks requested ex-ante allowances covering primary substations where there is currently no reverse power flow capacity remaining (i.e. where the company already knows it needs to invest), alongside a re-opener mechanism to increase allowances if an investment need arises at other substations which are not

currently fully utilised, or where there is a strong case to invest in a whole system solution.

Proposed reopener

2.9 The reopener proposed by NIE Networks is summarised in the table below:<sup>2</sup>

Parameter		Description
Allowance type		Lump sum
Output Measures	Forward	Retention of existing output measure (LI5s <2% at the end of the period.
	Reverse	No. of substations with no reverse capacity at the end of the period.
Reopener window		April 2027 (Year 2) and April 2029 (Year 4)
Trigger		Triggered by NIE Networks, if the full RP7 expenditure for either forward or reverse power flow investment is forecast to exceed its respective ex-ante allowance plus materiality threshold.
Materiality threshold		5% of ex-ante allowance for respective categories.
Scope	Forward	<p>This re-opener will be used where NIE Networks expects to incur additional expenditure above the ex-ante allowance plus materiality threshold, due to:</p> <ul style="list-style-type: none"> <li>• Forecast demand growth exceeding our 'best view' scenario.</li> <li>• Flex market failure.</li> <li>• Whole system solution investment where there is a strong case to invest.</li> </ul> <p>This will require a formal submission by NIE Networks to UR, at the reopener window, setting out the needs case and justification for increased allowance.</p>
	Reverse	<p>This re-opener will be used where NIE Networks expects to incur additional expenditure above the ex-ante allowance plus materiality threshold due to:</p> <ul style="list-style-type: none"> <li>• Actual or forecast generation growth resulting in additional substations forecast to become fully utilised within the RP7 period.</li> <li>• Whole system solution investment where there is a strong case to invest.</li> </ul> <p>This will require a formal submission by NIE Networks to UR setting out the needs case and justification for increased allowances.</p>
Application of cost sharing mechanism		50:50 cost sharing mechanism retained.

**The UR's provisional decision**

2.10 In the DD, the UR indicated its agreement with NIE Networks by means of the following statements:<sup>3</sup>

*"there is a risk that a higher than expected uptake could require additional of LCT and generation connections";*

*"a lower than anticipated availability of flexible services makes it difficult to determine a robust ex-ante allowance for primary network load related investment in RP7";*

<sup>2</sup> See NIE Networks, 'RP7 Uncertainty Mechanisms', p.6, Table 2.

<sup>3</sup> DD, Annex S, 4.13-4.14.

*"there is a risk that limitations on reverse power flow at the High Voltage (HV) to 33kV interface could prevent the use of renewable generation connected to the LV and HV grids and limit [the UR's] ability to deliver renewable generation targets"; and*

*"there is a need to provide the company with the ability to address this issue during the RP7 Price Control and the level of uncertainty makes it unreasonable to determine a robust ex-ante allowance for this activity".*

2.11 The UR then drew comparisons between NIE Networks' proposals and the Ofgem RIIO-ED2 load related expenditure re-opener for the primary network for the GB DNOs.<sup>4</sup> In particular, it compared:

- the number of reopener windows: both NIE Networks' proposal and Ofgem's proposal provide for two reopener windows;
- the materiality threshold, noting that *"the Ofgem mechanism has a materiality threshold of 0.5% of adjusted revenue, whereas NIE Networks envisages materiality threshold of 5% of ex-ante allowance for respective categories";* and
- treatment of capex for primary network, for which Ofgem has proposed having the ability to review if DNOs do not spend their allowances (to ensure that companies only benefit where they have been efficient, rather than simply failing to perform work).

2.12 Based on the above, the UR has provisionally concluded that:<sup>5</sup>

- It agrees with NIE Networks that a reopener is needed for primary network load related allowances.
- It is, however, minded to adopt an approach similar to that of Ofgem by including a mechanism to review allowances at the end of the price control period if expenditure was less than 80% of the ex-ante allowance. In the event that any underspend was due to works not being completed, rather than efficiency, the UR would have the option of deciding to reduce the allowance.
- the reopener submission windows should be August 2027 and August 2029 rather than the windows of April 2027 and April 2029 proposed by NIE Networks. The UR indicates that this is intended to allow the submissions to take account of audited costs for the previous financial years included in the Regulatory Information Guidelines (RIGS) submissions.
- The reopener threshold should be symmetrical, and be set at 20% rather than the 5% proposed by NIE Networks.

<sup>4</sup> DD, Annex S, 4.15-4.18.

<sup>5</sup> DD, Annex S, 4.19-4.21.

- If the re-opener is triggered, and additional allowances agreed for additional outputs in the latter part of the programme, the delivery of these outputs would be subject to the deferral mechanism at the start of RP8.

### **Concerns with the UR's provisional decision**

#### Timing of the reopener

- 2.13 The UR states that it agrees with NIE Networks' proposal for the reopener but that the window for reopener submissions should be August 2027 and August 2029, rather than April 2027 and April 2029. NIE Networks has no objections to this change.
- 2.14 Ideally, the reopener should be available at any stage during RP7, as this would provide maximum flexibility within the period. In developing its proposed suite of uncertainty mechanisms, NIE Networks was mindful of minimising the regulatory burden whilst supporting the associated resource planning to manage these mechanisms. As such, limiting the reopener to two windows reflects a pragmatic position.

#### The reopener should not be symmetrical

- 2.15 NIE Networks disagrees with the UR's provisional determination that the reopener should be symmetrical. A symmetrical reopener would disincentivise net zero investment, for the reasons explained below:
- Delivery of primary substations work requires a significant lead time; in particular, works may require consents and/or planning permission. For this reason, NIE Networks must commence projects as early as possible to ensure that capacity is delivered at the pace required for customers. By way of illustration, NIE Networks has already commenced pre-construction works on a number of primary substations outlined within its RP7 programme.
  - The identification of substations where investment is required is based on engineering analyses, under which each substation is allocated a Load Index ("LI") value. The values range from LI1 to LI5, where LI5 is the highest and therefore most in need of investment, and allowances being based on the classification of substations as either LI4 or LI5 (both of which indicate substations that are forecast to be overloaded, with classification as LI5 indicating that such overloading is forecast to cover a longer period). At each reopener window, the engineering analysis carried out will be based on up-to-date load and generation forecasts. As these forecasts can change over time, it is possible that, at any reopener window, the engineering analysis might conclude that a substation should no longer be forecast to be categorised as LI4 or LI5 within the RP7 period, due to the load or generation at that substation not materialising at the pace previously forecast. If the reopener were symmetrical, this would create the risk that investments previously made for a specific substation could have its associated allowance reduced or removed at the reopener.

- If this were to happen, the substation project would have to either be paused in response to the UR reducing or removing the associated allowance, or continue to be progressed without an allowance. Neither option is acceptable to NIE Networks or its stakeholders: with the first option, the investment already incurred is, if not completely wasted, then left dormant pending a future change in circumstances that would enable the UR to provide a new allowance to finish the work; with the second option, NIE Networks would have to take on a significant and unexpected financial exposure.
  - In either case, NIE Networks would be incentivised to minimise the risk by delaying substation works until either the opportunity for reopeners has expired (i.e. after August 2029) or there is sufficient certainty that a forecast need will actually materialise. Both would likely delay substation works and thus delay the delivery of critical net zero infrastructure that depends up it.
- 2.16 An asymmetrical reopener mechanism, as proposed by NIE Networks, provides the necessary certainty to allow urgent progress to be made on the sites identified in the RP7 plan, whilst allowing for any additional sites identified based on up-to-date forecasts to be progressed at reopener windows. We are firmly of the view that the UR should adopt an asymmetrical reopener mechanism in the final determination.
- 2.17 To the extent that there may be any substation projects where it is established that the need for the project has not materialised in circumstances where NIE Networks is able to avoid expenditure on such projects (e.g. if the change in circumstances is identified before work commences) this could result in an underspend compared with the ex-ante allowance. In such circumstances, the UR's proposed ex-post review mechanism already provides sufficient protection for customers.

The proposed materiality threshold is too high

- 2.18 The proposed 20% threshold is not an appropriate materiality threshold for the reasons explained below.
- 2.19 NIE Networks' proposed ex-ante allowances for the RP7 forward and reverse power flow network reinforcement allowances are c.£30 million and c.£20 million respectively. On this basis, a 20% materiality threshold for these categories of work would be c.£6 million and c.£4 million respectively. Allowing for the 50:50 cost sharing mechanism, this means that NIE Networks could face a financial exposure of as much as c.£5 million. This represents an unreasonable level of financial exposure and incentivises perverse outcomes for customers. For example:
- In a scenario where the company believes proposed investment will cause its expenditure to exceed the ex-ante allowance but fall well short of the amount required to trigger the reopener, the fact that it is unlikely to benefit from a reopener would act as a disincentive to making that investment, as the only way to limit the financial exposure is to avoid making the investment.
  - Alternatively, in a scenario where the company believes proposed investment will cause its expenditure to approach but not quite reach the level at which the reopener is triggered, there would be an incentive for the

company to seek to inflate its expenditure in order to ensure that the materiality threshold is reached. This is because reaching the trigger for a reopener opens the possibility that some or all of the spend in excess of the ex-ante allowance will be covered by an additional allowance after the reopener, whereas otherwise the company would be left to rely on the cost sharing mechanism.

- 2.20 NIE Networks is committed to taking a leadership role in NI's journey to net zero including through investment in the primary network, and as such recognises that it may need to accept a reasonable level of financial exposure, where necessary, in order to minimise the regulatory burden associated with a disproportionate number of reopeners. This is, however, not necessary in respect of the primary network reopener, as limiting the reopener to two fixed windows during the price control period will function as a hard limit on the number of reopeners that is not dependent on the size of the materiality threshold.
- 2.21 In any event, comparison may be drawn with the materiality threshold for the Change of Law ("**CoL**") uncertainty mechanism, which the UR has proposed to set at £125,000. That provisional decision is based, in part, on the UR's perception of a need to "*reduce the administrative burden on NIE Networks and UR in developing, challenging and completing applications and decisions*" i.e. to avoid the risk of the mechanism being triggered too frequently by small changes. Given that the primary network reopener would be subject to two submission windows, it is clear that a much lower threshold would be sufficient to prevent excessive or frivolous requests for reopeners.
- 2.22 The materiality threshold proposed by NIE Networks of 5% of ex-ante allowances equates to c.£1.5 million and c.£1 million for primary forward and reverse power flow allowances respectively, and would result in a maximum financial exposure to NIE Networks of c.£1.25 million. This represents a reasonable level of exposure having regard to the factors set out above.

Amendment of the retained RP6 output

- 2.23 NIE Networks' proposal for the forward power flow aspect of the allowances included the retention for RP7 of the RP6 output measure (i.e. LI5s <2% at the end of the period). In order to refine this measure to be more effective in promoting behaviour in line with customer expectations, it should be amended so as to exclude substations where flexibility solutions have been deployed as the optimum solutions in RP7 as opposed to conventional reinforcement.
- 2.24 This is because the emerging role of flexibility in RP7 will likely result in more substations falling into the LI5 category where flexibility is used to manage congested substations until future periods (e.g. in order to defer associated CAPEX). In other words, the more flexibility is used to manage congested substations, the worse the performance against this output measure. Stakeholders have made clear that the use of flexibility is to be promoted, and therefore it is important that this output measure does not create a disincentive for doing so.

- 2.25 In addition, if substations at which flexibility solutions have been applied are not excluded from this output measure, this would create a perverse incentive against the use of flexibility solutions and in favour of conventional reinforcement solutions. This incentive would apply even if the flexibility solution is identified as the optimal customer solution using the Common Evaluation Methodology.
- 2.26 For these reasons, substations should be excluded from the LI5 output measure where flexibility has been deployed as the optimum solution in RP7.

### **Conclusion**

- 2.27 Reopeners for primary network works should not be symmetrical, as this creates the risk of allowances being removed from projects that have already commenced and thus would incentivise the company to delay commencing projects. This in turn risks projects not being completed in good time to meet the underlying need.
- 2.28 In view of the level of financial exposure that the company will face, the limited number of reopener windows, and the comparative position of other reopeners, the materiality threshold for the primary network reopener should be set at no more than 5% of ex-ante allowances.
- 2.29 In order to meet stakeholder expectations regarding flexibility and to avoid creating perverse incentives, the retained output measure for forward power flow should be amended to exclude substations where flexibility has been deployed as the optimum solution in RP7.

## **3. SECONDARY NETWORK REINFORCEMENT**

- 3.1 NIE Networks requires allowances to accommodate future changes to network demand and load levels brought about by growth in the economy, government policy and – crucially for RP7 – by the uptake of LCTs in NI.

### **NIE Networks' proposed uncertainty mechanism**

- 3.2 In its RP7 Business Plan, NIE Networks took a deliberately prudent approach to network modelling to ensure that there is only a low risk of its ex-ante allowance for secondary network expenditure not being utilised in full. Adopting a 'best view' scenario for LCT uptake, the company identified a risk that the ex-ante allowance would not be sufficient to cover all work required over the RP7 period.
- 3.3 NIE Networks therefore proposed an ex-ante allowance of £101.4 million for RP7 plus a volume driver which would come into effect only once the ex-ante allowance had expired. NIE Networks would report annually on (i) expenditure against the allowance (including on volume measures and unit costs); and (ii) performance against control measures to ensure efficient use of the volume driver (including a mid-point review of the effectiveness of the volume driver). The UR would have the right to disallow allowances above the ex-ante funding which are considered inefficient.<sup>6</sup>

<sup>6</sup> NIE Networks RP7 Business Plan, 'RP7 Uncertainty Mechanisms', 2.2 and EJP 1.105, 'Secondary Network Reinforcement'.



- 3.4 In March 2023 (following preparation of NIE Networks' RP7 Business Plan), the Climate Change Committee ("**CCC**") published an advice report entitled 'The Path to a Net Zero Northern Ireland'<sup>7</sup> ("**Advice Report**"), which sets out deployment rates for LCTs at key milestones through to 2050. The deployment rates advised in the Advice Report exceed NIE Networks 'best view' scenario for LCT uptake.
- 3.5 Following its submission of its RP7 Business Plan, NIE Networks further engaged with the UR on the UR's preferred approach of adopting a 'volume driver only' allowance for secondary network investment. In doing so, NIE Networks outlined four main concerns to the UR's proposed approach:
- A volume driver only allowance carries risks in the event of a 'slow start' scenario, where LCT load growth is slower in the short term than the company's 'best view' scenario;
  - The company would miss opportunities to invest in innovation projects under its 'flexibility first' approach, which is supported by customers;
  - Applying a volume driver only allowance to secondary network reinforcement investment is novel and has not previously been deployed in NI or GB; and
  - The lack of certainty associated with volume driver only allowance may not provide customers with the necessary confidence and hinder decarbonisation plans.<sup>8</sup>

#### **The UR's provisional decision**

- 3.6 In its DD, the UR provisionally allowed a lump sum ex-ante allowance of £1.1 million for the purposes of procuring flexibility services on the secondary network, following the concerns raised by NIE Networks that a volume driver only allowance would not facilitate the company's flexibility first approach.
- 3.7 It proposed that the remaining allowance be volumetrically driven and based on the interventions identified by NIE Networks in its RP7 Business Plan. The UR states the following:

*"We consider that our preferred approach is proportionate and provides the correct balance of risk between the company and consumers as it ensures NIE Networks is remunerated for volumes delivered whilst ensuring consumers are not funding LCT uptake which does not materialise. Given our position on the remaining allowance being volume driven, the 50:50 cost sharing mechanism should only apply to unit costs."<sup>9</sup>*

<sup>7</sup> The CCC, Advice Report: The Path to a Net Zero Northern Ireland, March 2023, ([file:///C:/Users/PH26207/Downloads/Advice-report-The-path-to-a-Net-Zero-Northern-Ireland%20\(1\).pdf](file:///C:/Users/PH26207/Downloads/Advice-report-The-path-to-a-Net-Zero-Northern-Ireland%20(1).pdf)).

<sup>8</sup> NIE Networks, 'RP7 Network Reinforcement Allowances: Additional information following NIE Networks/UR meeting on 16<sup>th</sup> August 2023', 25 August 2023 and NIE Networks, 'RP7 Secondary Network Uncertainty Mechanism: Additional information following NIE Networks/UR meeting on 7<sup>th</sup> September 2023', 15 September 2023.

<sup>9</sup> DD, Annex S, 4.30.

## Concerns with the UR's provisional decision

### Risks to investment in the event of a 'slow start scenario'

- 3.8 In its DD, the UR states the following:
- “We do not think a volumetric driver would be a cause of a slow start to investment. NIE Networks should plan its investment according to need in any circumstances and, as with other volume drivers, UR approval is not required for investment. If LCT uptake materialises more slowly than forecast, the company’s criteria for identifying works would suppress expenditure in any case whether funded through ex-ante allowances or volume driven mechanisms. If work is delayed for contract or other project management reasons, the volume driver will ensure that consumers only pay for the benefits delivered.”<sup>10</sup>*
- 3.9 NIE Networks considers that, in making this statement, the UR has failed to have regard to the risks (as previously raised with the UR) that a volume driver only allowance poses to delivering NIE Networks' investment programmes if, due to a slow start in uptake, the company commences secondary network reinforcement slowly and then has to accelerate it to catch up with the CCC's LCT pathway.
- 3.10 As NIE Networks outlined in its additional submissions to the UR, in a 'slow start' scenario the company could defer some expenditure until RP8 by managing only the short term network constraints. However, there would then be a significant risk that the company would be unable to ramp-up network investment in RP8 and beyond should a faster uptake of LCTs materialise (akin to that recommended within the CCC's Advice Report). NIE Networks is concerned that in this scenario the electricity distribution network would become a blocker to people transitioning to electric vehicles and heat pumps, and, ultimately, NI's net zero legislative target.
- 3.11 Even if it was possible for NIE Networks to build additional network capacity at the accelerated pace required in RP8 and beyond, securing the volume of additional labour and material resources required in such short time horizons would carry cost premiums . This would ultimately lead to increases in the rate of inflation within the market, which would be reflected in customers' electricity bills.
- 3.12 Indeed, the UR acknowledges in its DD the need to commence long-term investment in strengthening the company's electricity networks now and accepts that some of this investment may need to be made in advance to avoid cost premiums at a later stage:
- “While the timing of load growth is uncertain, the trajectory is clear. The sale of new diesel and petrol cars are expected to be banned 2035, prompting increasing demand on electricity networks. The increased investment planned for RP7 is expected to continue for at least two further price control. The increasing level of investment necessary to upgrade electricity networks at local nation, and international, levels will place significant demands on supply chains. Delaying making a start on this investment can only increase*

<sup>10</sup> DD, Annex S, 4.28(a).

*the peak in future investment, making it difficult and possibly more expensive to deliver. It would also miss the opportunity to increase capacity in parallel with on-going maintenance programmes and increase the marginal cost of future capacity upgrades. Therefore, we have concluded that, despite the uncertainty over future load projections, there is a need to begin this long-term investment in strengthening our electricity networks now, accepting that some of this investment may be in advance of need.*<sup>11</sup>

- 3.13 NIE Networks welcomes this commentary. However, by adopting the company's proposed interventions into the UR's design of the volume driver, the UR would reserve the right to disallow allowances annually once flagged for review by the control measures identified by the company.
- 3.14 Under NIE Networks' proposals in its RP7 Business Plan, capacity could be added to parts of the network where constraints are forecast to materialise beyond the timeframes set out within the volume driver control measures (i.e. two years).<sup>12</sup> Conversely, within a volume driver only allowance, such control measures create a disincentive for NIE Networks to invest in network capacity in a 'slow start' scenario, beyond the two-year time horizon. Investing beyond this horizon carries a risk of disallowance during ex-post annual reviews.
- 3.15 The risk of disallowance is such that NIE Networks will be discouraged from making the necessary network investment in a 'slow start' scenario, resulting in a significant risk that investment in RP8 to catch up to the CCC's LCT pathway would be unachievable. This very risk was identified by Ofgem when setting its RIIO-ED2 Final Determination:

*"We did consider, following feedback from UKPN, the RIIO-ED2 CG and a consumer group, whether to extend the clawback of allowances under the Secondary Reinforcement Volume Driver to all relevant allowances, using our automatic checks to flag unjustified investment under ex-ante allowances as well as over ex-ante allowances. However, we are concerned that this approach may create a reluctance amongst DNOs to invest, hindering the long-term net zero transition by leaving networks with significant catching up to do in RIIO-3, which the supply chain flagged in Draft Determination responses may be challenging."*<sup>13</sup>

- 3.16 Following the publication of the DD, NIE Networks has continued to engage with the UR on the concerns set out above. NIE Networks looks forward to engaging further with the UR on this important topic.

