



SONI Ltd  
Price Control Submission  
2010-2015

Performance Incentives  
An Initial Discussion Framework

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## INTRODUCTION

### PURPOSE OF PERFORMANCE INCENTIVES

Performance incentives are an important component of revenue or price cap regulation. Performance incentives complement the requirement for a regulated business to efficiently manage costs by ensuring that the business also has an incentive to improve on quality and performance. The revenue cap and performance incentives taken together promote the most efficient CAPEX and OPEX by balancing the incentive to reduce actual expenditure with the need to maintain and improve quality and performance.

SONI welcomes the opportunity to engage with the Authority to discuss suitable performance incentives to its TSO business where the effect can be valued by customers. In particular, SONI believes that if meaningful incentives are set which are realistic yet challenging, with an appropriate balance between the potential benefit to consumers and potential reward to the business, then – as in a competitive market – both the consumer and business will have the potential to benefit from improved performance.

### BACKGROUND

The primary financial incentive which exists for the business is the operation of the revenue cap itself. The revenue cap should be set at a level which is consistent with the risk profile for the business and which takes into account the probability distribution of likely, or possible, outcomes. The arrangements under the revenue cap for the retention of savings on the one hand, and exposure to overspend, on the other, forms an important backdrop to the discussion of further performance incentives. The rolling retention of savings in the cap, which equalises the incentive to deliver them whenever within the control they might be identified, is worthy of consideration as part of discussion of the revenue cap itself, and the underlying principles which it is appropriate apply. This regime is widely applied in other sectors, and internationally.

SONI is an atypical utility business; indeed it is more akin to a service company operating in the utility sector. SONI is asset light with correspondingly limited underlying equity return on capital employed. Indeed its primary resource is not its physical, but its human and intellectual capital. While the submission made by SONI will most probably see its physical capital decline over the period, depending upon the basis of write down, it does include a significant investment in human and intellectual capital. While this intellectual capital can, from time to time, deliver benefits directly to SONI Ltd. it is for the most part involved in identifying solutions and delivering benefits to consumers and the industry at large.

The SONI submission is asking the Northern Ireland consumer to make an investment in that human and intellectual capital: this investment ought to repay many times over. The investment must, however, be supplemented by incentives which harness that investment and elicit the appropriate behaviours: giving focus not solely to areas of financial interest to SONI but to consumers and the wider industry. This can then find its focus in the business planning and management accountability at the heart of the organisation itself.

The focus must be on outputs; this makes it clear that the investment is not a cost to consumers but actually a benefit, providing a 'return'. Some of these outputs may be directly financial; many however, will be about the provision of improved quality services. SONI has not had performance based incentives applied during its previous price control and there was uncertainty as to the nature of the business post divestment. The increased maturity of the business, the bringing of that business and that of the EirGrid TSO licence under a group governance structure through the EirGrid Board, the challenging targets for the integration of renewable generation over the next price control period, combined with the investment which the Northern Ireland consumer is now making in developing SONI to be a separate and fit for purpose business, mean such a framework is not only appropriate, but essential.

In summary:

- A performance incentive regime must complement the underlying revenue cap model, including the underlying risk structure of the business.
- The ability to absorb downside risk must be measured against the 'thinness' of the SONI business itself and the impact of poor performance on reduced equity returns.
- The SONI submission represents a necessary investment in human and intellectual capital. It is important that this investment is harnessed and augmented through well designed performance based incentives.
- A focus on output and delivery will help demonstrate this investment is to the benefit, and not the cost, of Northern Irish consumers.

The thoughts proposed in this paper are outline in structure and are predicated upon the rest of the submission as made by SONI being considered in the round. The appropriate financial upside and downside associated with the incentives, both individually and as a package, will depend on the overall outcome of the revenue review, the specific targets that are set, and the design features of each of the incentives. SONI looks forward to discussing the incentives and associated financial arrangements with NIAUR.

## POTENTIAL INCENTIVES AND DESIGN CONSIDERATIONS FOR 2011-2015

### POTENTIAL INCENTIVES

SONI has considered whether there are possible measures which meet the following criteria:

1. Areas of System Operator performance which are likely to deliver significant benefit to SONI's customers and/or contribute significantly to the Government's energy policy goals;
2. Areas in which performance is able to be objectively observed and measured, either by the company or externally; and
3. Areas in which the company is able to exert a reasonable degree of influence, including through further investment or through the implementation of new measures or processes.

SONI would seek to build upon its experience, while still recognising that under the current industry arrangements SONI has limited ability to bear risk and, in some areas, limited ability to influence outcomes.

It is important that incentives for SONI are harmonised, in so far as possible, with those of EirGrid in the Republic of Ireland, so that benefits are maximized across the island of Ireland. However, in the case of network delivery incentives, SONI does not have the same scope as EirGrid to influence network delivery. Therefore some alternative measures are also proposed.

