

## **NIAER Consultation Paper – 5<sup>th</sup> July 2005**

### **Supply Competition for domestic customers**

#### **1. Introduction**

- 1.1 The European Union requires all member states to open their markets to retail competition at the household level by 1 July 2007. This means that a householder has to be free to move from NIE's Supply Business (the PES) to another supplier.
- 1.2 The establishment of full domestic competition will require considerable investment in IT systems in order to enable the complex billing and consumption data to be transferable between potential suppliers. It is estimated that it cost £60 per customer in the Republic of Ireland to establish the necessary systems to allow full electricity competition. The complex IT systems have to be able to manage the volume of data flows between all the parties to the supply chain for each of the 17520 trading periods each year. These IT systems are expensive. Since market opening is a legal requirement and not just an option there is no point applying a rigorous cost benefit analysis. There is however every reason for ensuring that it is implemented at least cost.
- 1.3 From a Northern Ireland perspective the overriding concern with the market opening project is whether the cost of establishing the detailed payment systems will outweigh the potential cost savings to customers. In a market already characterised by high prices, it is essential that implementing the EU directive does not lead to even higher electricity prices to Northern Ireland domestic consumers.
- 1.4 There are essentially two options available.
- 1.5 The first is to add on full market opening to the Further Electricity Market Opening (FEMO) model which would allow 100% of customers to switch their supplier contemporaneously in 2007. The FEMO model has been developed in order to enable all non-domestic customers to be able to choose their electricity supplier.
- 1.6 This 'big bang' approach would be similar to that adopted by the Republic of Ireland (albeit using different IT configuration), which is based on the GB model. The methodology is based on load profiling where domestic customers are allocated a profile of a 'standard' consumption pattern and billed on their total kWh consumption based on this assumed profile. The profiling approach necessarily implies cross-subsidisation between customers whose consumption varies across different hourly periods with different associated costs of supply.
- 1.7 The costs of setting up an IT system to allow this degree of contemporaneous market opening based on a profiling approach are likely to be in the tens of millions of pounds. With a high likelihood that insubstantial customers will

actually switch suppliers, it is necessary to examine whether full market opening can be achieved by a cheaper option.

- 1.8 The second option is to take an incremental approach to market opening by enabling customers to switch on a piecemeal basis as required / requested. This approach would require the installation of a Seasonal Time of Day (STOD) meter (or similar half-hourly meter) in the switching customers' premises.
- 1.9 The rationale for undertaking the second approach is that it is likely that very few domestic customers would actually wish to change their supplier initially and, moreover, it is quite possible that there will not be much competition between second-tier suppliers to supply domestic customers. If this is the case then the costs of installing half-hourly meters into the homes of those domestic customers who do indeed wish to switch are likely to be substantially less than the total cost of the 'full' market opening approach.
- 1.10 This consultation paper examines the issues which may arise from taking the second approach to full market opening.

## **2. The Challenge of Retail Competition at Household level.**

- 2.1 At present all non domestic customers are entitled to change their supplier. There are about 55,000 non domestic customers in Northern Ireland and they account for about 60% of the electricity consumed. Of the 55,000 about 11,500 accounting for about 40% of the electricity consumed in Northern Ireland have switched supplier. Of these about 9,000 have switched to renewable suppliers and they account for about 5% of total demand.
- 2.2 Non domestic customers switch supplier because other suppliers are able to offer more attractive prices than the PES since they are able to offer a customised contract to each customer – something which the PES is not free to do as it must sell on a published tariff.
- 2.3 Competition is normally regarded as being good for customers because it increases choice and lower prices. In the case of a small electricity market as these benefits may not be fully realised because of additional transaction costs and lack of competition there is an onus on the Authority to ensure that full market opening delivers additional tangible benefits to customers.

## **3. What sort of market?**

- 3.1 As has already been mentioned the cost of producing and delivering electricity varies in each of the 17,520 half hours in the year. This is because when demand is high less efficient machines - which cost more to run - must be brought into play. But it is also because the capacity of the network must be large enough to support the volume of peak periods of demand. Electricity is however sold by the PES on a basis which averages unit costs either over

every half hour in the year in the case of domestic customers or over blocks of half hours in the case of non domestic customers.

- 3.2 For domestic customers in aggregate the price they pay for their electricity is cost reflective. At the level of the individual customer the amount they pay will be more or less than the value of the electricity they are actually using. This is because one customer could be using the majority of their electricity at off-peak (cheaper) times while another customer could consume most of their electricity at peak (dearer) times. The PES only bills on total consumption and assumes an average profile of consumption across time periods.
- 3.3 In addition the cost of servicing – billing, meter reading, providing a meter etc – is the same for the PES irrespective of whether a domestic customer uses 1,000 or 10,000 kWhs of electricity. According to NIE's figures 3% of customers account for 11% of domestic consumption.
- 3.4 Selling electricity to customers on a profile i.e. charging exactly the same price irrespective of its cost is in any event open to criticism. It provides no signal to customers that they should reduce demand when prices are high and – where possible – defer demand to lower price periods. STOD pricing would save customers money – or oblige them to pay a more cost effective price for using electricity in expensive periods. It would also be good for the environment since lower demand at peak times would mean less use would be made of more polluting plants. The justification of staying with profiling despite these disadvantages is that moving to a STOD based system would be complicated and expensive.
- 3.5 Irrespective of the cost of establishing full market opening on either a load-profiling or STOD basis there is an additional problem with the profiling method. Full domestic market opening with profiling would enable a second tier supplier (STS) the possibility of identifying the more profitable customers and creaming these off. These would be customers with above average demand, below average risk of debt and better than average profiles. The danger would be that losing these customers would increase the average costs of the PES for servicing customers and increase the profiled tariff unit costs. The effect would be that market opening could reduce electricity prices for the larger users who are generally better off but increase them for the generality of domestic customers who do not switch or not targeted by an STS.
- 3.6 One way of avoiding the possibility of STSs being subsidised by the PES's customers would be to require STSs to sell their electricity on a STOD basis to their domestic customers.
- 3.7 The full opening of the market provides both the opportunity and reinforces the necessity for moving all customers in Northern Ireland to STOD tariffs. This could over time include all customers who chose to remain with PES.