Impact on NIE Networks' Touch the Network Once strategy

- 3.17 In its DD, the UR states as follows with respect to its proposal to introduce a volume driver only allowance:

<sup>11</sup> DD, 1.10.

<sup>12</sup> NIE Networks RP7 Business Plan, 'RP7 Uncertainty Mechanisms', 2.2.1.1.

<sup>13</sup> Ofgem, 'RIIO-ED2 Final Determinations Core Methodology Document', 30 November 2022, 3.55.

*“It would allow NIE Networks to flex investment up or down, depending on actual LCT uptake with minimal involvement by UR. The volume driver allows NIE Networks to respond to need. It does not require NIE Networks to delay decisions while seeking further approval from UR.”*

- 3.18 NIE Networks is concerned that this statement fails to take account of the detrimental impact of a volume driver only allowance on its TTNO strategy.
- 3.19 In its RP7 Business Plan, NIE Networks set out its TTNO strategy as part of its 'whole system' approach. The strategy involves building in future capacity to avoid double customer disruption and costs in RP8 or RP9. The volume driver control measures proposed by NIE Networks in its RP7 Business Plan were designed to facilitate the TTNO strategy and included the following tolerance for utilisation control measures:
- “A tolerance of 20% of capacity additions in ‘low’ utilisation bands will be permitted under the metric to account for situations where whole system opportunities require investment in transformers and circuits with a utilisation forecast to be below 100% within the next two years”.*<sup>14</sup>
- 3.20 The company proposed this tolerance on the basis that the UR would provide both an ex-ante allowance and a mid-term review of the volume driver to determine the appropriateness, or otherwise, of this tolerance, based on the expenditure delivered within the ex-ante allowance to that point.
- 3.21 In the context of a volume driver only allowance (as proposed by the UR in its DD), it is highly likely that the 20% tolerance would not be sufficient and would not encourage the company to deliver TTNO and 'whole system' solutions. The benefits of these solutions are recognised by the UR in its DD, as set out at paragraph 3.12 above.
- 3.22 NIE Networks notes that this is particularly pertinent considering the expected profiling of the secondary network reinforcement programme and asset replacement programme. NIE Networks' LCT forecasts reflect increasing levels of uptake year on year throughout RP7 and beyond, which (notwithstanding the issues raised above at paragraphs 3.8 to 3.16) will result in increasing levels of investment year on year. On the other hand, NIE Networks' asset replacement programme will be more evenly spread across the period from a deliverability perspective. Significant TTNO opportunities exist when making asset replacement investments; a more optimum investment may be available considering medium- and longer-term load forecasts.
- 3.23 Furthermore, in the earlier years of the RP7 period, investments and interventions in secondary network reinforcement will be at lower levels. Under a volume driver only allowance, the 20% tolerance will be regularly breached where TTNO and whole system opportunities are pursued. Breaching the 20% threshold will trigger an annual ex-post review by the UR, which could result in the holding back of allowances. This risk creates a disincentive for the company to invest in TTNO and whole system opportunities. Consequentially, annual ex-post reviews will create

<sup>14</sup> NIE Networks, RP7 Business Plan, 'RP7 Uncertainty Mechanisms', 2.2.1.1.

significant administrative burden for both the company and the UR, through the submission of reports and evidence and corresponding regulatory evaluation and determination. NIE Networks therefore considers that it is wrong for the UR to state that a volume driver only allowance will result in *“minimal involvement by the UR”*.

- 3.24 NIE Networks considers that under its proposed design of the uncertainty mechanism, the 20% tolerance would not be regularly breached. The company proposed a mid-point review of secondary network reinforcement investments against its proposed ex-ante allowance, which would allow for circa three years of outturn data to be reviewed and for the volume driver parameters (including unit costs) to be adjusted accordingly. At the stage of such a mid-point review, it is unlikely that the ex-ante funding (as proposed by the company) would be expired, and therefore the volume driver would not have been utilised at this stage.

Novelty and impact of a volume driver only allowance

- 3.25 In its DD, the UR makes the following statement:

*"NIE Networks state that a volume driven approach and the associated control measures have not yet been deployed in Northern Ireland. However, volume drivers are in place for other activities and are being added to in RP7. NIE Networks has proposed a volume driver for additional work under this category of investment."*<sup>15</sup>

- 3.26 In making this statement, the UR has misinterpreted NIE Networks' position. NIE Networks acknowledges that volume drivers have and will continue to be utilised within its price controls. However, the company considers that the UR has failed to acknowledge the novel application of a volume driver only allowance in the context of secondary network reinforcement, where the proposed control measures are detailed and impose sensitive parameters. In particular, the two-year constraint time horizon and 20% tolerance will directly impact the level of administrative burden for both the company and the UR and the level of incentive provided to the company to invest in a 'slow start' scenario and implementation of its TTNO and whole system strategy.
- 3.27 The company considers that introducing a volume driver only allowance from the outset of the RP7 period carries significant risk relating to the tuning of these sensitive parameters. Conversely, the company's proposal of ex-ante allowance and a mid-point reopener to review the volume driver would allow for the review of circa three years of outturn data to ensure that the parameters are appropriately tuned prior to a volume driver coming into effect in the latter part of RP7. Moreover, the company considers that a mid-point review of the volume driver will provide the opportunity for alternative solutions, not currently accommodated within the volume driver design, which have materialised over the first half of the price control to be included within the mechanism.
- 3.28 NIE Networks welcomes that the UR has accepted that the volume driven allowance could impede the company's flexibility first approach and has allowed a lump sum

<sup>15</sup> DD, Annex S, 4.28(c).

ex-ante allowance of £1.1 million for flexible solutions.<sup>16</sup> However, the company considers that this approach should apply also to conventional solutions. The lack of a mid-point review creates a disincentive for the company to seek out new or alternative solutions, since there is no mechanism for cost recovery of these alternative solutions under the current volume driver design.

### **Conclusion**

- 3.29 As set out above, NIE Networks is concerned that the UR's ability to clawback allowances under the volume driver only mechanism will discourage the company from making the necessary network investments in a slow start scenario and from implementing its TTNO strategy. This will result in a significant risk that the company is unable to make the necessary investment in RP8 to catch up with the LCT pathway and long-term net zero transition.
- 3.30 NIE Networks submits that the proposed uncertainty mechanism must provide sufficient certainty on the recovery of costs. The company therefore requests that in the Final Determination, the UR modifies the proposed uncertainty mechanism for secondary network reinforcement so that allowances granted cannot be clawed back.
- 3.31 The company wishes to work collaboratively with the UR to address any remaining concerns held by the UR.

## **4. LOOPED SERVICES**

- 4.1 NIE Networks has a legacy system of looped services, where the main electricity connection to one property is provided by a 'looped' connection from an adjacent property normally through common walls between semi-detached homes. These systems are not compliant with the Electricity, Safety, Quality and Continuity Regulations ("**ESQCR**") for NI, which came into effect on 31 December 2012. Safety and network risk considerations therefore require that looped services are removed from the network.
- 4.2 During RP6, NIE Networks removed 1,000 looped services equating to approximately 10% of locations across NI. In the RP6 business plan, this process was put forward as a 15-year programme.
- 4.3 In RP7, NIE Networks plans to remove all looped services from the network due to safety concerns associated with customers connecting LCTs, although it is conscious of the challenges that will arise as a result. Whilst the company is committed to proactively removing looped assets in RP7, it is conscious that there will be a risk of disruptive work, particularly where looped services run under houses (and customers refuse to facilitate works). As such, there is a level of uncertainty around the ability to proactively deliver all unlooping works, which means that an ex-ante allowance, alone, is inadequate.

<sup>16</sup> DD, Annex S, 4.29.

- 4.4 Instead for RP7 NIE Networks has requested an ex-ante allowance coupled with an uncertainty mechanism to enable the proactive removal of looped services. In particular, NIE Networks has requested:
- An ex-ante allowance of £4.8 million for the removal of looped services (which represents what the company considers is the absolute minimum to adopt a reactive approach to the removal of looped services based on demand growth); and
  - a volume driven uncertainty mechanism to enable the removal from the network of all other looped services (i.e., looped services not covered by the ex-ante allowance).

- 4.5 As this programme is more extensive than the programme in RP6, it targets a wider range of properties and scenarios (including scenarios that are particularly difficult to resolve). NIE Networks considers that there is unit cost uncertainty. To mitigate this, NIE Networks has proposed a mid-point review where the unit cost is reviewed based on the outturn unit cost position during the first half of the RP7 period. This will allow NIE Networks to revise the unit cost should it turn out to be too low or too high.

#### **The UR's provisional decision**

- 4.6 The UR disagrees that unit rates should be subject to a mid-point review on the basis that this would lessen the incentive for NIE Networks to control and reveal lower costs which would benefit customers in the future.
- 4.7 The UR agrees with the volume driven reopener coming into effect when NIE has efficiently expended its ex-ante allowance. However this is subject to NIE Networks presenting a written submission laying out the case for further funding and in the meantime proceeding with additional works at its own risk until such time as it receives approval from UR.

#### **Concerns with the UR's provisional decision**

- 4.8 NIE Networks welcomes the UR's approval of the volume driven reopener mechanism. However, NIE Networks has two principal concerns with the UR's provisional decision:
- first, in deciding not to approve a mid-point review, the UR has not taken into account the fact that a lower unit cost could be implemented for the second half of RP7; and
  - second, the current timing of the written submission would disincentivise NIE Networks from carrying out additional works while it awaits the UR's approval.

#### The mid-point review

- 4.9 The UR's concern that a mid-point review of unit costs would lessen the incentive for NIE Networks to control and reveal lower costs ignores the fact that NIE Networks plans to remove almost all looped services in RP7. As such, there will be limited to no benefit to customers in future price controls if a lower cost is revealed in RP7.
- 4.10 A mid-point review will enable NIE Networks to account for the cost of removing looped services from a wide range of sites and scenarios in the first half of RP7, and

to determine whether the unit cost is too low or too high for the remainder of RP7. If the unit cost is too high, NIE Networks could respond by lowering the unit cost for the second half of RP7 and any savings could be passed on to customers. On the other hand, if the unit cost is too low, NIE Networks would have to raise the unit cost for the second half of RP7 in order to avoid financial exposure and to continue the removal of looped services.

#### The written submission

- 4.11 The requirement to submit a written submission to the UR for further funding above the ex-ante allowance would result in a period (between the expiration of the ex-ante allowance and the volume driver coming into effect) where there is no allowance in place for the removal of looped services. In this period, there would be low certainty surrounding the outcome and timing of the UR's approval, the design of the volume driver mechanism and the timescale for implementation, meaning that NIE Networks would be disincentivised from proceeding with additional works. That is inconsistent with NIE Networks' proposal to proactively remove looped services in order to ensure the safety of the network and customers. As explained above and in NIE Network's business plan, the proactive removal of looped services is necessary to ensure the safety of the network and the public.

#### **Conclusion**

#### The mid-point review

- 4.12 NIE Networks requests that in the Final Determination the UR provides for a mid-point review of unit costs.<sup>17</sup>
- 4.13 The absence of a mid-point review may result in financial exposure for customers or NIE Networks during RP7, as it may become apparent in RP7 that planned unit costs are either too high or too low,<sup>18</sup> and in the absence of a mid-point review, NIE Networks will not be in a position to correct for this. If it materialises that unit costs are too low, NIE Networks will be disincentivised from carrying out additional works, which is inconsistent with NIE Networks' proposal to proactively remove looped services in order to ensure the safety of the network and customers.

#### The written submission

- 4.14 NIE Networks is willing to present a written submission to the UR, but it proposes that the deadline for the submission should be a specified number of months (to be determined by the UR) before the expiry of the ex-ante funding. In its submission, NIE Networks can notify the UR of the likely date on which the ex-ante funding will expire, and the UR's decision should be made prior to that date.

### **5. NET ZERO**

- 5.1 The path to net zero has the potential to present myriad opportunities and challenges for the energy sector. In order to be able to play its part in achieving net zero, NIE

<sup>17</sup> See also Section 3 of Chapter 4, where NIE Networks requests that the UR reviews the unit cost uplifts included in the RP7 Business Plan.

<sup>18</sup> This may arise from changes to the scope of works as well as changes to underlying costs.



Networks needs to be able to adapt to these developments during the price control period.

- 5.2 Given the potentially very broad scope of activities that this could entail, there is no guarantee that any specific uncertainty mechanisms will be able to address this need. Accordingly, in its RP7 Business Plan, NIE Networks proposed a general net zero reopener mechanism to be available throughout RP7, and that both the company and the UR should have the ability to trigger this mechanism.

#### **The UR's provisional decision**

- 5.3 The UR has provisionally decided to adopt a reopener for net zero, in order to ensure that the price control can adapt to major changes to the delivery of net zero without the need for further licence modification or a delay to the next price control.<sup>19</sup>
- 5.4 In reaching this provisional decision, the UR has recognised the potential for net zero policy to change at a faster pace than the six-year price control cycle and the need to be able to address changes within the price control period.<sup>20</sup> The DD also acknowledges the potentially wide scope of changes that could be relevant for this purpose, including government policy, the role of NIE Networks, and market developments.<sup>21</sup>
- 5.5 The UR has proposed a re-opener mechanism that would address changes connected to the achievement of net zero carbon targets not otherwise captured by other RP7 mechanisms, again having regard to the broad scope of changes that may ultimately be relevant to this reopener.<sup>22</sup> The UR does not expect it to be used to address changes falling within the scope of other mechanisms.<sup>23</sup>
- 5.6 The UR has provisionally decided that only the UR should have the ability to trigger the net zero reopener, and that the reopener should be subject to a materiality threshold of 0.5% of revenue.<sup>24</sup> It argues that this is necessary in order to:

*"ensure that the re-opener is only used where UR is satisfied that there is a sufficient level of certainty over the change in question and its impact".<sup>25</sup>*

#### **Concerns with the UR's provisional decision**

- 5.7 NIE Networks welcomes the UR's provisional decision to adopt a net zero reopener. It is essential that NIE Networks is able to adapt to potential major changes that may be necessary in pursuit of the net zero objective, and if implemented correctly the reopener can be a vital tool in promoting this objective.

#### The proposed materiality threshold is too high

- 5.8 The UR has proposed a materiality threshold for the net zero reopener set at 0.5% of revenue – i.e., the reopener would be available only if the relevant development

<sup>19</sup> DD, Annex S, 4.63.

<sup>20</sup> DD, Annex S, 4.64.

<sup>21</sup> DD, Annex S, 4.65.

<sup>22</sup> DD, Annex S, 4.66 and 4.68.

<sup>23</sup> DD, Annex S, 4.68.

<sup>24</sup> DD, Annex S, 4.67 and 4.69.

<sup>25</sup> DD, Annex S, 4.67.

would require a change to allowances which, if multiplied by the cost risk sharing rate of 50%, would exceed 0.5% of annual average base revenues.<sup>26</sup>

5.9 The UR states that:

*"We consider that a materiality threshold of 0.5% of revenue is reasonable for any one instance, calculated on the basis of combined transmission and distribution revenues."<sup>27</sup>*

5.10 NIE Networks disagrees with this position, for the reasons set out below.

5.11 First, the inclusion of a materiality threshold implies a significant financial exposure to NIE Networks, whereby the company may be required to invest to facilitate net zero initiatives outside the scope of other RP7 allowances with no option of cost recovery<sup>28</sup> up to the materiality threshold. NIE Networks is committed to taking a leadership role in NI's journey to net zero and so is prepared to accept a level of financial exposure, where appropriate, in order to minimise the regulatory burden associated with a disproportionate number of reopeners. This exposure, however, must be set at a reasonable level, which the proposed threshold does not do. The reasons for this are set out below, together with what NIE Networks believes would be a more reasonable approach.

5.12 As set out in the UR's worked example, taking the annual average base revenue that would be allowed under the DD for transmission and distribution combined (£366.7 million), the materiality threshold would be £1.824 million. After applying the cost risk sharing rate, this means that the forecast expenditure for any one project would need to exceed c.£3.67 million in order to meet the materiality threshold. This is unreasonable. In particular, there will be only a limited number of distribution projects of sufficient scale to trigger the reopener at this level.

5.13 This may be illustrated by looking at the costs of NIE Network's proposed RP7 primary network reinforcement jobs (which are typically the most expensive individual distribution projects):<sup>29</sup> only 2 of the 32 distribution reinforcement projects proposed in RP7 would exceed this materiality threshold.

5.14 Therefore, it is unlikely that any individual projects brought forward would be of sufficient scale to trigger the reopener. For example, if a need were established for the reinforcement of a strategic part of the network to facilitate the connection of EV charging infrastructure (e.g. following recommendations by the EV task force or a Government Department) it is unlikely that this would meet the materiality threshold.

5.15 This is particularly pertinent when consideration is given to any potential schemes or initiatives driven at local council level. The scope of such schemes or initiatives

<sup>26</sup> DD, Annex S, 4.69 and footnote 9.

<sup>27</sup> Ibid.

<sup>28</sup> Other than the 50:50 mechanism, which only allows recovery of half of such costs.

<sup>29</sup> This is due to these projects relating to the highest distribution voltage level. Note that although the DD provides for a primary network reinforcement uncertainty mechanism, determined through monitoring and forecasting functionality, the net zero reopener deals with much more strategic investment and hence the two mechanisms should not be conflated. The distribution projects have been used to provide an example of the types of work that could be triggered by the net zero reopener.

will not be widespread but rather limited to the local area and as such are even less likely to reach the materiality threshold.

- 5.16 Moreover, we consider that such a high materiality threshold creates a perverse incentive for scope creep within third party net zero proposals. Whereas a tightly-drawn proposal, for which costs are kept to a minimum, might fall under the threshold to trigger the reopener, a more broadly defined (and therefore more expensive) projects might be more likely to reach the threshold. Reaching the threshold and triggering the reopener would potentially result in NIE Networks receiving allowances for the whole of the project (rather than only 50% as available under the 50:50 mechanism) reducing the financial burden on NIE Networks and thereby removing an obstacle to commencing the project. Thus, a third party is incentivised to ensure that the total cost for its project exceeds the materiality threshold in order to increase the likelihood of it going ahead.
- 5.17 As with the primary network reopener, comparison may be drawn with the materiality threshold for the CoL uncertainty mechanism, which the UR has proposed be set at £125,000. Notwithstanding that there are differences in the nature of the changes that would fall within the scope of these two uncertainty mechanisms, both the CoL and net zero reopeners would address risks arising from uncertainty as to the developments that might take place within the price control period and their likely impact on the company. In that context it is difficult to understand such a profound difference in the materiality thresholds that would apply to each of them.
- 5.18 Without a more suitable threshold it is likely that supporting the transition to net zero would require NIE Networks to take on an unacceptably high degree of financial risk. By way of illustration, over the course of a six-year price control the company's exposure could be approximately £11 million.<sup>30</sup>
- 5.19 Moreover, this £11 million figure assumes that the total cost of relevant projects is no more than the UR's proposed threshold. The mechanism as proposed by the UR, however, would apply the threshold to each individual project,<sup>31</sup> meaning that the reopener would not be triggered even if the aggregate cost of multiple smaller projects far exceeded the 0.5% threshold. That being so, the potential exposure for NIE Networks is potentially unlimited and certainly well above the £11 million figure.
- 5.20 In view of the above, the materiality threshold should be significantly reduced. An appropriate threshold would be £0.8 million. This figure aligns with the median expenditure associated with our 33kV primary forward power flow projects (£0.854 million), which is also the forecast cost to upgrade a dual transformer substation. Work of this nature is likely to be required in any project that might appropriately be the subject of a net zero reopener. On this basis, the company's aggregate exposure over the six-year period would be up to £2.4 million.<sup>32</sup> Thus, this approach is not without risk to NIE Networks, but this risk is at a more reasonable level that

<sup>30</sup> £3.67m x 6 years x 50:50 mechanism = £11.01m.

<sup>31</sup> DD, Annex S, 4.69.

<sup>32</sup> £0.8m x 6 years x 50:50 mechanism = £2.4m. Again, this assumes that the materiality threshold is applied on an aggregate basis. The potential figure would be much higher if the threshold is applied to individual investments.

the company can accept in order to help facilitate NI's journey to net zero without the need for a disproportionate level of reopener mechanisms.

- 5.21 Importantly, the reopener should also be available on the basis of aggregate costs – i.e., where the costs of individual projects would, if taken in aggregate, exceed the materiality threshold. This would avoid the scenario where multiple smaller projects are progressed by NIE Networks in good faith and on aggregate amount to significant annual financial exposure to the company with no option of cost recovery (which could potentially significantly exceed the £11 million figure set out above).
- 5.22 NIE Networks would welcome further engagement with the UR as to the precise figure that would be appropriate for the materiality threshold.