### INCENTIVE DESIGN CONSIDERATIONS

Where investment is required to improve performance, the incentive needs to be designed with a reasonable prospect that investment in new tools or in changing processes will be returned in the form of incentive payments in order to be effective. As long as the benefit to consumers is greater than the incentive payment, then this will ensure an overall welfare improving solution.

#### *Term of incentive*

It is becoming well recognised that increasing the term of performance incentives can increase their efficacy. We note that the CER has, in its draft determination, endorsed EirGrid's proposal for longer term incentives and we welcome this and would propose something similar.

#### *Balance of risk and reward*

SONI therefore considers that each incentive needs to be carefully designed taking into account the potential value to customers, the degree to which the company has to invest to improve

performance, the certainty with which the baseline level of performance can be set etc. All of these factors imply that the risk and reward balance may differ for each incentive. A degree of asymmetry needs to be applied to the incentives such that, despite the limited ability of the TSO business to bear risk, it will be possible to increase the power of incentives to the ultimate benefit of consumers.

Indeed, there are potential mechanisms, widely used internationally, through which the incentive mechanism can provide for greater potential benefit to consumers while recognising the constraint of maximum exposure to the TSO. The appropriate design for any given parameter will taking into account features such as the potential upside benefit to consumers, the extent to which it is within the business's control, and the costs that would likely need to be incurred to improve performance.

There are a number of mechanisms through which the overall risk and reward balance can be altered. For example:

- A degree of asymmetry can be built into the upside or downside available (i.e. either greater upside reward than downside penalty available or bonus-only incentives). Asymmetry is relatively common internationally, particularly where there is significant potential upside benefit to consumers as it does allow for an increase in the power of the incentive.
- Incentive dead-bands can be applied whereby there is a band around the central target before the incentive kicks in. This may be appropriate where there is uncertainty as to the appropriate target to set, for example, due to a lack of historical data. The downside is that it reduces the power of the incentive.
- Gain-sharing or finder's fee arrangements whereby the company is rewarded with the retention of a share of the benefits that accrue to customers through an innovation it has brought forward. This is appropriate where entrepreneurial effort has the potential to deliver significant gains to customers but where the company would not otherwise gain from the innovation.

In each instance the incentive must be designed to incentivise the behaviour it is wished to be incentivised – only then will the incentive be well designed. Nonetheless in a number of instances it is important to signal intent in relation to performance even when the company has only a limited ability to exert influence. This is the case in relation to the application targets such as against System Minutes Lost (SML). SONI is proposing that, as in the case of EirGrid, there should be such a target.

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#### DELIVERY OF HIGH QUALITY SERVICE TO INDUSTRY AND CONSUMERS

It is important for both industry and consumers that SONI not only performs its roles as set out in statute and in licence adequately but performs them well. Moreover these areas, as compared to wider System Performance targets, are within the compass and control of SONI as a business and are

related not only to the equity return but to the underlying investment in human capital. For all these reasons they may be more amenable to the application of symmetric incentives, and ones with greater potential downside in the case of poor performance, than most. While the precise design remains the subject of further discussion the following are clearly worthy of consideration.

- Timely delivery of meter data to the SEM in the role of Meter Data Provider (MDP).

It is critical that timely, accurate meter data (and other data) is provided to SEMO to allow the market to be priced and settled. SONI have a formal role as Meter Data Provider in SEM in relation to generation. Although it is a requirement under the TSC, the late delivery of data could require market re-pricing and re-settlement and generate considerable overheads for market participants. Therefore some incentive might be considered appropriate around timely meter data delivery.

- Development of the NI Grid Code to ensure the timely delivery of new connections.

As the number of renewable connections continues to grow over the price control period, it is essential that the NI Grid Code has the required flexibility to deal with all types of new connections. Therefore SONI would consider that some type of incentive may be appropriate in the short term.

- Timely publication of documents; in particular:-
  - Transmission capacity Seven year Statement
  - Generation Capacity Seven Year Statement
  - Transmission System Performance Report
  - Charging Statement

These documents are very critical to the electricity industry and it is therefore appropriate an incentive against their timely, and high, quality, production be considered.

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## SYSTEM OPERATION INCENTIVES

This section discusses the potential areas for system operator incentivisation against standard system operator metrics

### **System Minutes Lost**

System Minutes Lost represents the international benchmark for system performance and reliability. The index measures the severity of each system disturbance. It is determined by calculating the ratio between energy not supplied during the outage and the energy that would be supplied during one minute, if the supplied energy was at peak load value. When this index has a value equal or greater than one System Minute Lost, the incident is classified as major. The incentive would be on the cumulative total of system minutes lost due to transmission faults.

An incentive on system minutes lost is volatile - this was noted in the discussions between EirGrid and SKM and by SKM in their report to CER. SONI considers that an incentive against System Minutes Lost is a measure of direct importance to customers. However, the incentive would need to be designed taking the inherent volatility into account.