Both the UR and NIE Networks should have the ability to trigger the reopener

- 5.23 The UR has provisionally decided that it should have the sole ability to trigger the net zero reopener, in order to "ensure that the re-opener is only used where UR is satisfied that there is a sufficient level of certainty over the change in question and its impact".<sup>33</sup>
- 5.24 It would be more appropriate for both NIE Networks and the UR to have the ability to trigger the net zero reopener:
- NIE Networks engages extensively with Government, Ministerial Departments, Local Council, Developers, and other stakeholders, and has the ability to forecast the expenditure required to deliver electricity network requirements.
  - These factors mean the company is well-positioned to determine whether any given circumstances might fall within the scope of the reopener.
  - Moreover, a re-opener mechanism which can be triggered by either NIE Networks or the UR will help ensure that important net zero investments above and beyond the scope of other allowances, and linked to NI's legislative targets, are not missed or unduly delayed.

- 5.25 Any concerns that the ability of NIE Networks to trigger this reopener will result in an excessive number of reopener applications would be alleviated through the inclusion of the materiality threshold, preventing many smaller and more speculative projects from triggering reopener mechanisms. In any event, the triggering of a reopener would not necessarily result in the awarding of allowances: the UR will retain its ability to determine the appropriate allowance in accordance with the terms of the reopener.

**Conclusion**

- 5.26 NIE Networks agrees with the UR's provisional decision to include a reopener for net zero. But in order for this reopener to be effective it must have a more reasonable materiality threshold – we consider this should be no higher than £0.8 million.

<sup>33</sup> DD, Annex S, 4.67.

5.27 Moreover, the reopener must take account of NIE Networks' key role within the sector by allowing the company to trigger the reopener.

## 6. ENVIRONMENTAL ACTION PLAN

6.1 In connection with its Environmental Action Plan (EAP), NIE Networks proposed an environmental and sustainability reopener mechanism.

6.2 The purpose of this mechanism is to address changes to its RP7 price control that might be required to reflect changing legislation and/or the expectations of stakeholders that would not be addressed by existing CoL provisions in NIE Networks' transmission and distribution licences. This is particularly important for RP7, given the political and stakeholder interest in this area that is likely to put pressure on NIE Networks to pursue initiatives going beyond its strict legal obligations. The reopener would be capable of being triggered by either NIE Networks or the UR.

6.3 In its DD, the UR provisionally rejected NIE Networks' proposal, thereby depriving itself of the ability to facilitate future initiatives that might otherwise have contributed to progress on environmental and sustainability solutions, in accordance with the UR's duties.

6.4 NIE Networks considers that, to the extent that the UR has concerns with the specific terms of this reopener, they would be better addressed by tailoring the reopener to address those concerns, rather than by simply omitting it and thereby limiting the scope for progress in an area that is important to a range of stakeholders.

### The UR's approach

6.5 In the Draft Determination, the UR acknowledged that Ofgem has provided for an environmental re-opener in its RIIO-ED2 Final Determination<sup>34</sup> but indicates that it considers the existing CoL provisions in NIE Networks' transmission and distribution licences adequate to address any change in costs as a result of legislative changes.<sup>35</sup>

6.6 The UR interpreted NIE Networks' proposed reopener as being intended to address "*optional environmental and/or sustainability issues over and above that required in legislation*".<sup>36</sup> It indicated that:

- it is "*concerned that the mechanism proposed by the company is wide ranging and unlimited*";
- it considers that this "*risks undermining the general principle of setting ex-ante allowances (largely based on historical costs), and allowing the company to manage all the work it considers necessary within those cost allowances, including work it might want to undertake under the broad heading of social and corporate responsibility*";<sup>37</sup>

<sup>34</sup> DD, Annex S, 4.72.

<sup>35</sup> DD, Annex S, 4.73 and 4.78.

<sup>36</sup> DD, Annex S, 4.74.

<sup>37</sup> DD, Annex S, 4.75.

- it is concerned that any additional, discretionary expenditure allowed to NIE Networks under a reopener would be passed on to customers and that this would put pressure on household and business finances;<sup>38</sup> and
- it considers that NIE Networks already has scope to undertake discretionary activities related to the environment and to pass through 50% of the efficient costs of doing so.<sup>39</sup>

6.7 On this basis the UR indicated that it will not include a reopener mechanism in respect of environmental and sustainability costs.

### **Concerns with the UR's approach**

6.8 The CoL uncertainty mechanism does allow for potential cost recovery for some costs arising from a change of law. However, it does not provide the opportunity for additional cost recovery during the period if stakeholders believe that NIE Networks should be progressing environmental and sustainability initiatives that go further than the minimum set out in legislation or in the absence of legislation. By omitting this mechanism, the UR would:

- deprive itself of the ability to pursue its duties in relation to the environment by means of allowing funding for relevant initiatives; and
- undermine NIE Network's ability and incentive to pursue environmental and sustainability goals.

### The UR's statutory duties in respect of the environment

6.9 The UR's secondary duties include the following:

*"To have regard to the effect on the environment of activities connected with the generation, transmission, distribution or supply of electricity"; and*

*"To secure a diverse, viable and environmentally sustainable long-term energy supply."*

6.10 Additional environmental and sustainability funding may be required during the RP7 price control period in order to provide for initiatives that are consistent with the UR's duties. While these statutory duties are not specific about the manner in which it might be achieved, failing to make provision for a suitable reopener mechanism does not appear consistent with these statutory duties.

### NIE Networks' ability and incentive to pursue environmental and sustainability goals

6.11 NIE Networks disagrees with the UR's provisional decision to decline to introduce a reopener for the following reasons:

- NIE Network's RP7 Business Plan was predicated on the inclusion of the environmental reopener, and therefore on the prospect of being able to add cost recovery for additional initiatives at an appropriate stage during the control period. If no reopener is provided for, and therefore NIE Networks does not have the opportunity to recover costs for such further

<sup>38</sup> DD, Annex S, 4.76.

<sup>39</sup> DD, Annex S, 4.77.

environmental and sustainability activities during the period, this could necessitate a revisiting of the RP7 Business Plan to ensure that potential initiatives are funded through the price control. This might mean, for example, requesting specific ex-ante allowances for less certain environmental and sustainability initiatives as part of the initial price control, whereas a reopener would enable those initiatives to be funded only once they become more certain.

- NIE Networks believes that stakeholder sentiment is supportive of NIE Networks taking a leadership role in the journey to net zero. This is evidenced in feedback received by NIE Networks during its RP7 stakeholder engagement. For example, the Consumer Council has said that: *“This ambition, if appropriately costed, aligns with consumers’ desire for industry to demonstrate leadership in the journey to net zero.”*
- NIE Networks will continue to test stakeholder sentiment throughout the RP7 period, and it is anticipated that if an Evaluative Performance Framework incentive is introduced<sup>40</sup> then this will support the testing of sentiment for this purpose. In any event, the stakeholder engagement received as part of the RP7 process suggests that it is likely that stakeholders will expect NIE Networks to continue to take a leadership role throughout the control period. NIE Networks believes that such a leadership role requires that it goes beyond the baseline statutory requirements that apply from time-to-time. Doing so requires that NIE Networks and the regulatory framework within which it operates are flexible and adaptable enough to respond to stakeholder requirements, including as regards funding for relevant initiatives.
- If, during the RP7 price control period, stakeholders believe that additional environmental and sustainability initiatives should be progressed that extend beyond the minimum required in law (such that the CoL mechanism would not apply), there is currently no mechanism by which NIE Networks could seek to recover the whole costs of such projects. Whilst this does not prevent NIE Networks from progressing such initiatives, it creates a clear disincentive for NIE Networks to invest in these initiatives as it would only receive 50% cost recovery (through the 50:50 mechanism).
- Due to recent disruption in the political arrangements in NI, specifically the 22-month period in which there was no sitting Executive, it could be argued that environmental policy and legislation has been delayed and is behind that of neighbouring jurisdictions. With the Executive having reformed in February 2024, it is likely that development of policy towards environmental and sustainability matters will resume. Nonetheless, given that the Executive has not been active for 22 months, it is likely that any relevant legislation will be delayed, such that stakeholders may expect NIE Networks to adopt new initiatives or adapt existing ones ahead of

<sup>40</sup> See NIE Networks, RP7 BusinessPlan, 2.33, and 10.15-10.16.

legislative requirements, in keeping with its leadership role. This would require the availability of a reopener.

- 6.12 As regards the UR's distinction between legal requirements and optional / discretionary initiatives, the absence of a legal requirement to undertake an initiative should not preclude the possibility of obtaining funding for initiatives going beyond such requirements where such initiatives are within the scope of NIE Networks' role and activities as the network owner/operator and pursue objectives that are consistent the interests of stakeholders and support the delivery of RP7 work.
- 6.13 NIE Networks considers that initiatives that seek to address matters such as the climate emergency and biodiversity loss are consistent with the interests of stakeholders and the UR's statutory duties, and it would be in their interests to include a reopener for this purpose. Insofar as the UR considers the mechanism proposed by NIE Networks is too "wide ranging and unlimited" in scope, the appropriate solution would be to define a narrower provision which the UR is comfortable is aligned with its statutory duties.
- 6.14 With respect to customer cost pressures, NIE Networks emphasises that the availability of a reopener in no way obliges the UR to approve future allowances. Any submission made to the UR as part of the reopener mechanism will need to be fully justified, including outlining customer appetite to fund any additional schemes. Moreover, it is important to note that sustainability makes good economic sense. For example, the UN's Global Commission on Adaptation reports<sup>41</sup> that every \$1 spent on Climate Adaptation will save \$4 in the long term across five key areas, one of which is making new infrastructure resilient.

### **Conclusion**

- 6.15 For the reasons set out above, NIE Networks submits that the inclusion of a reopener for environmental and sustainability initiatives would be consistent with the UR's statutory duties. In contrast, failure to include a reopener risks seriously limiting the scope for such initiatives irrespective of their importance, even in circumstances where there is support for such initiatives from bodies such as the NI Assembly and other stakeholders.
- 6.16 To the extent that the UR has concerns with respect to the scope of such a reopener, these should be addressed in the framing of the provision, rather than by making no provision altogether.

## **7. CREOSOTE POLES**

- 7.1 In its RP7 Business Plan, NIE Networks noted that it was highly likely that during the RP7 period, legislation will enter into force that will prohibit the installation of new creosote impregnated poles in NI due to environmental concerns.
- 7.2 The company has been heavily engaged in Energy Network Association working groups considering this issue and significant uncertainty exists regarding the

<sup>41</sup> United Nations Global Commission on Adaption, 'Adapt Now: A Global Call for Leadership on Climate Change', September 2019, ([https://files.wri.org/s3fs-public/uploads/GlobalCommission\\_Report\\_FINAL.pdf](https://files.wri.org/s3fs-public/uploads/GlobalCommission_Report_FINAL.pdf)).



optimum alternative to creosote poles. Should new legislation enter into force, the company considered that the CoL mechanism could be used to accommodate associated cost increases.

7.3 However, NIE Networks considered it prudent to include an additional reopener mechanism specific to the potential ban on creosote poles to reflect international supply chains potentially moving faster than NI legislation and the resultant price impact.

7.4 Recently implemented legislation also addresses how poles already installed on the network are to be disposed of and that will be the subject of a CoL process in RP6. However, these additional disposal costs are not yet fully reflected in the RP6 outturn unit rates and therefore a separate mechanism will be required to review the currently uncertain impact of these costs in the RP7 period. The company therefore proposed that this potential change is also included in the reopener mechanism proposed above.<sup>42</sup>

#### 7.5 **The UR's provisional decision**

7.6 The UR has rejected the company's proposed additional re-opener mechanism, in respect of creosote poles. The UR notes that:

*"The determination already makes provision for changes in future costs through the inflation adjustment and real price effects. These cover a wide range of risks and opportunities which might increase or reduce specific unit costs during the course of the price control. Identifying specific issues which might result in changes of market rates for individual materials, but which are not related to clearly defined and limited circumstances (such as change of law), undermines the underlying principle of a price control based on ex-ante allowances. It would be asymmetric in that it only focuses on costs which might increase. If it were implemented, it would be difficult to distinguish between changes in costs, which reflect how international supply chains potentially moving faster than Northern Ireland legislation, and other causes. In effect, it would make the costs of creosote poles a pass through, but only if they increase."<sup>43</sup>*

#### **Concerns with the UR's provisional decision**

7.7 NIE Networks is concerned that the UR's provisional determination indicates a lack of understanding of the uncertainty of future overhead line network design, which results from the ever-changing legislative framework regarding the use of creosote. It also indicates that the UR has failed to consider the substantial follow-on impact that this may have on NIE Networks' cost base.

7.8 NIE Networks considers that in light of the broad indices under the UR's proposed RPE allowance, and the volatility of international supply chains, there is a risk that the specific costs associated with potential legislative changes to the use of creosote

<sup>42</sup> NIE Networks, RP7 Business Plan, 'RP7 Uncertainty Mechanisms', p.11.

<sup>43</sup> DD, Annex S, 4.99.

poles will result in price increases in excess of those addressed by inflation adjustments and RPEs.

- 7.9 NIE Networks acknowledges that the changes in question relate specifically to creosote poles, and therefore, a single asset. However, the alternative to creosote impregnated poles ranges from copper treated poles to steel or composite poles. Each solution has a very different impact on the design, installation and maintenance processes for the overhead line network going forward and therefore significant variations in the potential future costs. NIE Networks are actively trialling alternatives to creosote. However, the international nature of the materials market means that NIE Networks may have to accept the solution that suppliers are seeing the most demand for. As a result, the company would have a limited influence on which materials may be available in future and indeed the timing of such availability. This drives NIE Networks' concerns that cost increases will be experienced in advance of the trigger for any CoL mechanism.
- 7.10 NIE Networks also considers that the UR's concern regarding the asymmetrical nature of the re-opener indicates its failure to take into account the current cost challenges facing the utilities market as a result of macro-economic circumstances and increasing global demand driven by decarbonisation targets. These issues, combined with the decreasing production of creosote poles (whilst utility companies actively trial alternatives to creosote), risk increasing the cost of creosote above the cost reflected in current outturn unit rates.
- 7.11 In consideration of the size of NIE Networks' RP7 overhead line programmes, the potential financial impact of cost increases above RPEs and inflation driven by the current uncertainty and future legislative changes could be excessive. Under the 50:50 cost sharing mechanism that applies for costs incurred above the proposed RPE allowance, such cost increases would represent an unreasonable financial burden on NIE Networks.

### **Conclusion**

- 7.12 For the reasons provided above, NIE Networks requests that in the Final Determination, the UR introduces NIE Networks' proposed reopener mechanism for creosote poles.
- 7.13 In the alternative, NIE Networks notes that at Chapter 4 of its Response, it has requested that in the Final Determination the UR introduces a unit cost midpoint reopener for the company's network investment plan. The proposed midpoint reopener would share the cost risk burden resulting from the unprecedented changes in the materials market. If the UR agrees to the proposed unit cost midpoint reopener, NIE Networks considers that a specific reopener mechanism for creosote poles may not be necessary.<sup>44</sup> However, this will ultimately depend on the available alternatives to creosote and the operational impact that the preferred alternative has on network design, installation, maintenance and disposal activities.

<sup>44</sup> NIE Networks, RP7 Response, Chapter 4, 3.37-3.40.

## 8. BUSINESS RATES

- 8.1 Rates are a tax on the occupation of property, which represent a hypothetical rental value of a property. Rates are set by Land and Property Services ("**LPS**"), a division within the Department of Finance.
- 8.2 The rates liability for NIE Networks is set by multiplying the Rateable Valuation ("**RV**") of NIE Networks' assets by both:
- the regional rate, which is set by the Northern Ireland Executive; and
  - the district rate, which is individually set by each of the eleven district councils in NI.
- 8.3 NIE Networks has no control over the regional rate or district rate (together, the "**poundage rates**"). The only element specific to NIE Networks is the RV. LPS set the RV for NIE Networks in accordance with their valuation rules and then apportion them over the eleven district councils.
- 8.4 NIE Networks can seek to influence the outcome of RV determination by proactively engaging with LPS when it conducts revaluations of the RV ("**Rate Revaluations**"). It has consistently done so, most recently for the 2023 Rate Revaluation but also for previous Rate Revaluations.
- 8.5 NIE Networks' rates liability amounted to circa £14.5 million for 2023/24. This equates to £87.1 million across the RP7 period.
- 8.6 NIE Networks' RP7 Business Plan proposed that rates be allowed as a pass through, subject to the company demonstrating that it has taken appropriate actions to minimise valuations. This is consistent with the approach in GB. In the alternative, NIE Networks proposed a mechanism which would allow output rates costs to be periodically trued up using an uncertainty mechanism, again subject to the company demonstrating that it has taken appropriate actions to minimise valuations.
- 8.7 These proposals were made on the basis that the rates liability is uncontrollable, given that both the RV and poundage rates are set by external bodies and are outside of NIE Networks' control.

### **The UR's provisional decision**

- 8.8 The UR has provisionally concluded that efficiently incurred rates will be treated as a pass-through expenditure subject to "*some level of check on the effectiveness of the company's challenge of RV*".<sup>45</sup>
- 8.9 The UR proposes to make the Licence condition for pass-through of rates subject to a test that:

*"NIE Networks has acted reasonably when challenging revaluations and maintaining good records and challenging rates bills. This would include the ability of UR to allow a lower amount than that actually paid if it considers it appropriate, subject to the condition that it explains its reasons for any*

<sup>45</sup> DD, Annex S, 4.234.

*adjustment and allows NIE Networks to make representations in advance of making a final decision."*<sup>46</sup> (emphasis added)

### **Concerns with the UR's provisional decision**

#### Clarification of engagement expectations

- 8.10 NIE Networks welcomes the UR's proposal to allow rates as a pass-through item in RP7. However, NIE Networks is concerned that the UR has not been clear on how it proposes to implement the proposed condition that NIE Networks has effectively challenged the LPS on the RV.
- 8.11 NIE Networks sought clarification from the UR as to how NIE Networks should evidence that it has acted reasonably when (a) challenging revaluations, (b) maintaining good records and (c) challenging rates bills ("**Engagement Expectations**").<sup>47</sup>
- 8.12 In response to NIE Network's query, UR provided the following:
- " (a) provide evidence that NIE Networks has engaged effectively with LPS in advance of each revaluation point including provision of calculations and inputs for deriving rateable value (b) provide copy [sp.] of LPS invoices annually (c) copies of any correspondence with LPS in relation to rateable value. UR are content to discuss this further with NIE Networks."*<sup>48</sup>
- 8.13 NIE Networks notes that the most recent 2023 revaluation has been set for the three years until March 2026. Therefore, the company will shortly be commencing engagement with LPS for the 2026 revaluation (which will run from 1 April 2026 to 31 March 2029). NIE Networks would therefore welcome constructive discussions with the UR as soon as possible in order to agree the scope of the evidence requirements to ensure that the company is in a position to meet the Engagement Expectations for RP7.

#### Linking pass-through of a lower amount to NIE Networks' engagement with LPS

- 8.14 As noted above, the UR proposes to incorporate into NIE Network's licence conditions a power for the UR to pass-through an amount lower than that actually paid by NIE Network in respect of business rates if the UR considers it "appropriate".
- 8.15 This proposal indicates that the UR is minded adopt a similar approach to that adopted by Ofgem for the pass-through of business rate costs by GB DNOs.
- 8.16 The following provisions are included in the RIIO-ED2 special licence conditions of each GB DNO:<sup>49</sup>

*6.1.4 As part of any periodic revaluation, the licensee must:*

*(a) engage with the Relevant Valuation Agency; and*

<sup>46</sup> DD, Annex S, 4.236(d).

<sup>47</sup> RP7 Draft Determination Query Log, Query NIEN-021, query submitted by [REDACTED] (NIE Networks) on 8 December 2023.

<sup>48</sup> RP7 Draft Determination Query Log, Query NIEN-021, response submitted by [REDACTED] (UR) on 15 December 2023.

<sup>49</sup> RIIO-ED2, Special Licence Conditions. The conditions referred to (SpC. 6.1.4-6.1.7) are consistent across the RIIO-ED2 Special Licence Conditions for each of the 14 GB DNOs.