This proposed incentive is also directly related to the close management of the relationship with NIE through the Transmission Interface Agreement and will have the added value in ensuring the TSO and the TAO work together to minimise system outages.

### **System Frequency Management**

SONI proposes that in recognition of the importance to customers it should be incentivised to manage system frequency. Moreover Northern Ireland's system is synchronous with that in the Republic of Ireland and EirGrid also has in place such an incentive. Northern Ireland's nominal operating frequency is 50Hz. In order to maintain the frequency within the statutory limits of 49.5Hz to 50.5Hz, SONI has to balance generation with demand on a second by second basis. Too much generation on the system will cause the frequency to rise and too much demand will cause the frequency to fall. To ensure that the system isn't operated outside of the statutory limits, SONI sets a more restrictive operational frequency limit of 49.8Hz to 50.2Hz.

The increasing penetration of wind on the system, with the inevitable fluctuations that arise, increases the challenges associated with managing system frequency. Such an incentive will also inevitably lead to even greater north south co-ordination and more active monitoring.



The incentive would relate to the percentage of time that frequency is maintained in a specified range noting that, as the amount of intermittent generation increases, the “optimal<sup>1</sup>” target may be reducing.

### **Demand Forecasting**

External costs are, by their definition, to a considerable extent outside the direct control of the TSO and the means through which prudent management can exert influence upon their overall level can be limited. However, SONI considers that the introduction of incentives in these areas, when practicable, would be beneficial. Constraints and Ancillary Services are a significant element of electricity costs and their prudent management is of considerable benefit to consumers. It is not, however, appropriate at this time, and following the introduction of a new regime to consider widespread incentives around their management.

One of the key areas where SONI does have some ability to directly influence constraint costs is through effective demand forecasting as costs arise to the extent that there are differences between the market schedule of generation and the actual generation dispatch. Constraints costs are jointly forecast on an all-island basis by EirGrid and SONI and recovered through the SEMO Imperfections Charge. They are treated as pass-through costs reflecting the degree to which the assumptions underpinning the forecast are subject to a number of factors outside the control of the TSOs.

Of course, foresight of the system conditions, whether it be system demand, or wind penetration, represents only a small proportion of the Dispatch Balancing Costs and the ability to improve upon it, with increasing challenges of greater intermittency, a smaller sub component still. The design of an incentive in this area should take account of the limited potential for improvement as compared to the potential significant downside risk but may nonetheless be important.

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<sup>1</sup> Because the increase in intermittent generation will increase the costs of managing system frequency, the optimal target may change given the changing balance between costs and benefits.

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## NETWORK DELIVERY AND RELATED CONSIDERATIONS

SONI recognises the increasing importance of the timely delivery of network build, particularly in light of the Government's 40% target for renewables. However, SONI can only be incentivised for those elements that are able to be influenced to a considerable extent by the TSO. Under the current industry structure, SONI's direct influence is limited to providing comments on the NIE network investment plans and connection offer and use of system offer times.

Notwithstanding the above limitations under the current industry structure, SONI recognises the increasing importance of network delivery and the potential benefits of improvements in network design and policy. SONI therefore has an appetite to be incentivised where appropriate.

SONI proposes that consideration be given as to whether it be incentivised in relation to the delivery of two of these activities:

- the timely delivery of transmission connection offers
- the timely delivery of transmission use of system offers

In consideration of these incentives, it would only be appropriate at such a time as a suitable customer tracking system is introduced, so therefore may be appropriate from the 2<sup>nd</sup> or 3<sup>rd</sup> year of the price control. It would be important that any such incentives are appropriately aligned with the incentives placed upon NIE, given SONI's dependence on NIE through the TIA.

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## INNOVATION – THE REWARD FOR INTELLECTUAL CAPITAL

In the EirGrid TSO Review, the CER and its consultants recommended incentives in relation to the investigation of measures to make more efficient use of the network. Specific examples noted in the EirGrid context were the use of active network management techniques and tools such as dynamic line ratings and advanced protection/control schemes.<sup>2</sup>

Similarly, SONI recognises that, in its role as TSO, technological advances and innovations may be possible that would bring about significant benefits to consumers. However, under the industry model, SONI has no direct financial incentive to seek out such innovations as the outcome does not impact on its own internal revenues. This is particularly the case where the pursuit would require additional expenditure by the company, such as through intellectual capital.

SONI is therefore proposing consideration of a gain-sharing mechanism or finder's fee in respect of such innovations where the TSO can clearly demonstrate that a policy or design innovation,

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<sup>2</sup> SKM Final Report *Review of Transmission System Operator Costs 2006 to 2015*, p. 84

investigated and introduced by the business, results in a demonstrable benefit to the electricity consumer. This would incentivise SONI to utilise its intellectual capital to seek out innovations which consumers' value. The potential benefits to consumers under such an arrangements would be significant. The finder's fee approach is typically considered appropriate whereby entrepreneurial effort has the potential to deliver significant gains to customers but where the company would not otherwise gain the from the innovation.