- (b) *use reasonable endeavours to minimise the amount of the Prescribed Rates to which it is liable.*
- 6.1.5 *The Authority may review the licensee's engagement with the Relevant Valuation Agency with respect to a revaluation.*
- 6.1.6 *If, after reviewing the licensee's engagement with the Relevant Valuation Agency and requesting any further information required from the licensee with respect to a particular revaluation, the Authority considers that the licensee has not complied with paragraph 6.1.4, the Authority may adjust the value of Rbt by direction.*
- 6.1.7 *Before making a direction under paragraph 6.1.6 the Authority must publish on the Authority's Website:*
- (a) *the text of the proposed direction;*
- (b) *the reasons for the proposed direction; and*
- (c) *a period during which representations may be made on the proposed direction, which must not be less than 28 days."*
- 8.17 Under the GB DNO special licence conditions, the pass-through mechanism for business rates creates a clear link between the DNO's engagement obligations with the relevant valuation agency and Ofgem's ability to adjust the value of the pass-through, should the DNO not comply with such obligations. Moreover, the pass-through mechanism incorporates clear limitations on Ofgem's ability to adjust the value of the pass-through, proposed adjustments must be supported by reasons (which must be made public) and a certain period for making representations is provided.
- 8.18 NIE Networks welcomes the UR's proposal that the UR provide reasons for any adjustment to the pass-through value and allow NIE Networks to make representations in advance of making a final decision. However, NIE Networks considers that the UR has not provided a clear link between the company's Engagement Expectations and the UR's ability to allow a lower amount of pass-through than that actually paid by the company.
- 8.19 An unconditional right for the UR to lower the pass-through value where it deems it "appropriate" (regardless of the company's compliance with the Engagement Expectations) would add unnecessary uncertainty into the mechanism. It would also extend the UR's right to disallow pass-through costs beyond the rights held by Ofgem's rights to disallow comparable pass-through costs for GB DNOs.

### **Conclusion**

- 8.20 NIE Networks welcomes the UR's proposal to allow rates as a pass-through cost. However, any modification to the company's Licence conditions to incorporate a mechanism that permits the UR to pass through an amount lower than the business rates costs actually incurred by NIE Network should provide a clear link to NIE Network's compliance with the Engagement Expectations.

- 8.21 One means of doing so would be for the UR to align the drafting of the Licence modification more closely with the equivalent licence conditions of the GB DNOs.

## 9. **NON-RECOVERABLE ALTERATIONS**

- 9.1 From time-to-time NIE Networks carries out alterations to network assets located on customers' land, for example by raising or re-routing overhead lines so as to remove an impediment to bona fide development. In certain circumstances<sup>50</sup>, customers cannot be charged for such alterations. These are referred to as "**Non-Recoverable Alterations**" ("**NRAs**").
- 9.2 NRA expenditure has the potential to be very variable, as it is driven by customer behaviour (for example, the volume of land developments necessitating the movement of overhead lines) and the specific scope of required works in each case, over which NIE Networks has little control.
- 9.3 For RP7, NIE Networks is proposing an improvement to its policy for NRA works. Up to now, where a proposed route for power lines would take them over any premises, this has been addressed by raising the height of the lines to achieve clearance. For RP7, NIE Networks proposes to move away from this approach and instead adopt a policy of seeking to re-route overhead lines so that they do not pass over properties.<sup>51</sup> Although highly uncertain, NIE Networks estimates that this change in policy will increase NRA costs by approximately £5.4 million over the course of the price control period.

### **NIE Networks' proposed uncertainty mechanism**

- 9.4 In view of the dependency of NRA costs on customer behaviour and customer-specific scopes of work, and the change in costs likely to arise from the change in policy regarding alterations to line routes, NIE Networks proposed in its RP7 business plan that NRA costs should be subject to a pass-through mechanism.
- 9.5 This approach would ensure, in particular, that NIE Networks is able to recover the costs of its proposed change in policy as regards alterations to lines, and that it is appropriately protected against unexpectedly high activity or if the cost of works is significantly higher for other reasons.
- 9.6 From the customer perspective, the pass-through approach would ensure that customers are protected if activity or costs are lower than anticipated, while also ensuring that NIE Networks is able to fund this change in policy on line alterations, which NIE Networks considers to be preferable technically.

### **The UR's approach**

- 9.7 Despite agreeing that the volume and scope of NRA work are influenced by factors outside of NIE Networks' control, in its provisional determination the UR states that:

<sup>50</sup> Namely, where the alteration is in accordance with Conditions 12 and 13 of an established Wayleave Agreement or where a notice to remove equipment is enforced. This might occur, for example, where electricity infrastructure is impeding a bona fide development.

<sup>51</sup> This option is currently made available to customers seeking a connection, but on the basis that the increased cost compared with raising the line will be covered by the customer.

- NIE Networks is responsible for managing and controlling the costs of the required work;
- applying a pass-through mechanism to this expenditure would reduce NIE Networks' incentive to minimise the costs passed through to consumers;<sup>52</sup>
- while outturn costs of NRAs will be dependent on the level of future activity, that is true for all allowances.<sup>53</sup>

9.8 In support of its position, the UR draws comparison with the lump sum allowance and actual outturn costs in RP6, noting that the annual average allowance for RP6 was £2,750k, whereas the RP6 outturn was £2,885k to March 2023 (a difference of 4.9%). The UR acknowledges that this meant that NIE Networks under-recovered by £67.5k each year.<sup>54</sup>

9.9 The UR ultimately relies on the availability of the 50:50 cost sharing mechanism and what it perceives to be a "low variance" between the allowance and the outturn in RP6 as a basis for rejecting NIE Networks' proposal for a pass-through mechanism.<sup>55</sup>

#### **Concerns with the UR's provisional decision**

9.10 NIE Networks has two principal concerns with the UR's provisional decision:

- The UR has proposed no allowance to reflect the additional cost associated with the change of policy in respect of NRAs;
- The UR is in error to equate future activity driven by asset condition with future activity driven by customer action: NIE Networks can be expected to rely on forecasts of asset condition but forecasts of customer action are far less certain.

9.11 These concerns are addressed in turn below.

#### *No allowance to reflect change in NRA policy*

9.12 In order for NIE Networks to be able to adopt the new policy, the price control needs to enable it to recover the full additional cost of doing so. The UR's provisional decision includes an allowance for NRAs that is based on the RP6 outturn costs. In doing so the UR has not adequately considered the cost implications of the proposed change in policy associated with the diversion of overhead lines, as these costs are not reflected in the NRA RP6 outturn position. Instead, under the approach set out in the DD NIE Networks would be limited to using the 50:50 cost sharing mechanism to recover this potentially significant part of its costs for NRA activities.

9.13 For the reasons given previously, the likely additional cost in this area is highly uncertain but NIE Networks estimates that this could be in the region of £5.4 million above the proposed allowance, implying a shortfall of £2.7 million under the 50:50 mechanism. This would create a significant disincentive against NIE Networks

<sup>52</sup> DD, Annex S, 4.106.

<sup>53</sup> DD, Annex S, 4.108.

<sup>54</sup> DD, Annex S, 4.107.

<sup>55</sup> DD, Annex S, 4.110.

investing in the proposed change of policy in this area, potentially impacting on NIE Networks' ability to implement the new policy.

*Asset condition vs. customer action*

- 9.14 The UR has recognised that the volume and scope of NRA work is influenced by factors outside of NIE Networks' control. It fails to distinguish, however, between those factors which NIE Networks might be expected to forecast and model based on the information available to it, and other factors which are less susceptible to such analysis, such as where events are primarily driven by third party activity. Whereas NIE Networks may be expected to manage the costs of the former, it cannot do so for the latter.
- 9.15 The UR states that whilst the level of out-turn costs of non-recoverable alterations will be dependent on the level of future activity this is true for all allowances. NIE Networks understands this reference to "future activity" to be a reference to customer action and, that being so, this statement is incorrect. The cost of investment associated with maintaining a safe, reliable and resilient network (i.e. for which allowances are provided) is largely not driven by customer activity but rather determined based on the condition of the network. For those costs, NIE Networks can use condition information and modelling to forecast the levels of asset replacement required over the entire price control period and as such there is limited need for uncertainty mechanisms.
- 9.16 In contrast, where investment is more clearly dependent on third party activity (including that of customers) the UR in its DD has proposed various uncertainty mechanisms to help manage the financial uncertainty arising from such dependencies. An example of this is in the treatment of investment linked to facilitating net zero, for which uncertainty mechanisms are proposed to address this dependency on customer activity.
- 9.17 It follows that where investment is linked to customer activity the UR has generally provided an uncertainty mechanism, and where investment is not linked to customer activity the UR has generally not provided an uncertainty mechanism. In this case the UR has recognised that NRA costs are driven by customer activity but has not provided for an uncertainty mechanism. This is inconsistent with the UR's general approach.

**Conclusion**

- 9.18 For the reasons given above, NIE Networks reiterates its view that NRA costs should be funded through a pass-through mechanism. Such a mechanism is the right tool to address the uncertainty and likely increase in overall costs stemming from NIE Networks' proposed change of policy in respect of alterations, as well as the general dependency of NRA costs on customer activity.
- 9.19 If contrary to our view, the UR is not minded to adopt a pass-through mechanism, it should instead adjust the ex-ante allowance to cover in full the forecast NRA costs including costs associated with the change in policy on line routes. This must be made subject to a mid-period reopener at which outturn costs would be assessed



(both as regards volumes and unit costs) and a determination made in respect of the remainder of the price control period.

- 9.20 This is a very important investment area for NIE Networks, and NIE Networks would accordingly welcome further engagement with the UR on this topic.

## 10. CAPEX ASSET REPLACEMENT

- 10.1 In its RP7 Business Plan, NIE Networks noted the inevitability that its asset replacement priorities will change over the RP7 price control period. For example, a new investment stream may be required as a result of asset type failures not originally included in NIE Networks' plan or a higher volume of replacement than predicted may be required.
- 10.2 The company proposed the removal of the current 20% cap on the value of outputs which can be substituted out of a single allowance, on the basis that it exacerbates the company's already limited ability to re-prioritise its replacement plans as a result of short time periods for deferring the replacement and refurbishment of assets.
- 10.3 NIE Networks also noted that the ability to substitute only in areas of investment with already identified outputs greatly restricts its ability to react to circumstances which were not foreseeable as part of its long-term investment planning. For example, the funding position for the company's investment in necessary noise enclosure installations at Kells Main remains unclear under the RP6 price control rules.
- 10.4 The company welcomed further discussions with UR regarding a change to the specified outputs rule within the substitution mechanism that provides greater flexibility for investment but which continues to protect customers from inefficient investment.<sup>56</sup>

### The UR's provisional decision

- 10.5 In its DD, the UR has rejected NIE Networks' requests for greater flexibility under the substitution mechanism. The UR considers that:

*"to date, NIE Networks has not brought to our attention any substantive changes under the existing substitution mechanism".<sup>57</sup>*

- 10.6 Ultimately, the UR does:

*"not consider that the evidence presented to us was a strong enough case to amend the current arrangements".<sup>58</sup>*

### Concerns with the UR's provisional decision

- 10.7 NIE Networks considers that the UR has failed to engage with NIE Networks' wider concerns regarding the uncertainty caused by necessary changes to asset replacement priorities over the price control period.
- 10.8 The UR notes that the overall price control framework, including ex-ante allowances, cost risk sharing and deferral mechanisms:

<sup>56</sup> NIE Networks, RP7 Business Plan, 'RP7 Uncertainty Mechanisms', p.12.

<sup>57</sup> DD, Annex S, 4.129.

<sup>58</sup> DD, Annex S, 4.131.

*“comes with some degree of opportunity and risk. It is not the case that the price control seeks to eliminate that risk in its entirety”.*<sup>59</sup>

- 10.9 NIE Networks agrees with this statement. The company is not seeking to eliminate risk in the price control in its entirety and regards the 50:50 cost sharing mechanism as positive.
- 10.10 However, the company is concerned that under the current price control framework,<sup>60</sup> capex incurred as a result of unforeseen issues could be treated as reactive capex. Such incurred capex may fall outside of the 50:50 cost sharing mechanism, and could result in NIE Networks having to fund this capex in its entirety.
- 10.11 In light of the uncertainty of future environmental and legislative changes, NIE Networks considers that this risk will increase over RP7. Indeed, the company has already faced difficulties in utilising the current change of law and substitution mechanisms during RP6, as reflected in the uncertainty surrounding the funding position of necessary noise enclosures at Kells Main substation (as noted above at paragraph 10.3). The lack of certainty regarding the operation of the current substitution and deferral mechanisms could create a disincentive for the company to invest in its network investment programme.
- 10.12 NIE Networks will continue to prioritise investment in asset replacement on a risk-based approach. However, it is considered that a more flexible substitution mechanism will allow NIE Networks to make necessary and proportionate investment decisions with the confidence that it will not be penalised in future regulatory periods.

### **Conclusion**

- 10.13 For the reasons set out above, NIE Networks requests removal of the 20% cap on the value of outputs which can be substituted out of a single allowance. It also welcomes the opportunity to discuss with the UR more generally the possibility of greater flexibility in the substitution mechanism.

## **11. D5 MECHANISM**

### **Full review of the transmission infrastructure approval process**

- 11.1 The D5 mechanism was introduced by the Competition Commission in its RP5 Final Determination. It enables the UR to approve funding for additional investment projects to increase the capacity and capabilities of the transmission system.<sup>61</sup> Such projects are proposed by the transmission system operator, SONI.
- 11.2 The D5 mechanism was maintained in the UR's RP6 Final Determination.<sup>62</sup> In its RP7 Business Plan, NIE Networks supported the maintenance of the D5 mechanism for RP7.

<sup>59</sup> DD, Annex S, 4.130.

<sup>60</sup> See UR, RP6 Final Determination, 13.21.

<sup>61</sup> Competition Commission RP5 Final Determination, 7.39.

<sup>62</sup> During RP6, this was expanded to include two larger transmission asset replacement projects (Ballylumford Switchboard and CPS-Magherafelt) whose particular risk-profiles were more akin to projects remunerated through the D5 mechanism.

- 11.3 Since NIE Networks submitted its RP7 Business Plan, the UK Government has published an independent report from the UK's Electricity Networks Commissioner on how to accelerate the deployment of electricity transmission infrastructure.
- 11.4 NIE Networks has considered the report in light of the scale of the transmission works identified by SONI to deliver 2030 renewable targets and beyond, supply chain constraints. Specific to the regulatory approval associated with transmission infrastructure in Great Britain, the report observes that:

*"the regulatory process has evolved from considering individual transmission lines to groups of them, but it is not settled, streamlined, regular and operating at a system level. It still adds uncertainty and significant time to the process – this is time we cannot afford."*<sup>63</sup>

- 11.5 In NI, whilst the D5 approval process has facilitated the delivery of modest levels of transmission projects over the last number of years, the company considers that a full review of the transmission infrastructure approval process is required to ensure the significant increase in projects can be progressed to delivery stage without delay, helping to ensure the achievement of 2030 targets and beyond.

Notwithstanding NIE Networks' requested amendments to the D5 mechanism, the company believes that a review should be jointly progressed, in the short term, by at least the UR, SONI and NIE Networks. Whilst the company acknowledges an expedited review will require focused resource commitment, NIE Networks is committed to fully support this and looks forward to engaging further with the UR and SONI on this important topic.

*NIE Networks' 'minimum value submission' proposal*

- 11.6 In its RP7 Business Plan, NIE Networks highlighted the pace of change required on the transmission network to facilitate the 80% renewables legislative target by 2030. In light of climate emergency demands, the company welcomed the opportunity to look at ways to improve the D5 mechanism for RP7 to include efficiencies that could be realised in the submission and approval process to reduce the resources required by both NIE Networks and the UR to administer the process.<sup>64</sup>
- 11.7 The company proposed minor changes to the RP6 D5 mechanism to incorporate a 'minimum value submission' ("**MVS**") mechanism. NIE Networks proposed this change given the scale of projects forecast by both SONI and NIE Networks to be completed during the RP7 period and the impact that a delayed pre-construction phase can have on overall project completion.
- 11.8 NIE Networks proposed that the MVS mechanism would permit two different processes depending on the magnitude of pre-construction works:

<sup>63</sup> Nick Winser CBE, Electricity Networks Commissioner Letter to Secretary of State for Energy, Security and Net Zero, June 2023 (<https://assets.publishing.service.gov.uk/media/64c8e96e19f5622360f3c0f0/electricity-networks-commissioner-letter-to-desnz-secretary.pdf>).

<sup>64</sup> NIE Networks, RP7 Business Plan, 9.8.

- Projects with pre-construction works estimated to have a value in excess of a proposed threshold of around £3 million per individual D5 project would be submitted to the UR for ex-ante approval.
- Projects with pre-construction works estimated to have a value below that threshold would be logged throughout the pre-construction phase and the costs subject to ex-post review by the UR as part of the construction phase approval process.

11.9 Under NIE Network's proposal, the expectation would be that the UR would separately approve only the largest and most risky projects at the pre-construction stage. Projects below the relevant threshold would not require an approval paper, thus reducing the workload for both NIE Networks and the UR, and allowing pre-construction work to commence as soon as contracts are in place. This time saving could have a significant impact on the completion date depending on outage requirements.<sup>65</sup>

#### **The UR's provisional decision**

11.10 In its DD, the UR recognised the potential advantages of NIE Networks' proposed MVS mechanism but considered that it creates its own risks and process issues.

11.11 The UR proposed to continue to apply the D5 mechanism in RP7. It further proposed to incorporate the MVS mechanism, subject to the imposition of further constraints to secure efficient delivery. The UR's proposed amendments to the MVS included:

- lowering the pre-construction works value threshold for ex-post review from around £3 million to £1.5 million;
- restricting NIE Networks from seeking an ex-ante allowance for pre-construction works previously forecast to fall below the ex-post review threshold;
- restricting the types of costs that qualify as pre-construction costs;
- imposing an overall aggregate cap on ex-post allowed capex for pre-construction works of 12.5% of total allowed capex for D5 projects; and
- requiring the company to maintain records which allow staff time and cost to be allocated to individual activities.<sup>66</sup>

#### **Concerns with the UR's provisional decision**

11.12 NIE Networks welcomes the UR's proposals to maintain the D5 mechanism and to incorporate the MVS mechanism.

11.13 The UR has however made errors in its analysis of NIE Network's proposed MVS mechanism. In addition, the UR's proposed amendments to the MVS:

- would significantly hinder achievement of the benefits the MVS – benefits which the UR recognises in its DD; and

<sup>65</sup> NIE Networks, RP7 Business Plan, 9.11 – 9.17.

<sup>66</sup> DD, Annex S, 4.139.

- would increase the financial risk to NIE Networks and likely add delays to the completion of projects.

*The UR is wrong to describe the MVS as a pass-through mechanism*

11.14 In its assessment of the MVS mechanism proposed by NIE Networks, the UR describes the proposal as a "*pass-through mechanism*"<sup>67</sup>. That description is not correct.

11.15 NIE Networks' proposal is that the pre-construction costs in question will be subject to an ex-post review by the UR, under which the UR will have the discretion to allow costs that they deem to be efficient. It is wrong to describe such a mechanism as a 'pass-through' since this underrepresents the risk value of the MVS; clearly, a pass-through mechanism represents a lower financial risk to NIE Networks than an ex-post review mechanism.

11.16 The UR also states that the proposed mechanism will create a:

*"category of internal staff costs which are pass-through, requiring the company to record the time for all internal staff activities to ensure that the allocation to this narrow category of pass-through cost is reasonable."*<sup>68</sup>

11.17 NIE Networks infers from this statement that the UR supposes that NIE Networks does not keep these records currently, and that this requirement will impose an additional administrative burden on NIE Networks. That is not the case: NIE Networks currently records internal staff pre-construction activities for D5 projects and therefore the MVS proposal will not increase the administrative burden on NIE Networks.

*The UR's proposed £1.5m ex-post review threshold is too low*

11.18 In its DD, the UR proposes that:

*"pre-construction costs should only be determined on an ex-post basis when the pre-construction cost estimate is expected to be less than £1.5M."*<sup>69</sup>

11.19 As NIE Networks has previously explained to the UR, a £1.5 million threshold would capture only c.43% of proposed D5 projects.

11.20 NIE Networks proposed the MVS in good faith on the basis that it would materially improve the timelines for completion associated with D5 projects overall. By reducing the ex-post review threshold from NIE Networks' proposal of around £3 million to £1.5 million, over half of proposed D5 projects will not benefit from efficiency improvements.

11.21 NIE Networks considers that a £1.5 million threshold will significantly reduce the benefits of the MVS and will hinder efforts to accelerate the timelines associated with D5 projects in light of statutory 2030 renewable targets. As evidenced at Table 12.1 below, under NIE Network's proposed ex-post review threshold of £3 million,

<sup>67</sup> DD, Annex S, 4.139(a).

<sup>68</sup> DD, Annex S, 4.139(d).

<sup>69</sup> DD, Annex S, 4.140(a).

90% of D5 project timelines would benefit from improved efficiency as a result of the ex-post review of pre-construction costs.

**Table 12.1: UR £1.5m threshold v NIE Networks £3m threshold**

Ex-post review threshold	No. of projects where pre-construction costs are covered under ex-post review	No. of projects where pre-construction costs are not covered under ex-post review	Percentage of projects where pre-construction costs are not covered under ex-post review
< £1.5 million	9	12	57%
< £3 million	19	2	10%

11.22 In its DD the UR has also proposed the following restriction on the individual ex-post review threshold:

*"[o]nce the company has decided to carry out pre-construction work which will be determined ex-post on the basis of costs incurred, it will not seek an ex-ante pre-construction allowance part way through the work."*<sup>70</sup>

11.23 This suggests that the UR intends to impose a strict limit on the pre-construction work allowance in cases where forecast costs fall below the ex-post review threshold.

11.24 If the UR automatically limits ex-post allowances to the ex-post review threshold, this will increase the financial risk to NIE Networks. The company would be required to devote significant time and resources to determining pre-construction forecasts in advance of deciding whether to submit costs for an ex-ante or ex-post allowance. This would slow the associated project completion timeline and undermine the principles and recognised advantages behind the MVS.

11.25 Alternatively, this may result in NIE Networks adopting a conservative approach whereby it only progresses projects with pre-construction costs estimated to fall significantly below the ex-post review threshold. Under current analysis, only c.28% of D5 projects have estimated pre-construction costs that amount to less than 75% of the UR's proposed £1.5 million threshold.

*The UR's proposed aggregate cap on ex-post allowed capex*

11.26 In its DD, the UR proposes the following further constraint on the MVS:

*"the aggregate ex-post allowed capex for pre-construction works will not exceed 12.5% of the total allowed capex for these projects. This will be assessed over time on an aggregated basis. If, at any time there is reason to believe that this threshold has been exceeded in a sustained way, UR will make a negative adjustment to individual ex-ante decisions to secure this*

<sup>70</sup> DD, Annex S, 4.140(b).

*threshold, subject to on-going cumulative review. As a result, 50/50 cost risk sharing would apply to costs in excess of this threshold."*

- 11.27 NIE Networks submits that the inclusion of an individual ex-post threshold as described above at paragraph 11.18 (notwithstanding NIE Networks' request that such a threshold should be set at £3 million) provides sufficient control around the use of the mechanism. The inclusion of an additional overall aggregate cap on ex-post allowance introduces an unnecessary layer of complexity to the mechanism and an administrative burden to the company.
- 11.28 In addition, the UR's proposes to make negative adjustments to individual ex-ante decisions where the overall cap is exceeded in a sustained way. This represents an additional financial risk to NIE Networks.
- 11.29 Under the UR's proposals at paragraph 11.11 above, NIE Networks will already be required to expend significant time and resource into determining whether to submit costs for an ex-ante allowance or ex-post review. The risk of facing negative adjustments to individual ex-ante decisions will mean that the company will have to expend even more time and resource into determining whether to submit costs for an ex-ante allowance or ex-post review, further reducing the mechanism's benefits and hindering the overall timelines of D5 projects.

### **Conclusion**

- 11.30 NIE Networks is concerned that the UR's proposed constraints on the MVS will significantly reduce the benefits of the MVS and the overall D5 mechanism.
- 11.31 Reducing the individual project ex-post review threshold from £3 million to £1.5 million, would mean that less than half of the proposed D5 projects will progress through the MVS. The UR's other proposed constraints will hinder the efficiency improvements required in the D5 mechanism to deliver the underlying work in the time required to meet statutory 2030 renewable targets.
- 11.32 NIE Networks requests that the UR adjusts the proposed constraints in its Final Determination. The UR should increase the individual threshold for ex-post review of pre-construction costs to £3 million, which if exceeded should not automatically prevent the company from seeking additional ex-post allowances above the cap on an individual basis. In addition, the UR should exclude the proposal to impose an overall aggregate ex-post allowance cap for pre-construction capex.

### Indirect costs associated with D5 projects

- 11.33 As set out at paragraphs 4.11 to 4.21 of Chapter 3 of this Response, NIE Networks requests that the UR includes in its Final Determination a mechanism that grants additional allowances for indirect costs incurred in circumstances where the UR has approved capex during the course of RP7 under a re-opener mechanism, including under the D5 mechanism.

## 12. SEVERE WEATHER

- 12.1 In NI, the threshold for a severe weather event is defined as 13 times the average daily HV fault rate calculated over the previous 10 years. This currently stands at 74 HV faults in a 24-hour period.
- 12.2 In its RP7 Business Plan, NIE Networks proposed to amend the treatment of severe weather events from an ex-ante allowance (as used in RP6) to a pass-through mechanism, in line with the approach taken by Ofgem for RIIO-ED2.
- 12.3 The company considered that a pass-through allowance would negate the difficulties of setting an ex-ante allowance for unpredictable severe weather events which are predicted to increase in frequency and duration due to climate change.
- 12.4 NIE Networks proposed that the pass-through allowance would include all staff-related and contractor-related costs over and above those the DNO incurs in the normal course of its business and would also include the cost of supporting affected customers during qualifying events i.e. payments for food, drink and/or temporary accommodation, in a hotel or otherwise.<sup>71</sup>

### The UR's provisional decision

- 12.5 In the DD,<sup>72</sup> the UR has rejected the company's proposed pass-through allowance. It has provisionally allocated an ex-ante allowance of £3.84 million for the RP7 period (£0.64 million per annum)<sup>73</sup>, based on the average cost run-rate<sup>74</sup> of the last 11 years (from 2013 to 2023).<sup>74</sup> It also proposed to retain 50:50 risk sharing in line with RP6.<sup>75</sup>
- 12.6 The UR justifies its provisional decision on the following grounds:<sup>76</sup>
- At RP5, the Competition Commission ("**CC**") considered pass-through costs which expose consumers to unnecessarily high costs should be avoided, and these concerns remain the same.
  - The proposed introduction of Guaranteed Standard Service ("**GSS**") payments for reconnections during periods of severe weather could increase the likelihood of exposing customers to unnecessarily high costs.
  - The threshold trigger for a severe weather event is much lower in NI than in GB, where the threshold is defined as an event where a DNO experiences 42 times its mean daily HV faults within a 24-hour period.
  - GB DNOs experience fewer severe weather events as compared to NIE Networks. For RIIO-ED2, Ofgem's principal concern in moving away from an ex-ante allowance was that DNOs were being indirectly rewarded for events not incurring.

<sup>71</sup> NIE Network, RP7 Business Plan, EJP 1.801 'Network Performance Strategy', pp.33-34.

<sup>72</sup> The UR considers NIE Networks' proposed severe weather allowance in both Annex D and Annex S of its DD.

<sup>73</sup> DD, Annex D, 3.11 and Annex S, 4.165.

<sup>74</sup> DD, Annex D, 3.16.

<sup>75</sup> DD, Annex D, 3.19.

<sup>76</sup> See DD, Annex D, 3.12 – 3.21 and Annex S, 4.161 – 4.164.



- The 50:50 risk sharing will maintain an incentive to restrain costs but will limit the impact if events are more frequent than expected.

### **Correction to the allocation of costs**

- 12.7 NIE Networks notes that the UR has questioned NIE Networks' allocation of 100% of severe weather event costs to capex.<sup>77</sup> NIE Networks supports that this allocation should be corrected in the Final Determination to a 40%:60% split between opex and capex respectively per the historic trend.

### **Concerns with the UR's provisional decision**

- 12.8 NIE Networks considers that there are several flaws in the UR's provisional decision and that the proposed ex-ante allowance is inappropriate and inadequate to fund costs incurred as a result of severe weather events.
- 12.9 In rejecting the company's proposed pass-through for severe weather, the UR has relied on the CC's statement in its RP5 final determination that:

*"wherever possible we should avoid cost pass-through which could expose consumers to unnecessarily high costs".<sup>78</sup>*

- 12.10 In fact, the CC made this statement in the context of considering how storms valued at under or over £1 million could be treated differently. The CC went on to state the following:

*"If storms costing more than £1 million were passed through but storms costing less than £1 million were subject to an ex-ante allowance, NIE would face a powerful incentive to increase the cost of storm events to the £1 million pass-through threshold. We found that such an arrangement would not be in the public interest and we therefore decided that it was appropriate to set an ex-ante allowance in this area despite the inevitable difficulties in setting the level of the allowance."<sup>79</sup>*

- 12.11 The UR also makes reference to the CC's statement at paragraph 12.10 above in its DD.<sup>80</sup> However, it is incorrect that the CC's concerns at RP5 are relevant, since NIE Networks' proposal for RP7 is that all qualifying severe weather events would be subject to a pass-through allowance. Therefore, there is no incentive for the company to inflate costs unnecessarily.
- 12.12 The UR is also incorrect to consider that the proposed introduction of new GSS payments for severe weather events could exacerbate unnecessarily high costs that customers may be exposed to. In fact, equivalent payments have been in place under the price control regime of GB DNOs for a number of years. For RIIO-ED2, Ofgem did not consider any adverse risks of such payments when deciding to allocate severe weather costs as a pass-through allowance.

<sup>77</sup> DD, Annex D, 3.21.

<sup>78</sup> CC, 'Northern Ireland Electricity Limited price determination' Final Determination, 26 March 2014, 10.344.

<sup>79</sup> CC, 'Northern Ireland Electricity Limited price determination' Final Determination, 26 March 2014, 10.345.

<sup>80</sup> DD, Annex S, 4.161(b).

12.13 NIE Networks also considers that the ex-ante allowances granted for RP5 and RP6 have been inadequate. This is demonstrated by the costs incurred by NIE Networks as a result of severe weather events in comparison to the applicable allowance set out in Table 12.2 below.

**Table 12.2: Severe weather events in RP5 and RP6 that met the exemption threshold**

Period	Event	Date	Allowance (£m (FY21/22))	Actual costs (£m (FY21/22))	Underfunding (£m (FY21/22))
RP5	All events	Apr 2012 – Sep 2017	2.89	3.15	0.25
RP6	Ex-Hurricane Ophelia	16 – 18 Oct 2017	3.37	c.6.38	3.01
	Storm Eleanor	2 – 5 Jan 2018			
	Unnamed Storm	16 – 17 Jan 2018			
	Storm Hector	13 – 15 Jun 2018			
	Storm Ali	19 – 22 Sept 2018			
	Storm Franklin	20 -22 Feb 2022			
	Storm Isha	21 – 25 Jan 2024			

12.14 Considering the above, ex-ante allowances are not an appropriate mechanism for costs attributed to severe weather events. Such events are uncertain and unpredictable in nature, and due to climate change are predicted to occur more frequently in future such that ex-ante funding is likely to be inadequate.

12.15 Under the UR's proposed ex-ante allowance, NIE Networks would be expected to fund an unacceptable level of risk during RP7. Notwithstanding the different definition of severe weather events in GB, Ofgem recognised in its RIIO-ED2 draft

determination that costs associated with severe weather events are largely outside of DNOs' control and as such proposed such costs could be passed through:

*"Costs associated with SW 1-in-20 events are largely driven by the extent of damage to the DNOs network, which are in part outside the DNOs control. As such we think it is justifiable for DNOs to be able to recover some costs through our proposed mechanism. We propose to define the activities that DNOs can pass-through SW 1-in-20 costs as variant totex allowance."*<sup>81</sup>

- 12.16 Given NIE Networks' lack of control over volatile severe weather events, the company submits that the adoption of a pass-through cost allowance for RP7 would remove the uncertainty for both NIE Networks and consumers.
- 12.17 The UR's proposal to base the proposed ex-ante allowance on the average cost run-rate of the last 11 years (from 2013 to 2023) is also inappropriate. It firstly fails to consider the expected increase in the frequency of severe weather events. The UR has itself recognised this inadequacy of historic run rates in the DD that *"it could be argued that allowance on historic rates does not recognise the increasing frequency of severe weather events."*<sup>82</sup> The UR's proposed 11-year run-rate is also inappropriate as it fails to take account of real price effects.
- 12.18 NIE Networks also considers that the proposed ex-ante allowance could undermine the company's incentive to respond as quickly and comprehensively to severe weather events. If the ex-ante allowance has been fully expired during RP7, the company will be exposed to a 50% of the costs associated with responding to further storm activities during the period. As a result, this could create a disincentive for the company to reduce CMLs and to enable NI net zero goals and decarbonisation of the energy sector.
- 12.19 Further, in relying on the different definitions of severe weather between GB and NI, the UR has failed to take into account its recent consultation to change arrangements for the GSS (the **"GSS 2023 Consultation"**).<sup>83</sup> The GSS 2023 Consultation proposes changes to the current exemptions for severe weather events. These changes would align the NI definition of a severe weather event with the GB definition. NIE Networks considers that it would be inappropriate for the UR not to adopt the same updated definition of a severe weather event in NIE Networks' licence conditions. The regulatory incentive structure in NI would become asymmetric if the severe weather exemption provisions in the GSS were aligned to GB without also aligning the price control design for the severe weather events.

### **Conclusion**

- 12.20 For the reasons set out above, NIE Networks requests that in its Final Determination the UR grants costs for severe weather events as a pass-through allowance. The company requests that the pass-through allowance would include all staff-related and contractor-related costs over and above those the DNO incurs in the normal

<sup>81</sup> Ofgem, RII0-ED2, Draft Determinations, 'Core Methodology Document', 29 June 2022, 6.172.

<sup>82</sup> DD, Annex D, 3.20.

<sup>83</sup> UR, 'Review of Electricity Guaranteed Standards of Service and Overall Standards of Performance', August 2023, (), p.45.

course of its business and would also include the cost of supporting affected customers during qualifying events i.e. payments for food, drink and/or temporary accommodation, in a hotel or otherwise.

- 12.21 In the event that the UR implements an ex-ante allowance in its Final Determination, NIE Networks requests that the allowance is based on the average run-rate for the RP6 period and is increased to £6.38 million for RP7 to take account of the company's costs incurred as a result of Storm Isha. This is on the basis that the UR has based its proposed ex-ante allowance on *"recent experience of costs incurred by NIE Networks for extreme events"*<sup>84</sup> and should therefore take into account the company's recently incurred costs resulting from Storm Isha.

<sup>84</sup> DD, Annex S, 4.165.

## CHAPTER 13

### WACC AND FINANCEABILITY

#### SUMMARY

This Chapter relates to the UR's provisional determination of the weighted average cost of capital ("**WACC**") and its assessment of RP7 financeability, which represents one of NIE Networks' three significant concerns with the DD and which could jeopardise NIE Networks' ability to finance the RP7 plan.

Driven by the necessity to decarbonise, the RP7 plan represents a step-change in the level of investment in the network with a requirement to fund £2.5bn. Financing RP7 will require NIE Networks to retain its A- stand-alone credit rating and equity returns comparable with Great Britain ("**GB**") networks in order to compete for ongoing access to debt markets and equity at competitive market cost to fund significant levels of investment. NIE Networks' significant concern is that the proposed WACC and financeability assessments undertaken by the UR are not sufficiently robust and do not take account of significant downside risks to financeability and investability. In particular there are four main areas of concern:

- The UR's DD financeability assessment is improved by artificially low gearing assumptions which are not consistent with an efficient capital structure nor with GB regulators' approach.
- The proposed inflation adjustment mechanism to the cost of debt in the WACC poses a significant departure from the current RP6 regulatory model and the arrangements that current apply in GB. If implemented, it would pose a significant risk to NIE Networks' credit rating, funding capacity, investability and its cost of capital relative to GB networks. NIE Networks requests that the UR does not include the inflation adjustment mechanism as part of its Final Determination for RP7, but instead retains the existing RP6 approach for now. The UR could then revisit its approach at RP8 including its appropriateness for NI consumers and investors in light of Ofgem's decision on the treatment of inflation in RIIO-3 (as part of an overall determination package that is financeable and investable for GB networks).
- The proposed cost of equity of 5.15% post tax (real) is significantly lower than that proposed in the RP7 Business Plan (5.95%). This is not reflective of a rational investor's expectations of investing in electricity networks in the current higher interest rate environment, as it does not have sufficient headroom over the proposed cost of debt of 4.49% pre-tax (real) to appropriately reflect the higher risks faced by equity holders over debt providers. Further, as highlighted by Moody's in its recent outlook for ESB, there is no proposed uplift to NIE Networks' allowed equity returns for the cash flow volatility arising from the proposed inflation adjustment mechanism to the cost of debt.

- There are a number of other aspects of the proposed WACC parameters which indicate that it is not properly calibrated including an inefficient gearing level and the level of additional borrowing costs are not reflective of actual costs and regulatory precedents.

NIE Networks requests the UR to review its approach to the WACC and financeability assessment at the Final Determination and set a WACC that is more in line with the proposals by NIE Networks to enable it to efficiently secure the necessary finance at competitive market rates to deliver the £2.5bn RP7 plan to facilitate decarbonisation and maintain a safe, reliable and resilient network.

## 1. INTRODUCTION AND EXECUTIVE SUMMARY

### Financeability

- 1.1 Financeability is the ability of an efficient company such as NIE Networks to secure funding for investments and operations from debt markets and shareholders at competitive market cost. As the UR noted in the DD, one of its statutory duties is the:

*“need to secure that licence holders are able to finance the activities which are the subject of licence obligations placed on them”<sup>1</sup>*

- 1.2 NIE Networks estimates that over RP7 it will make investments in its network of £2.5bn totex for the benefit of the NI economy and customers. That is almost double the £1.4bn totex in RP6. Of this additional investment for RP7, the total expenditure on Net Zero is £828m (i.e. 72%).
- 1.3 In view of this step-change in investment, it is essential that the price control for RP7 is properly calibrated to enable NIE Networks to access the necessary finance at competitive rates to deliver these investments efficiently.
- 1.4 A critical element of this is that NIE Networks retains its A- stand-alone credit rating and equity returns comparable with GB networks peers to compete for ongoing access to debt markets and equity at competitive cost to fund the delivery of the £2.5bn RP7 plan.
- 1.5 The DD states that the UR has tested the financeability of its proposed cost of capital allowance using several key financial ratios and has concluded that the ratios in this modelling appear to be compatible with NIE Networks maintaining its existing A-stand-alone credit rating and NIE Networks being able to finance itself through RP7 based on the revenues provided in the DD.<sup>2</sup>
- 1.6 However, NIE Networks has strong concerns that the proposed allowed WACC and the financeability assessment undertaken by the UR in the DD:

1. is not sufficiently robust;

<sup>1</sup> UR, Draft Determination- Main Report, November 2023, 13.53.

<sup>2</sup> DD, 13.58 - 13.62.

2. is improved by artificially low gearing assumptions which are not consistent with an efficient capital structure, achieved by the modelled withholding of dividend payments in the early years of RP7 (which should not be part of the notional company's baseline financeability assessment in line with the current approach of regulators in GB); and
  3. does not take account of material downside risks, in particular the proposed inflation adjustment mechanism to the cost of debt in the WACC (addressed further below), which could ultimately put at risk NIE Networks' ability to retain its current credit rating, funding capacity, investability and cost of capital relative to GB network peers with whom it competes for finance.
- 1.7 Analysis presented with this Response demonstrates that the UR's proposed price control calibration is insufficient from a financeability and investability perspective when tested at a more appropriate gearing level that is consistent with an efficient capital structure, and that NIE Networks would fall below several of the credit rating metric thresholds set by Standard and Poor's and Moody's for NIE Networks to retain an A- standalone credit rating. These metrics are at risk of being jeopardised further by the operation of the proposed inflation adjustment mechanism to the cost of debt, changes to the risk-free rate driven by market movements, an increase in capex costs above the expected level or the payment of significant incentive penalties.
- 1.8 Consequently, the WACC parameters and the approach to financeability in the DD create a significant risk that NIE Networks standalone credit rating could be downgraded by Standard and Poor's which would increase the cost of capital, reduce the level of access to debt capital, curtail funding capacity and impact investability compared to GB network peers at a time when NIE Networks is reliant on access to significant levels of financing to deliver the £2.5bn RP7 plan.

### **WACC**

- 1.9 In the DD, the UR proposes a WACC of 4.79% (vanilla real) based on a data cut off of September 2023, as compared to NIE Networks' proposal of 4.80% (vanilla real). As summarised in Table 13.1 below, the DD WACC is based on a higher projected cost of new debt, a lower proposed cost of equity and a lower gearing than the NIE Networks' submission proposal.
- 1.10 In addition, updating the UR's approach to calculating the WACC in the DD to account for market data as at January 2024 results in a WACC of 4.35%, which is significantly below the proposal by NIE Networks.<sup>3</sup>

<sup>3</sup> Frontier DD Report, 1.23 - 1.24.

**Table 13.1: WACC parameters**

<b>WACC Components</b>	<b>RP7 Submission</b>	<b>RP7 UR DD (Sept 2023 data)</b>	<b>RP7 UR DD Rolled forward with Jan 2024 data</b>
Gearing (Debt / RAB)	60%	55%	55%
Cost of Equity (post tax)	5.95%	5.15%	5.08%
Cost of Debt (pre tax)	4.03%	4.49%	3.75%
<b>WACC (Vanilla Real)</b>	<b>4.80%</b>	<b>4.79%</b>	<b>4.35%</b>

- 1.11 There are a number of areas where NIE Networks does not take issue with the approach set out in the DD as regards the calculation of the WACC (but on which it would welcome continuing engagement with the UR, including if the UR were minded to change its position on these aspects in the Final Determination). This covers:
- The risk-free rate, save in respect of downside risk to financeability set out in Section 5 below; and
  - The cost of new debt: in particular, NIE Networks agrees with the UR's proposed approach to indexing the cost of new debt to the market cost set out in Annex H of the DD.
- 1.12 However, there are also a range of aspects where NIE Networks, supported by its advisers, Frontier Economics, have identified significant concerns regarding the UR's approach to setting the WACC which it considers the UR should address as it develops its Final Determination for RP7.
- The inflation adjustment mechanism
- 1.13 In the DD, the UR proposes to introduce an inflation adjustment mechanism to adjust the allowed cost of debt ex-post so that it reflects outturn inflation.
- 1.14 The proposed mechanism would be a significant departure from the more stable RP6 arrangements and from the continuing long established and understood regulatory framework for other regulated utilities in GB. This would create significant risks to NIE Networks' credit rating, funding capacity, investability and cost of capital relative to GB network peers with whom NIE Networks competes for funding.
- 1.15 Further, the mechanism would also create inflation risk to NIE Networks' parent company due to legitimate financial risk mitigation that NIE Networks has taken out in the past based on the existing long established regulatory treatment of inflation in the allowed cost of debt.



- 1.16 NIE Networks' strong view is that this is not the time to introduce such a new mechanism, and that the UR should maintain the existing RP6 arrangements. Therefore, NIE Networks urges the UR to pause on this proposal and instead wait and see the outcome of the Ofgem consultation on this issue in GB as part of the overall RIIO-3 determination, lest NIE Networks be negatively impacted relative to GB network companies with whom it competes for funding.

Gearing

- 1.17 The UR has set a notional gearing assumption at 55% in the DD. NIE Networks considers that 60% is an appropriate efficient capital structure, which is in line with the level of gearing that NIE Networks expect to reach in RP7. It is also in line with the actual gearing observed from the GB networks, consistent with regulatory precedent from other regulatory decisions in the UK; and supported by guidance from credit rating agencies.

Cost of equity

- 1.18 The proposed cost of equity is not reflective of the current higher interest rate environment and therefore does not set an appropriate total market return, does not have sufficient headroom over the cost of debt to appropriately reflect the higher risk faced by equity holders over debt providers and as highlighted by Moody's in its recent outlook for ESB, has no proposed uplift to NIE Networks' allowed equity returns for the cash flow volatility arising from the proposed inflation adjustment mechanism to the cost of debt<sup>4</sup>.

Additional borrowing costs

- 1.19 The UR has allowed only 0.10% to cover issuance and liquidity costs and cites lack of evidence for additional allowance to cover the cost of carrying and CPIH basis risk mitigation as a reason for providing no allowances for these further categories of borrowing cost. NIE Networks will in fact incur additional costs in respect of all the above categories. Moreover, Ofgem provided an allowance for all these types of borrowing costs at RIIO-ED2. NIE Networks therefore requests that the UR increases its allowance for additional borrowing costs in the Final Determination to between 0.29% - 0.34% to correctly and adequately reflect these market related costs.

Overall, NIE Networks requests that the UR reviews its approach to the WACC and financeability assessment at the Final Determination and sets a WACC that is more in line with the proposals by NIE Networks to enable it to efficiently secure the necessary finance at competitive market rates to deliver the significantly increased investment in the £2.5bn RP7 plan to facilitate decarbonisation and maintain a safe, reliable and resilient network.

- 1.20 The remainder of this Chapter is structured as follows:

<sup>4</sup> Moody's, Issuer in-Depth- Electricity Supply Board (ESB), March 2024.

- Section 2 outlines NIE Networks' concerns in respect to the UR's assessment of financeability for RP7.
- Section 3 describes NIE Networks' concerns with the proposed inflation adjustment mechanism to the cost of debt.
- Section 4 details why NIE Networks disagrees with the UR's proposed approach to gearing.
- Sections 5 and 6 describes issues with the UR's provisional determination of the cost of equity.
- Section 7 sets out issues relating to the spread between the UR's provisional determination of the cost of equity and cost of new debt.
- Sections 8 and 9 detail issues with parameters provisionally determined by the UR in respect of the cost of debt.
- Section 10 provides an overview by way of conclusion.

1.21 The submissions in this Chapter are supported by a report from NIE Networks' advisers, Frontier Economics, which responds to the UR's provisional decision concerning financeability and the WACC ("**Frontier Economics Cost of Capital and Financeability for RP7 – Comments on the Draft Determination, March 2024**", referred to in this Chapter as the "**Frontier DD Report**"), provided as **Annex 13.1** to these submissions.

1.22 This report is an integral part of NIE Networks' response on the issues above and should be read in conjunction with this Chapter.

## 2. FINANCEABILITY

### The UR's decision and the issue

2.1 As the UR noted in the DD, one of its statutory duties is the:

*“need to secure that licence holders are able to finance the activities which are the subject of licence obligations placed on them”.*<sup>5</sup>

2.2 The DD concludes that the financeability metrics from the UR's modelling show that the key parameters from the DD are financeable<sup>6</sup>.

2.3 NIE Networks has significant concerns, supported by the analysis and conclusions in the Frontier DD Report, that the UR's financeability assessment is not sufficiently robust to a range of plausible downside risks. In particular:

- The UR's assessment is based on artificially low gearing levels which are not consistent with an efficient capital structure and which were achieved by a UR assumption that dividend payments will be withheld in the early years of RP7. (which should not be part of the notional company's baseline

<sup>5</sup> DD, 13.53.

<sup>6</sup> DD, 13.58 - 13.62.

financeability assessment in line with the current approach of regulators in GB).

- It does not take account of the WACC inflation adjustment mechanism.
- It does not take account of a number of other downside risks that can operate to worsen the metrics, such as changes to the risk-free rate due to market movements, an increase in capex costs above the expected level and significant incentive penalties.

2.4 A critical element of financeability and investability is that NIE Networks retains its A- stand-alone credit rating and equity returns comparable with GB networks peers to compete for ongoing access to debt markets and equity at competitive cost to fund the delivery of the £2.5bn RP7 plan.

**The financeability assessment applies artificially low gearing levels**

2.5 The UR has assumed that gearing increases over the period from the 45% notional gearing at RP6 to the 55% gearing that the UR has used in its WACC estimation.

2.6 As set out in Section 10.2 of the Frontier DD Report, the assumption of this artificially low gearing level will improve the financeability metrics relative to the 60% gearing level that NIE Networks expect to realise by financing its capital plan efficiently.

2.7 Analysis in the Frontier DD Report of the UR's financeability modelling in the DD indicates that the assumed lower level of gearing is achieved by a UR assumption that dividend payments will be withheld in the early years of RP7. NIE Networks agrees with Frontier Economics' view that it is not appropriate for the UR's baseline financeability assessment of the notional company to include such an assumption<sup>7</sup>, which is in effect a financing choice for the actual company. Not including such an assumption is also in line with the current approach of regulators in GB.

2.8 Once this assumption is removed from the UR's modelling, consistent with the GB regulatory approach: (i) the resulting gearing levels are higher than in the UR's DD and more in line with the 60% gearing that NIE Networks have proposed in its RP7 Business Plan, particularly in the latter years of the RP7 period; and (ii) the financeability metrics decline compared to the UR's assessment in the DD.

2.9 These metrics show that the UR's proposed parameters of the DD are insufficient when tested at a more realistic gearing. For example:

- By the end of RP7, the FFO/Net debt is at 11.00% which is below the 12% threshold suggested by Standard & Poor's for NIE Networks to maintain its A- standalone credit profile.<sup>8</sup>

<sup>7</sup> Frontier DD Report, 10.7.

<sup>8</sup> S&P, Northern Ireland Electricity Networks Ltd. Ratings Score Snapshot, November 2023.

- The adjusted interest cover falls to 1.30x in the last year of RP7. Moody's guidance for a Baa rating (equivalent to Standard and Poor's BBB rating) requires values in the range of 1.4-2x.<sup>9</sup>

2.10 NIE Networks agrees with the Frontier Economics conclusion that this demonstrates that the allowances in the DD give rise to a risk that NIE Networks will not be able to maintain its existing credit rating, which would increase its cost of capital and reduce its level of access to debt.

**The impact of the WACC inflation mechanism is not addressed**

2.11 The UR's financeability assessment does not take account of the proposed WACC inflation adjustment mechanism, which the Frontier DD Report notes "*has the potential to make the investment programme unfinanceable*"<sup>10</sup>. Specifically:

- If the mechanism was implemented by means of an annual adjustment to revenues, this would negatively affect credit rating agencies' assessment of NIE Networks' business and financial risk and its credit rating, as NIE Networks' financeability metrics would no longer be stable and predictable, but potentially highly volatile from year to year. Critically, this would make NIE Networks less attractive relative to its GB network peers, with whom it competes in debt markets. The overall effect of introducing an inflation true up mechanism made through an annual true up, would therefore be to increase the cost of debt over RP7 and beyond.
- If the mechanism was implemented by means of an adjustment to the RAB at the end of the regulatory period, this would place the regime in NI on a significantly different footing to other regulatory regimes in GB. It would also be a significant departure from the approach at RP6. Ultimately, a perception of higher business and financial risk, stemming from new and less well understood exposures which its GB network peers do not face, would, again, put NIE Networks at a disadvantage when competing with its GB network peers for investors and would lead to higher debt costs and lower capacity funding and investability for NIE Networks.

2.12 The inflation adjustment mechanism is considered in detail in Section 3 below.

**High inflation with an adjustment mechanism on allowed revenues**

2.13 The risks relating to the inflation adjustment mechanism are even higher after removing the assumption of withholding dividend payments and after rolling forward the UR's methodology using January 2024 data.

2.14 The Frontier DD report considers the financeability metrics in a scenario where: (i) the assumption of withholding dividend payments is removed and the allowed return is based on rolling forward the UR's methodology using January 2024 data, but

<sup>9</sup> Exhibit 2, 'Rating Methodology: Regulated Electric and Gas Networks', Moody's, 13 April 2022, based on Moody's Adjusted Interest Coverage Ratio which Frontier Economics considers has close similarities to the interest cover used by the UR (see Frontier DD report, footnote 67).

<sup>10</sup> Frontier DD Report, 10.10.

inflation actually outturns at 5% over the RP7 period; and (ii) an inflation adjustment mechanism is in place that adjusts the cost of debt in the WACC. The Frontier DD report confirms that:

*"This analysis shows that changes to allowed revenue due to the inflation true up mechanism could have severely negative consequences on NIEN's ability to finance its investment in RP7. Owing to the operation of this mechanism, in this scenario NIEN's credit metrics sit far below the threshold that Standard and Poor's has set for NIEN to retain A- stand-alone credit rating".<sup>11</sup>*

- 2.15 Further, under this scenario, the financeability metrics would decrease to below the thresholds for a 'Baa' rating that Moody's set out in its guidance for regulated energy networks ('Baa' is the equivalent of a BBB rating by Standard and Poor's). If NIE Networks was considered to have a rating below 'Baa', then this would no longer be considered investment grade which would have a significant impact on its access to debt and its cost of capital.<sup>12</sup>
- 2.16 If NIE Networks was considered to have a 'Ba' rating then this would no longer be considered investment grade which would have a significant impact on its access to and its cost of capital and make NIE Networks' large investment programme unfinanceable.

#### **Decrease in the risk-free rate**

- 2.17 The DD proposes that the risk-free rate will be subject to an adjustment mechanism that updates the cost of equity for changes in the 20-year index linked gilt rate. The UR's financeability assessment does not consider whether the operation of this mechanism might lead to changes in the WACC which in turn impact on the financeability of the price control.
- 2.18 The Frontier DD Report analyses the impact to the financeability metrics of a 2% decrease in the risk-free rate.<sup>13</sup> NIE Networks concurs with the view in the Frontier DD Report that this is a realistic change in the risk-free rate over the course of RP7 and is lower than the change observed during RP6. Under this scenario:
- the FFO/Net debt falls to 10.57% which is below the 12% threshold set by Standard & Poor's for NIE Networks to maintain its A- standalone credit rating, and below the 11% threshold that Moody's expect from utility networks for a 'Baa' rating (equivalent to BBB rating from Standard and Poor's).
  - The adjusted interest cover falls to 1.22x in the last year of RP7 which is below the Moody's guidance for a Baa rating (which requires values in the range of 1.4-2x).

<sup>11</sup> Frontier DD Report, 10.12.

<sup>12</sup> Moody's guidance suggests that the range for 'Baa' rated networks is 11-18% for FFO/Net debt whereas it is 5-11% for 'Ba' rated networks (see Exhibit 2, 'Rating Methodology: Regulated Electric and Gas Networks', Moody's, 13 April 2022). In this scenario, NIE Networks would reach 8.35% FFO/Net debt which is in the middle of the 'Ba' non-investment grade rating range.

<sup>13</sup> Frontier DD Report, 10.15 – 10.16.

- 2.19 NIE Networks agrees with the Frontier Economics conclusion that this analysis demonstrates that market movements risk significantly impacting the financeability metrics and could lead to a downgrading of NIE Networks' credit rating, which would increase its cost of capital.

#### **Increase in capex spend**

- 2.20 During RP7, NIE Networks plans to undertake a very significant capital investment programme. The Frontier DD Report outlines at paragraph 10.17 that: (i) NIE Networks will, as a result, be exposed to much greater delivery risk (i.e., greater construction risk than it has been in past price controls); and (ii) the capex figures for D5 transmissions projects are currently based on forecasted numbers from SONI which may be subject to significant change. This could lead to an increase in capex spend above the level assumed in the DD. The UR's financeability modelling does not test this risk.
- 2.21 Analysis presented in the Frontier DD Report<sup>14</sup> demonstrates that even a £100m increase in capex spend – which accounts for just 7% of the allowed network capex over RP7 – would significantly impact the financeability metrics and risk that NIE Networks will not be able to maintain its existing credit rating, which would increase its cost of capital.

#### **Incentive payments**

- 2.22 The financeability of the DD is also sensitive to any significant incentive payments.
- 2.23 Analysis in the Frontier DD Report<sup>15</sup> demonstrates that the financeability metrics with full negative incentive outcomes (assuming a penalty totalling £5.5m per annum resulting from poor performance in relation to Customer Minutes Lost and the Evaluative Performance Framework) are worse compared to the base case and, again, risk that in this scenario NIE Networks would not be able to maintain its existing credit rating, which would increase its cost of capital.

#### **Conclusion**

There are a number of downside risks that could have a material impact on the financeability of the proposed DD package that the UR has not taken account of in its financeability modelling. The risks would be even greater if more than one of these scenarios occurred at the same time.

It is essential that the parameters of the Final Determination are robustly financeable to ensure that NIE Networks can efficiently compete for funding with GB networks who all have strong investment grade ratings to deliver the very large capital investment programmes planned for RP7 to meet Net Zero objectives. This is also consistent with the duties of the UR to ensure that NIE Networks can finance its licensed activities.

<sup>14</sup> Frontier DD Report, 10.18 – 10.19.

<sup>15</sup> Frontier DD Report, 10.20 - 10.21.

NIE Networks therefore requests that the UR amend its approach to the WACC and financeability assessment in line with the proposals put forward in this response to enable NIE Networks' financeability for RP7.

### 3. INFLATION ADJUSTMENT MECHANISM

#### The UR's decision and the issue

- 3.1 The DD includes an inflation adjustment mechanism which would "true-up" the allowed cost of debt in the event that outturn inflation differs from the UR's forecasts. The DD indicates that the aim of the mechanism is to protect both companies and consumers from additional costs from forecasting errors in respect of inflation.<sup>16</sup>
- 3.2 NIE Networks has very significant concerns regarding the material unintended consequences of introducing such a mechanism for RP7, which it sets out in detail below.
- 3.3 As such, NIE Networks does not consider that proceeding with the proposed inflation adjustment mechanism at this time is consistent with the UR's obligation to ensure that NIE Networks is financeable.

#### Materially detrimental effects of the inflation adjustment mechanism

- 3.4 There is a lack of clarity in the DD as to whether adjustments would be made to allowed revenues during RP7 as outturn inflation is observed, or whether an adjustment, e.g. to RAB, would be made at the end of the RP7 regulatory period once outturn inflation for the whole period is known. However, in either case, the introduction of the mechanism would lead to materially detrimental effects both for NIE Networks and consumers in NI, as discussed in Section 4 of the Frontier DD Report.
- 3.5 If the UR intends that adjustments would be made to allowed revenues during RP7, it follows that:
- First, if inflation adjustments are made to WACC on an annual basis through the allowed return adjustment process and inflation outturn is materially different from the inflation assumption that is used at the Final Determination, then this mechanism would be likely to induce significant volatility into consumer bills during RP7.
  - Second, the effect of such a mechanism would be to negatively affect credit rating agencies' assessment of NIE Networks' business and financial risk, as NIE Networks' financeability metrics would no longer be stable and predictable, but potentially highly volatile from year to year. This increased business and financial risk would have a negative impact on NIE Networks' credit rating quality. Moody's specifically called out the potential effect of this

<sup>16</sup> DD, 13.44 - 13.49; DD, Annex H, 1.6 - 1.10.

volatility in its recent outlook for ESB (NIE Networks' parent company), and also illustrated its potential materiality, noting that:

*“Each one percentage point deviation leads to a 0.55% point change in allowed returns which would impact regulatory return over the period by £87 million”.*<sup>17</sup>

- Critically, this would make NIE Networks less attractive relative to their GB Networks peers. In its recently published SSMC for RIIO-3 Ofgem has said that it is:

*“not considering any changes to the principle of general inflation protection (ie keeping real returns stable relative to inflation)”.*<sup>18</sup>

Ofgem then has effectively ruled out a true up of this kind. More specifically, at RIIO-2, Ofgem stated explicitly that it did not consider an inflation adjustment mechanism appropriate noting that:

*“outturn inflation is not appropriate for deflating long term bond yields as it is not a measure of long-term inflation expectations”.*<sup>19</sup>

Therefore, implementing a mechanism of this type would significantly differentiate and could significantly disadvantage NIE Networks from GB networks, with whom it competes in debt markets. The overall effect of introducing an inflation true up mechanism to the cost of debt made through an annual true up could therefore be to result in NIE Networks' credit rating being downgraded. This would result in an increase the cost of debt and a reduced level of access to debt relative to GB Networks over RP7 and beyond. Ultimately, these costs would be borne by consumers from RP8 onwards in the form of higher embedded debt costs.

- Further harm to consumers may also arise from reduced investability relative to GB networks and a loss of investor confidence in the stability and predictability of the regulatory regime as a whole.

3.6 The Frontier DD Report illustrates that a 5% outturn inflation as compared to an allowed return set at the level of the DD could have *“severely negative consequences on NIEN's ability to finance its investment in RP7”*<sup>20</sup> and that *“NIEN's credit rating would be jeopardised bringing with it the risk of higher borrowing costs that would ultimately be borne by customers”*<sup>21</sup>. In particular, in this scenario, it would result in NIE Networks' credit metrics:

- Falling far below the threshold that Standard and Poor's have set for NIE Networks to retain its standalone credit rating of A-.

<sup>17</sup> Moody's, Issuer in-Depth- Electricity Supply Board (ESB), March 2024.

<sup>18</sup> Ofgem, RIIO-3 Sector Specific Methodology Consultation – Finance Annex, December 2023, 2.26.

<sup>19</sup> Ofgem, RIIO-2 Draft Determinations– Finance Annex, July 2020, 2.75.

<sup>20</sup> Frontier DD Report, 4.14.

<sup>21</sup> Frontier DD Report, 4.16.



- Decreasing to below the thresholds for a 'Baa' rating that Moody's set out in its guidance for regulated energy networks. If NIE Networks was considered to have a rating below 'Baa' then this would no longer be considered investment grade which would have a significant impact on its access to debt and its cost of capital.
  - For example: (i) the PMICR ratio is 1.02 on average over the period and falls to 0.89 in the last year of RP7 (equivalent to BBB rating with Standard and Poor's). Moody's guidance for a 'Baa' rating requires values in the range 1.4-2x; (ii) FFO to Net Debt is approximately 11.4% on average, which is marginally above the 11% threshold suggested by Moody's for a 'Baa' rating but (equivalent to BBB rating with Standard and Poor's) and below the 12% threshold set by S&P to retain NIE Networks' standalone A- credit rating. This metric is falling over the period and FFO to Net Debt in the final year of RP7 is significantly below the 11% Moody's threshold at 9.7%; and (iii) FFO Interest Cover ratio is also falling over the period and falls below the 2.8 'Baa' threshold (equivalent to BBB rating with Standard and Poor's) by the final year of RP7.
- 3.7 It would also change the financeability significantly relative to the UR's modelling, as set out in Section 2 above.
- 3.8 If the UR intends that adjustments would be made as a true-up to the RAB at the end of RP7:
- This would place the regime in NI on a significantly different footing to other regulatory regimes in GB. It would also be a significant departure from the approach at RP6. In particular, as noted by Moody's in their outlook for ESB, this would effectively remove the inflation protection on the nominal debt portion of the RAB.<sup>22</sup> After the true up, the debt portion of the RAB would only be indexed to the level of inflation assumed at the Final Determination regardless of the level of outturn inflation. This would represent a significant departure from the prevailing regulatory arrangements around inflation indexation for GB networks. This poses a significant risk to NIE Networks' credit rating quality, funding capacity, investability and cost of capital relative to GB networks with whom NIE Networks competes for finance.
  - Although the UR first introduced an inflation adjustment mechanism of this kind for the NI gas networks at GD23, none of the GB regulators, including in particular Ofgem, have yet introduced any similar mechanism.
  - Whilst Ofgem has been giving consideration to how to address the potential for differences in outturn inflation in the context of the upcoming RIIO-3 reviews, no decision on this matter has yet been taken. In addition, although Ofwat has also considered options to account for differences in outturn

<sup>22</sup> Moody's, Issuer in-Depth- Electricity Supply Board (ESB), March 2024.

inflation, it has ultimately decided to keep the current framework and not to introduce any change at this time.

- This risks creating significant negative effects as NIE Networks competes with GB Networks for funding. Introducing this mechanism risks NIE Networks being perceived as less competitive and attractive compared to GB network peers, which at this time still continue to benefit from tried and tested and well understood mechanisms for allowing the cost of debt and for indexing RAB, not subject to any inflation true up.
- Ultimately, a perception of higher business and financial risk, stemming from new and less well understood exposures, would lead to higher debt costs for NIE Networks which would in turn be passed onto consumers from RP8 onwards as the cost of embedded debt would be higher.
- NIE Networks notes that Moody's specifically called out the potential effect of the increased volatility in its recent outlook for ESB (NIE Networks' parent company) and also illustrated its potential materiality, noting that:

*“Each one percentage point deviation leads to a 0.55% point change in allowed returns which would impact regulatory return over the period by £87 million”.*<sup>23</sup>

Investors and credit ratings agencies' reactions to the introduction of a similar mechanism at GD23 also strongly bear this out. Moody's observed that Phoenix Natural Gas's credit rating quality was constrained by significant changes to the framework including the inflation adjustment mechanism.<sup>24</sup> Given the scale of the proposed RP7 investment, NIE Networks could ill afford a similar impact.

- 3.9 In addition, in 2006, a £550m portfolio of RPI linked interest rate swaps<sup>25</sup> was put in place to better match NIE Networks' inflation-linked revenues and act as a hedge (further details regarding these arrangements are set out at paragraph 4.23 and 4.24 of the Frontier DD Report). The introduction of an inflation adjustment mechanism would mean that NIE Networks' revenues related to the allowed cost of debt would no longer be index linked. Therefore, these swaps, which were taken out to reduce inverse inflation exposure in the legitimate expectation that the regulatory regime would be stable, would now give rise to unwanted and unexpected direct inflation exposure, since they will be swapping inflation exposure that NIE Networks would no longer have. These positions could not be unwound rapidly without incurring substantial costs.

<sup>23</sup> Moody's, Issuer in-Depth- Electricity Supply Board (ESB), March 2024.

<sup>24</sup> Moody's, May 2023, available at: [https://www.moodys.com/research/Moodys-changes-outlook-on-Phoenix-Natural-Gas-to-stable-affirms-Rating-Action--PR\\_476214?cy=aus&lang=en](https://www.moodys.com/research/Moodys-changes-outlook-on-Phoenix-Natural-Gas-to-stable-affirms-Rating-Action--PR_476214?cy=aus&lang=en)

<sup>25</sup> NIE Networks Annual Report & Financial Statements 2022, p.8.

## Conclusion

The introduction of an inflation adjustment mechanism as proposed in the DD gives rise to a number of material risks for NIE Networks and consumers in NI.

Given the very significant capital investment programme that NIE Networks plans to undertake over the course of RP7, NIE Networks considers that this is not the time to introduce uncertainty and instability into the price control which poses a significant risk to NIE Networks' credit rating, funding capacity, investability and cost of capital relative to GB networks with whom NIE Networks competes for finance. In particular, introducing this mechanism before Ofgem has taken a decision on its position risks increasing NIE Networks' cost of capital and reducing its level of access to capital by reducing its ability to compete with GB networks for funding.

NIE Networks requests that the UR does not include the inflation adjustment mechanism as part of its Final Determination for RP7, but instead retains the existing RP6 approach for now. The UR could then revisit its approach at RP8, including its appropriateness for NI consumers and investors, in light of Ofgem's decision on the treatment of inflation in RIIO-3 (as part of an overall determination package that is financeable and investable for GB networks).

## 4. GEARING

### The UR's decision and the issue

- 4.1 The UR's proposed gearing for RP7, being a point estimate of 55%<sup>26</sup>, is too low. Imposing a notional gearing that is inefficiently low risks hampering NIE Networks' ability to access all forms of financing to ensure an efficient capital structure in order to deliver its planned investment programmes for RP7.<sup>27</sup>
- 4.2 NIE Networks applied a gearing of 60% in its RP7 Business Plan<sup>28</sup> as an efficient capital structure as evidenced by the actual gearing of GB Networks, UK Regulatory precedent and guidance from credit rating agencies. Furthermore 60% is in line with the level of gearing that NIE Networks expects to reach in RP7 as a consequence for the need to finance a large investment programme efficiently.

### The proposed level of gearing is too low

- 4.3 The UR states that a gearing of 55% has been selected "*for the sake of computational simplicity*" while noting that "*WACC should not be especially sensitive to the choice of gearing ratio*".<sup>29</sup>
- 4.4 NIE Networks considers that it is important that the level of gearing applied is appropriate in the context of RP7. As set out in Section 6 of the Frontier DD Report:

<sup>26</sup> DD, 13.20.

<sup>27</sup> Frontier DD Report, 6.11 - 6.12.

<sup>28</sup> RP7 Business Plan, 13.31 - 13.33.

<sup>29</sup> DD, 13.20.

- UKRN guidance suggests that *“The level of notional gearing chosen represents the regulator’s judgement on the level of gearing which is appropriate for an average, efficiently-run, company, given the characteristics of the price control”*.<sup>30</sup> Economically speaking, the efficient capital structure is one that balances the costs and benefits of gearing. There are costs to gearing being below the efficient level as well as costs to being above the efficient level.
  - An efficient capital structure will ultimately provide best value to customers, since it should strike the best balance between finance costs, tax costs, incentives and resilience. Failure to adopt an efficient capital structure risks failing to strike an appropriate balance between costs and benefits – ultimately to the detriment of customers.
  - Regulated companies have an incentive to seek efficient capital structures as this reduces their financing costs. Given these incentives on NIE Networks, market evidence from similar regulated entities provides a reference point for considering efficient gearing levels.
- 4.5 The First Economics report provided at Annex J to the DD discusses various regulatory decisions which have applied gearing of between 45% and 60%. First Economics go on to note that *“there is no particular reason to think that NIE should not be ‘in the pack’ with the other regulated utilities”*<sup>31</sup>.
- 4.6 NIE Networks does not agree that applying a gearing level of 60% would mean it was "out of the pack" of other regulated utilities. To the contrary, there are a number of examples of other regulated entities that utilise a gearing level of 60% or above and remain financially resilient that are not addressed in the DD or the First Economics report. For example, as set out in Section 6 of the Frontier DD Report, over the RIIO-1 period, the average gearing on a RAV weighted basis across the electricity distribution comparators is 62%, and the average gearing across the electricity transmission comparators is 57%. The range of gearing across the entire group ranges from 50% to 68%.
- 4.7 Further, credit ratings agency guidance and methodologies also reflect their view of best practice in terms of efficient capital structures. Examples of credit ratings gearing ranges include:
- Moody's 2022 global methodology for Regulated Electric and Gas Networks has a gearing range of 60%-75% for the 'Baa' rating band (equivalent to BBB rating with Standard and Poor's) and 45-60% for the 'A' rating band (equivalent to A rating with Standard and Poor's). 60% would therefore be in line with NIE Networks' 'A-' rating that it currently has from Standard and Poor's). This is before UK specifics such as a relatively stable regulatory

<sup>30</sup> UKRN guidance for regulators on the methodology for setting the cost of capital, p.33.

<sup>31</sup> DD, Annex J, p.9.

regime compared to other geographies globally has been overlaid – which may raise this range, all else equal.

- Moody's 2018 ratio guidance for UK water utilities has a threshold regulatory gearing range of 65%-72% for a Baa1 rating.

- 4.8 NIE Networks concurs with the conclusion of Frontier Economics that this evidences that an assumed gearing of 60%, as proposed by NIE Networks, is consistent with credit rating agency and GB regulator views of efficient capital structures.

### Conclusion

The proposed level of gearing applied in the DD is too low and does not take account of available evidence on actual gearing in other sectors, recent regulatory precedent and credit ratings guidance which indicate that 60% gearing is efficient for regulated networks and compatible with financial resilience.

NIE Networks proposes that the UR revisit this issue for its Final Determination and apply gearing at a level of 60%.

## 5. COST OF EQUITY: RISK-FREE RATE

### The UR's decision

- 5.1 In the context of determining the allowed rate of return for NIE Networks for RP7, the UR has estimated in the DD an annual risk-free rate of 2.2%. NIE Networks accepts the UR's proposed methodology and calculations of the estimated risk-free rate, save in respect of the following point below (which is also discussed at Section 7.2 of the Frontier DD Report).
- 5.2 The risk-free rate in the DD has been estimated based on a weighted average of 20-year index-linked gilts and on AAA non-government bonds of 10-15 and 10+ years maturities<sup>32</sup>.
- 5.3 The UR is proposing in the DD that the risk-free rate is adjusted throughout RP7 to remove the forecasting risk<sup>33</sup> by indexing the estimated value of the risk-free rate determined in the Final Determination to movements in yields of 20-year index linked gilts. In Annex H of the DD, the UR indicate that the update to the risk-free rate would be *“the difference between the annual average out-turn value of the index and the value at our cutoff date for data on 30 September 2023 of 1.34%.”*<sup>34</sup> However, the original calculation *“uses yield data over the month to September 2023”*<sup>35</sup>. The average of the 20-year index linked gilt, in RPI terms, was 1.23% over September 2023.
- 5.4 NIE Networks considers that this is a technical mistake insofar as it would potentially result in the risk-free rate being updated by an incorrect amount (i.e., by reference

<sup>32</sup> DD, 13.30.

<sup>33</sup> DD, 13.42.

<sup>34</sup> DD, Annex H, 1.3.

<sup>35</sup> DD, 13.30.

to the spot value of the index of 1.34% rather than the value used in the initial calculation, which is 1.23%).

### Conclusion

While both spot values and short-term averages are valid methods to estimate the risk-free rate, it is important that the method used in the mechanism aligns with the initial calculation.

NIE Networks therefore requests that the UR revisit this in the final decision, so that the methodology for the calculation of the risk-free rate by reference to yield data for 20-year index-linked gilts, and the adjustment mechanism of the risk-free rate by reference to yield data for 20-year index-linked gilts are consistent.

## 6. COST OF EQUITY: TOTAL MARKET RETURN

### The UR's decision and the issue

- 6.1 The UR proposes in the DD to use a fixed expected market return of 6.5% as a component of the cost of equity.<sup>36</sup> The expected market return as referred to by the UR is commonly known as the total market return being the sum of the risk-free rate and the equity risk premium.
- 6.2 The DD states that “*Our chosen value is 6.5%, in line the recommendations made in a 2018 report for UKRN and with Ofgem’s estimate in its RIIO-2 reviews*”.<sup>37</sup> The First Economics report at Annex J to the DD further sets out various regulatory precedents for the total market return, which show that regulators have used values from 6.5-6.81% over the last few years, with the most recent decision being 6.8% by the CAA at H7. First Economics also note that the CMA reviewed the total market return extensively as part of its PR19 inquiry. This resulted in a range of 6.2-7.4% in CPIH deflated terms. However, since the CMA stated that the UR’s estimate of 6.5% at GD23 was not wrong, First Economics suggests that 6.5% is still reasonable for RP7.
- 6.3 In its RP7 Business Plan, NIE Networks proposed a total market return of 7.2%<sup>38</sup>, as informed by the analysis by Frontier Economics set out in its Cost of Capital Report, which was provided to the UR as part of the Business Plan.

### Concerns with the total market return rate adopted in the DD

- 6.4 NIE Networks considers that the range proposed in the DD is too low, as it does not reflect long run data and appears to rely on previous regulatory decisions that were taken in a low-interest rate environment that no longer prevails.
- 6.5 As set out in Section 7.3 of the Frontier DD Report:

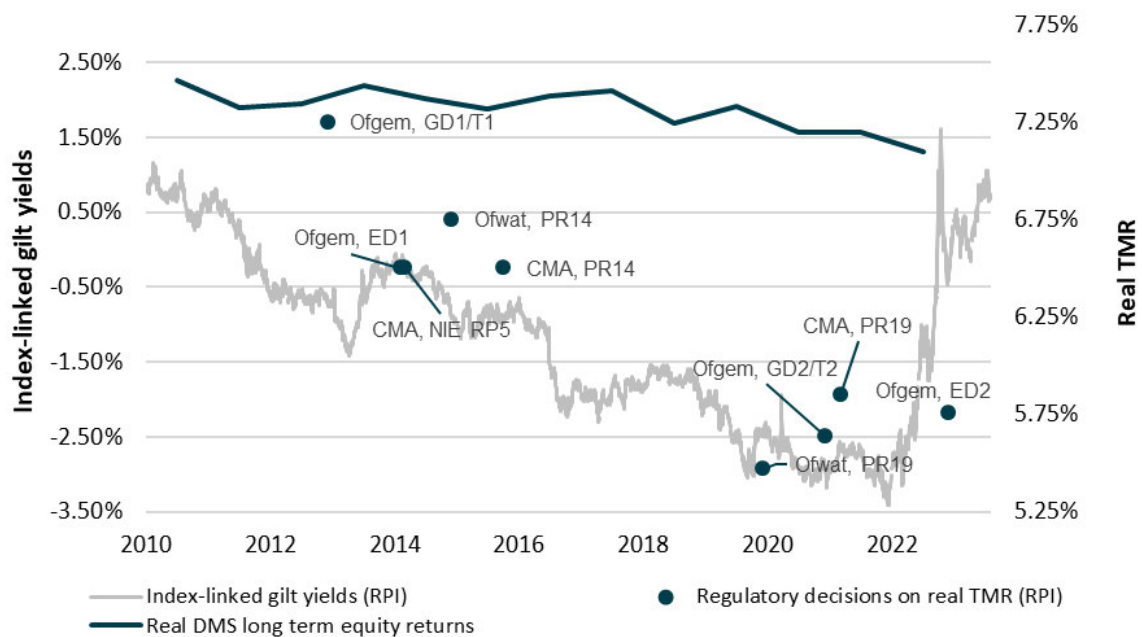
<sup>36</sup> DD, 13.31.

<sup>37</sup> DD, 13.31.

<sup>38</sup> RP7 Business Plan, 13.29 and Table 21.

- For the period 2010 – 2022, Frontier Economics has considered regulatory decisions on the estimated total market return, in light of data on real long-term equity returns over this period and yields on index-linked gilts (RPI). The output of this analysis is reproduced below in Figure 13.1, in which: (i) the blue line in the chart (right-hand scale) shows the real long-term equity returns have fluctuated in a narrow range roughly between 7.1% and 7.5% in real terms<sup>39</sup>; and (ii) the blue dots show regulatory decisions on the estimated total market return (also right-hand scale) in the same period, all converted to RPI-real terms for comparison purposes.

**Figure 13.1: DMS TMR versus regulatory decisions on TMR**



Source: Bank of England, DMS, Frontier Economics

- NIE Networks agrees with Frontier Economics' conclusion that, based on this figure, it is clear that regulatory decisions on the total market return have been influenced by the falls in market interest rates during the period.
- Commentary in previous regulatory decisions, Ofwat guidance and Ofgem consultation documents also indicates that the interest rate environment played a role in estimating the total market return in those decisions. For example, Ofgem's consultation on assessing equity market returns for the RIIO-ED1 price controls states that Ofgem decided to “give greater weight to the influence of current market conditions in relation to equity market return”.<sup>40</sup> Ofwat's "risk and reward" guidance for the PR14 price control also

<sup>39</sup> DMS has its own inflation series for the UK. Credit Suisse Global Investment Returns Yearbook 2023.  
<sup>40</sup> RIIO-ED1: Draft determinations for the slow-track electricity distribution companies- Financial Issues, July 2014.

set out that a key reason why Ofwat selected a range of 6.25% - 6.75% (RPI terms), which was a large reduction from the 7.4% total market return estimated in its PR09 decision was that *"monetary policy and investor appetite have significantly reduced Government and corporate bond yields and put downward pressure on returns across most asset classes"*.<sup>41</sup>

- This evidence demonstrates that the low interest rate environment was a significant factor in the falling estimate of the total market return in regulatory decisions over the past decade. However, given the marked changes in the current interest rate environment, these can no longer be considered appropriate precedents to follow in estimating the total market return for RP7.

6.6 There is the prospect of material harm to NIE Networks in estimating the total market return at too low a rate. As set out in the Frontier DD Report:

*"retaining an estimate TMR for RP7 of 6.5%, when that low level was set to meet the needs of the era of cheap money, runs the risk of creating a level of allowed equity return that is manifestly too low versus the cost of debt, and which would not be sufficient to attract or retain equity investment"*.<sup>42</sup>

#### **Estimating the total market return for RP7**

6.7 Frontier Economics has undertaken analysis of an appropriate estimate of total market return for RP7, which: (i) averages historical stock-market returns over a long period, consistent with the approach followed by many UK regulators; and (ii) uses a range of different estimators and averaging/holding periods in line with long-standing regulatory precedent of estimating historical returns using a range of measures.<sup>43</sup>

6.8 The output of Frontier Economics' analysis is included below at Figure 13.2. This demonstrates that CPIH deflated historical returns have varied within a relatively narrow range. In fact, all but one observation below falls between 6.6% and 7.2%.

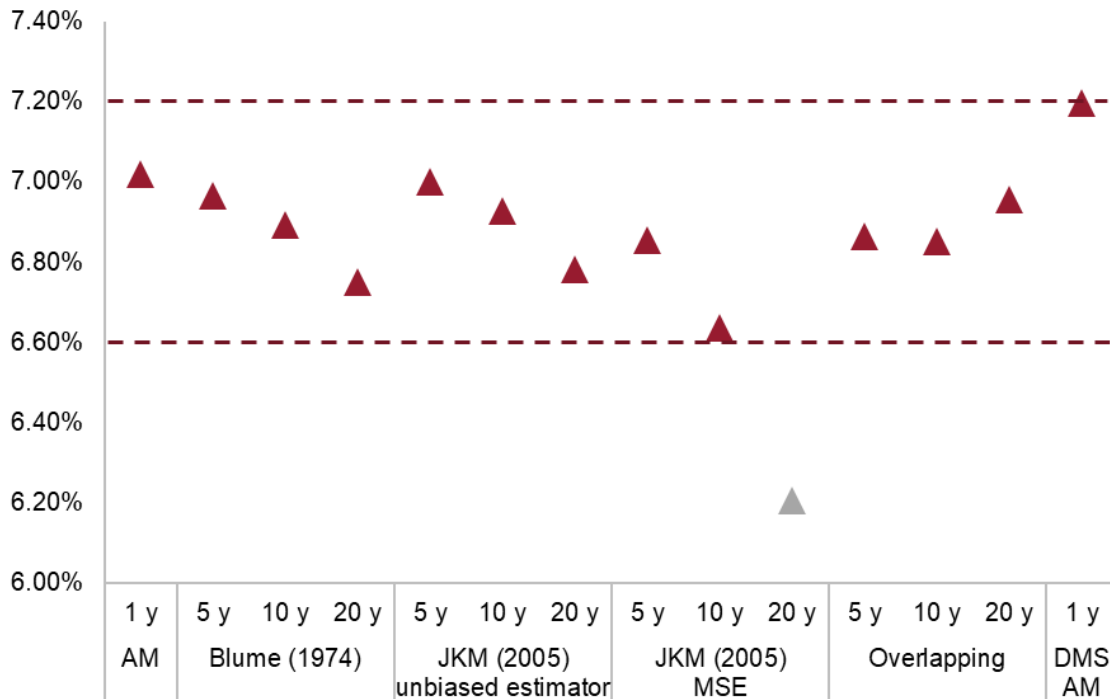
<sup>41</sup> Ofwat, Setting price controls for 2015-20 – risk and reward guidance, January 2014.

<sup>42</sup> Frontier DD Report, 7.34.

<sup>43</sup> Further details on the methodology used by Frontier Economics are set out in the Frontier DD Report, 7.35 – 7.38.



**Figure 13.2: TMR Estimates, CPIH-real**



Source: Credit Suisse Global Investment Returns Yearbook 2023, Frontier Economics analysis

### Conclusion

The total market return of 6.5% proposed in the DD is too low as it is not in line with long run data and relies on regulatory precedent that was developed taking account of the low interest rate environment at the time, which is no longer the case. Analysis undertaken by NIE Networks' advisers, Frontier Economics, demonstrates that a total market return in the range of 6.6% - 7.2% is appropriate for RP7.

NIE Networks requests that the UR set the total market return at the top end of the range of 6.6% - 7.2%, as proposed in NIE Networks' RP7 Business Plan. As set out in the Frontier DD Report, this approach is appropriate given the current interest rate environment and from the cross-checks set out in Section 7 below, since this is a key parameter which needs to adapt to these cross-check outputs.

## 7. COST OF EQUITY: CROSS-CHECKS

### The UR's decision

- 7.1 The UR states in the DD that, in calculating the allowed cost of equity, it uses the Capital Asset Pricing Model ("**CAPM**") to determine the returns that shareholders require in exchange for their equity investment.<sup>44</sup>

<sup>44</sup> DD, 13.29.

- 7.2 Using this approach, the equity risk premium is calculated as the difference between the estimate of total market return and the estimate of the risk-free rate. Under this calculation, where the total market return is a fixed value, as the UR has proposed in the DD, any significant movement in the risk-free rate risks having a consequential impact on the equity risk premium.

**Importance of cross-checks**

- 7.3 NIE Networks does not take issue with the use by the UR of CAPM outputs to calculate the allowed cost of equity estimates. However, NIE Networks considers that it remains important for the UR to cross check the CAPM outputs (or the outputs of any other cost of equity model that the UR might use in the Final Determination) in order to ensure that the cost of equity in the Final Determination is reflective of an appropriate equity risk premium level and that there is sufficient headroom for movement in the risk-free rate.
- 7.4 As discussed in Section 7.5.1 of the Frontier DD Report, this is particularly important: (i) in the context of RP7, where NIE Networks is intending to undertake a large capital investment programme over the RP7 regulatory period, and where the WACC estimate in the UR's final decision will therefore be critical; and (ii) in the current environment where capital market conditions have changed markedly over a short period.
- 7.5 Such an approach is also in line with UKRN's guidance for regulators on the methodology for setting the cost of capital which states:

*"Since the CAPM is just one model of expected returns, market benchmarks (such as market valuations from public markets or transactions) provide a sense-check on the CAPM point estimate when such market data are available. Despite judgement being required over their interpretation, such cross checks are important given they are founded on market pricing data".<sup>45</sup>*

- 7.6 For example, Moody's in its recent outlook for ESB has specifically highlighted that there is no proposed uplift to NIE Networks' allowed equity returns from the cash flow volatility arising from the proposed inflation adjustment mechanism to the cost of debt. It states:

*"We note that whilst Ofgem is considering making changes to inflation remuneration for the forthcoming regulatory period (proposed options differ to UREGNI's for RP7), they did not implement them for the current electricity distribution control. There is no proposed uplift to NIE Networks' allowed equity returns, e.g. through the asset beta or total market returns parameters, for the increased cash flow volatility arising from this adjustment*

<sup>45</sup> UKRN guidance for regulators on the methodology for setting the cost of capital, p.26.

*(or the risk of a RAB log-down if inflation is higher than the ex-ante estimate)."*<sup>46</sup>

- 7.7 Additionally, the Frontier DD Report highlights that an important cross-check to consider whether the cost of equity and cost of debt is appropriately calibrated is the spread between the allowed cost of equity and cost of new debt.

**The cost of equity versus cost of new debt cross check**

- 7.8 The UR in the DD proposes an allowed post-tax cost of equity of 5.15%<sup>47</sup> and a proposed cost of new debt of 4.59%<sup>48</sup>. This is a spread of 0.56%.

- 7.9 The Frontier DD report sets out that<sup>49</sup>:

- In a well calibrated scenario, the return to equity holders should command a premium above the return to debt-holders to reflect that debt-holders receive their contracted returns before equity holders receive the residual cashflows.
- In contrast, a scenario where returns available to equity holders are similar to debt-holders indicates that the allowed return on equity has been miscalculated. This can occur, for example, where certain combinations of inputs into the model used to estimate the allowed return on equity leads to an inappropriate overall outcome.
- Conducting a debt versus equity cross-check can help to identify these issues. The spread shows the difference in the post-tax cost of equity and the cost of new debt. This reflects the estimated difference in returns that each type of investor would expect to receive in the upcoming regulatory period.

- 7.10 NIE Networks considers that the headroom of 0.56% between the allowed cost of equity in the DD and the allowed cost of new debt in the DD is too low as it is not reflective of the higher risks faced by equity holders versus debt holders. This indicates that the cost of equity in the DD is not well calibrated.

**The spread between the allowed cost of equity and the allowed cost of new debt in the DD is too low**

- 7.11 As noted in the Frontier DD report, a spread of 0.56% is within a reasonable range of movement in the debt market and is not therefore sufficiently resilient to changes in the market. If the market moves up by, say 0.60%, the allowed returns in the DD would allow a lower equity return than the cost of new debt, which would be illogical.<sup>50</sup>

<sup>46</sup> Moody's, Issuer in-Depth- Electricity Supply Board (ESB), March 2024.

<sup>47</sup> DD, 13.36 and table 13.3.

<sup>48</sup> Frontier DD Report, Table 7.

<sup>49</sup> Frontier DD Report, 7.58 – 7.59.

<sup>50</sup> Frontier DD Report, 7.60.

## Conclusion

The proposed cost of equity of 5.15% post tax (real) is significantly lower than that proposed in the RP7 Business Plan (5.95%). This is not reflective of a rational investor's expectations of investing in electricity networks in the current higher interest rate environment. Consequently, NIE Networks concurs with the conclusion in the Frontier DD Report that the current spread between the cost of equity and the cost of new debt in the DD provides insufficient headroom against the cost of investment grade debt and therefore does not properly reflect the respective levels of risks of debt providers and equity investors.

### 8. COST OF DEBT: ADDITIONAL BORROWING COSTS

#### The UR's decision and the issue

- 8.1 As a component of the cost of debt, the UR has allowed NIE Networks an allowance of 0.1% for transaction costs on both embedded (i.e., existing) debt and new debt to be entered into during RP7.<sup>51</sup> The UR stated that its calculations “*exclude certain premia that NIE Networks claimed for in its business plan submission, such as the cost of carry and CPIH basis mitigation risk.*” This is on the basis that NIE Networks have not provided evidence that they have incurred these costs in the past or over the upcoming regulatory period.<sup>52</sup>
- 8.2 In its Business Plan, NIE Networks submitted that an allowance of 0.25% was representative of the costs associated with borrowing.<sup>53</sup> These costs included not only direct transaction costs (i.e., issuance costs and costs of liquidity/revolving credit facility), which are included in the proposed 0.1% allowance by the UR, but also additional costs of borrowing, namely cost of carry and CPIH risk mitigation.

#### Concerns with the decision to only provide an allowance for issuance and liquidity costs

- 8.3 NIE Networks considers that the decision in the DD not to include the full set of additional borrowing costs in the calculation of the appropriate allowance is incorrect. The exclusion of the cost of carry and CPIH basis mitigation risk is not consistent with UR's financing duty to fund efficient financing cost of the regulated company and is inconsistent with regulatory precedent.
- 8.4 In particular, Ofgem's Final Determination in relation to RIIO-ED2 includes direct transaction costs as well as cost of carry and CPIH basis risk mitigation within their calculation of allowance for transaction costs.<sup>54</sup> Ofgem granted an allowance of 0.25% for transaction costs in this decision, which is in line with the proposed allowance submitted by NIE Networks.

<sup>51</sup> DD, 13.21 – 13.25 and Table 13.1.

<sup>52</sup> DD, 13.24.

<sup>53</sup> RP7 Business Plan, 13.20.

<sup>54</sup> RIIO-ED2 Final Determination - Finance Annex, 2.23 - 2.24.

8.5 As detailed in Section 8.3 of the Frontier DD Report, both the cost of carry and CPIH basis risk mitigation are relevant additional transaction costs for NIE Networks:

- The cost of carry is the cost of raising finance by debt issuance ‘ahead of need’ and is essentially unavoidable in the pursuit of efficient debt raise. The corporate bond market typically operates at a benchmark size of at least £250 million per bond, for the deep and liquid section of the market, i.e. the portion of the market in which there is best value for debt raising company (and in this case customers). Often, £250m of proceeds cannot immediately be deployed in the business, as expenditure is phased over time, meaning that in the near-term the business has excess cash balances, thus incurring a cost of carrying this cash.
- CPIH basis risk mitigation reflects costs in relation to index-linked debt. These result from the UR’s decision to fully index the RAB to CPIH for RP7, moving away from RPI indexation. Since this change is new for RP7, this is a cost that has not yet been incurred during RP6. However, since this new approach will change the nature of NIE Networks’ financial exposure, there will be additional costs that occur during RP7 to mitigate this risk.

8.6 The Frontier DD Report<sup>55</sup> estimates the additional borrowing costs for NIE Networks over RP7, taking into account issuance costs, liquidity costs, cost of carry and CPIH basis risk mitigation. It concludes that the additional borrowing costs that NIE Networks face are around 29-34 bps. This is higher than Ofgem’s estimate from RIIO-ED2 of 25bps. The difference is because estimated carry costs are significantly higher over RP7 than the RIIO-2 estimate, due to the current high interest rates which affect the interest charge paid on these facilities.

### Conclusion

In provisionally setting the allowance for additional borrowing costs as a component of cost of debt in its DD at 0.1%, the UR omitted the cost of carry and CPIH basis mitigation within its calculation. NIE Networks considers that this approach excludes relevant costs and is inconsistent with previous regulatory precedent from Ofgem RIIO-ED2.

NIE Networks requests that the UR take account of the full set of additional borrowing costs when setting the allowance for transaction costs as a component of cost of new and embedded debt in the Final Determination and apply the allowance within the range 0.29% – 0.34%.

<sup>55</sup> Frontier DD Report, 8.21 - 8.26.

## 9. COST OF DEBT: RATIO OF EMBEDDED TO NEW DEBT

### The UR's decision

- 9.1 NIE Networks proposed a ratio of 25:75 embedded:new debt in its Business Plan for RP7.
- 9.2 In the DD, the UR has applied a ratio of 30:70 embedded:new debt. Based on the UR's response to Query 24, NIE Networks understands that: (i) the ratio calculated by the UR in the DD was determined by reference to the level of allowances proposed under the DD; and (ii) there is otherwise no significant difference between the methodologies applied by the UR and NIE Networks to calculate the ratio.
- 9.3 NIE Networks is content with the methodology used by the UR to calculate the ratio of embedded debt to new debt, but requests that the ratio be recalculated again at the Final Determination stage, based on the allowances reflected in the Final Determination.
- 9.4 This approach will ensure that the ratio applied will be consistent with the estimate in the Final Determination of the level of debt financing required in view of allowed totex. This accords with the First Economics report submitted to the UR<sup>56</sup> which states that "*The weights for the cost of existing debt and new debt are 30:70 to be consistent with the Utility Regulator's financial modelling. However, we note that the weights are sensitive to the size of NIE's RP7 capex allowance and, hence, there may be a need to revise the figures prior to the regulator's determination*".<sup>57</sup>

### Conclusion

NIE Networks requests that the UR recalculate the ratio of new:embedded debt at the Final Determination stage, based on the allowances reflected in the Final Determination.

## 10. FINANCEABILITY AND WACC – CHAPTER CONCLUSION

- 10.1 The UR's financeability assessment is not robust:
- It is based on artificially low gearing achieved by an assumption of withholding dividend payments in the early years of RP7 (which is not an appropriate assumption for a notional company and not consistent with the current approach of regulators in GB).
  - It does not factor in the material downside risks posed by its proposed inflation adjustment mechanism to the cost of debt for WACC.
  - It does not sufficiently take into account how plausible changes in some of the assumptions underlying the WACC estimate could result in NIE Networks' financeability declining against a number of metrics, putting NIE

<sup>56</sup> First Economics, 'An Estimate of NIE's RP7 Cost of Capital', 3 October 2023.

<sup>57</sup> First Economics, 'An Estimate of NIE's RP7 Cost of Capital', 3 October 2023, Section 5, p.11.

Networks' credit ratings at risk which would in turn impact its level of access to and cost of debt.

- 10.2 Additionally, the UR's approach to estimating the WACC raises a number of significant concerns, including in relation to the impact of the inflation adjustment mechanism as well as a number of other components (i.e. the cost of equity is not sufficiently reflective of the higher risks faced by equity providers versus debt, the notional gearing assumption is not reflective of an efficient capital structure, the allowance for estimating borrowing costs is understated relative to market costs and regulatory precedence), resulting in an underestimate of WACC for RP7.

Overall, NIE Networks requests that the UR reviews its approach to WACC and financeability assessment at the Final Determination and sets a WACC that is more in line with the proposals by NIE Networks to enable it to efficiently secure the necessary finance at competitive market rates to deliver the significantly increased investment in the £2.5bn RP7 plan to facilitate decarbonisation and maintain a safe, reliable and resilient network.

## CHAPTER 14

### CONSUMER MEASURES AND CONSUMER ENGAGEMENT

#### **SUMMARY**

This Chapter relates to the UR's proposals for Consumer Measures and Consumer Engagement for RP7.

NIE Networks identifies in this Chapter certain considerations to which the UR should have regard when further developing and applying its proposed measures.

#### **1. CONSUMER MEASURES AND ENGAGEMENT**

- 1.1 Chapter 9 and Annex U of the DD relates to the UR's proposals for Consumer Measures and Consumer Engagement for RP7. NIE Networks' Business Plan proposed one set of formal measures and targets and proposed that further appropriate measures and targets could be developed through the Consumer Engagement Advisory Panel ("**CEAP**"), during the RP7 price control period.
- 1.2 In this context, the UR is proposing that data is collected and reported on for a number of measures including some of those set out in Ofgem's RIIO-ED2 determination. This would be done through CEAP and also published. This will allow for a benchmark in NIE Networks' performance to be established. It will also provide a reputational incentive when compared against GB counterparts, despite no formal target being set at this point. In parallel, through CEAP, appropriate measures and targets can be developed. These may be specific measures for NI or using those established in GB and set out in RIIO-ED2 (if deemed appropriate).
- 1.3 NIE Networks' comments in this regard are as follows:
  - There is a level of ambiguity around the consumer measures and targets for RP7 which means there is uncertainty around the baseline performance that will apply to the Customer Service Quality aspect of the Evaluative Performance Framework.
  - NIE Networks considers that the outcome of the Final Determination will be an important consideration for appropriate consumer measures and targets to be set.
  - NIE Networks considers that appropriate time needs to be given to gather enough information on the proposed new consumer measures set out in Annex U Table 1 Summary of proposed Customer Measures to establish baseline performance.
  - RIIO-ED2 is not an appropriate comparator for RP7 customer satisfaction targets. GB DNOs have experienced significant customer satisfaction improvements as a result of Ofgem's Customer Service and Connections



Incentives during RIIO-ED1. The UR has accepted a RP7 customer satisfaction target of 8.2 which NIE Networks considers appropriate. This target of 8.2 aligns to RIIO-ED1 which is an appropriate comparator given that it represents a benchmark target for customer satisfaction prior to incentives being introduced for GB DNOs, which is the case for RP7.

- 1.4 The UR should have regard to these considerations when further developing and applying its proposed measures.

## CHAPTER 15

### IMPACT ON CUSTOMER BILLS

#### SUMMARY

This Chapter relates to the impact on revenue entitlement and customer bills of the RP7 price control:

- As proposed by the UR in the DD; and
- In the event the proposals put forward in this Response are accepted by the UR when setting the Final Determination for RP7.

#### 1. INTRODUCTION

- 1.1 In this Chapter, NIE Networks considers the impact on revenue entitlement and customer bills.

#### 2. ENTITLEMENT

- 2.1 NIE Networks' RP7 Business Plan included a distribution revenue request of £1,838.4m<sup>1</sup> in 2021/22 prices. For transmission, the revenue request was £495.9m<sup>2</sup>.
- 2.2 The UR's DD proposals include a distribution revenue amount of £1,715.1m, and a transmission amount of £485.1m.<sup>3</sup>
- 2.3 If the UR accepts all of NIE Networks' proposals put forward in this Response when setting the Final Determination for RP7, this would result in a distribution revenue amount of £1,824.0m, and a transmission amount of £456.1m.
- 2.4 NIE Networks' requested distribution revenues are higher than those allowed in the UR's DD because NIE Networks is proposing that the UR re-instate (almost) all of the expenditures it has disallowed in the DD. However, the requested transmission revenue amount is lower than the UR's DD. This is due to a re-profiling of major transmission works (D5 projects), with a greater volume of the work now occurring in the latter years of RP7 compared to NIE Networks' RP7 Business Plan. As a result, NIE Networks would receive lower transmission-related revenues in the early years of the price control period.

<sup>1</sup> This figure is different from what was in NIE Networks' RP7 Business Plan submission (at £1,717.9m – RP7 Business Plan, 14.7) and also the UR's DD (at £1,823.2m – DD, Table 13.6). The reason is because of differences in the method applied to adjust the price base to 2021/22 prices, and also because of the use of more up to date inflation figures between the RP7 Business Plan submission, DD publication, and development of this Response.

<sup>2</sup> As above. The figure in the RP7 Business Plan submission was £463.4m (RP7 Business Plan, 14.8), and the UR's DD £491.8m (DD, Table 13.6).

<sup>3</sup> DD, Table 13.6, p.78.

### 3. IMPACT ON BILLS

3.1 Table 15.1 below sets out the impact on customer bills by customer type of:

- the proposals in NIE Networks' RP7 Business Plan;
- the UR's DD; and
- NIE Networks' proposed outcome for the Final Determination (whereby the UR accepts all of NIE Networks' proposals put forward in this Response).

It shows changes in the network charge element of an average bill in 2024/25 i.e. the last year of RP6, as compared to an average bill in 2030/31 i.e. the last year of RP7.

3.2 As can be seen in Table 15.1, the outcome for the Final Determination proposed by NIE Networks in this Response would lead to a modest increase in customer bills by the end of RP7. However, this increase occurs in a more gradual manner compared to the proposals in NIE Networks' RP7 Business Plan. This is due to the re-profiling of major transmission works referenced above at paragraph 2.4, the impact of which is that customer bills rise more gradually throughout RP7 rather than experiencing a sharper immediate increase in the early years.

**Table 15.1: Change in average network charges between 2024/25 and 2030/31, £**

Customer group	Typical MWh p.a.	Network charges: original RP7 BP				Network charges: Draft Determination				Network charges: FD proposal			
		24/25, £	30/31, £	Change		24/25, £	30/31, £	Change		24/25, £	30/31, £	Change	
				£	%			£	%			£	%
Domestic	3.4	173	182	9	5%	173	170	-3	-2%	173	180	6	4%
Small businesses	16.4	718	795	77	11%	718	742	23	3%	718	782	64	9%
SME, LV connected	275	10,762	12,222	1,460	14%	10,762	11,409	647	6%	10,762	12,020	1,258	12%
SME, HV connected	1,593	38,848	44,983	6,136	16%	38,848	42,206	3,358	9%	38,848	44,148	5,300	14%
LEU, HV connected	5,457	98,095	115,391	17,296	18%	98,095	108,868	10,774	11%	98,095	112,990	14,895	15%
LEU, 33kV connected	31,075	295,809	367,751	71,942	24%	295,809	352,823	57,014	19%	295,809	357,603	61,794	21%