#### **4. Securing value for customers.**

- 4.1 Moving to full domestic competition based on profiling would confer costs but at best doubtful benefits to domestic customers. Basing the full liberalised market on STOD pricing is the key step to delivering value.
- 4.2 While any domestic customer who could find an STS to offer a STOD tariff superior to that offered by the PES would be better off in a liberalised market there are three customer categories who might be expected to benefit. These are:
- (a) gas customers who could receive a dual fuel contract – i.e. deal with one company for their gas and electricity. The potential for dual fuel is at present limited due to the small scale of the gas market but it will grow year on year. Electricity charging on a STOD basis re-inforces the appeal of a dual fuel product as it re-inforces the benefits of cooking and tumble drying using gas. The immaturity of the potential dual fuel market is a further reason for not favouring a “big bang” approach in 2007. (Dual fuel could of course apply to other fuels. In principle a coal, oil or wood supplier could obtain an electricity supply licence and offer a dual fuel option.).
  - (b) customers who want to buy from a renewable supplier. There will be much more scope for a variety of products in the renewables market than in the “brown” electricity market. There is also no reason why renewable suppliers should not offer dual fuel products; and
  - (c) local community suppliers. Provision already exists – though has never been taken up – for a community which has its own source of generation – such as a biomass or biogas plant – “piggy backing” on the PES’s systems to sell to the local community with the PES continuing to assume the risks of bad debt, meter reading etc. This type of arrangement should make the funding of such projects easier.

#### **5. An Energy Services Company (ESCO) approach.**

- 5.1 In Great Britain it has been possible to catch the attention of customers by offering savings of around £100 per annum for switching gas and electricity suppliers. That is not likely to be possible in Northern Ireland where supply margins are tightly regulated.
- 5.2 It is therefore likely that in order to attract and retain customers suppliers will have to offer additional benefits. In recent years there has been much interest in the concept of an Energy Services Company (ESCO). A traditional utility sells gas or electricity by the kilowatt hour. The logic of its business structure pushes it to sell more gas or electricity. However, since primary fuels are a major cause of climate change and since supplies are finite, it is socially desirable to minimise sales. Moreover energy is only a means to an end – the enjoyment of light, heat and the use of electrical appliances. If the same energy service can be enjoyed with lower fuel consumption that is a gain for everyone – except the company selling the energy.

- 5.3 The ESCo concept potentially enables the utility to offset the pressure to consume less electricity by selling services to the customer which facilitate lower levels of consumption. This puts the utility at both sides of the customers' meter influencing the way in which the customer translates the gas or electricity economically into the light, heat and power that they want.
- 5.4 Energy supply companies which become ESCos should be more competitive in the market than those who don't.

## **6. Switching supplier advantageously.**

- 6.1 In the absence of the possibility of the large cash benefit from switching which is the inducement in Great Britain, it is obvious that customers should only move when it is subjectively advantageous for them to do so. This suggests that they should move as the circumstances are put in place inducing them to do – circumstances such as putting in gas or the development of a local community generating project or an offer from an ESCO.
- 6.2 Once a customer receives or secures such an offer a STOD meter would have to be installed. This would be free of charge to the customer. Once the customer has moved this should be for a period of one year at least though movement to another supplier or back to the PES should thereafter be possible on serving two months notice.

## **7. Starting with Keypad.**

- 7.1 The PES already offers a STOD option to its keypad customers on a trial basis but following an agreement with the Authority this will be more widely publicised in the autumn. There will therefore be upwards of 175,000 customers with meters that have STOD functionality in place before formal market opening. Most gas customers in social housing would therefore be able to move to an STS without waiting for a new meter to be installed. It would then be open to less well off customers to see if the competitive market can reduce their energy costs.
- 7.2 The keypad STOD tariff will allow customers to secure electricity which is 10% cheaper 52% of the time, 40% cheaper at night but 60% dearer during three peak hours each weekday.
- 7.3 It will have to be decided if the keypad meter will be installed for all domestic customers desiring to switch or indeed if keypad will suffice for all wanting to switch. However Keypad has additional features which facilitate budgeting and there are indications that it has led to more the efficient use of electricity by customers prior to full market opening. Accordingly it is proposed that from 1 April 2006 STSs, subject to the necessary systems adjustments being undertaken, should be entitled to make offers to existing keypad customers.

## **8. Full Market Opening**

8.1 Full market opening will be from 1 July 2007. The rate at which customers are able to switch will be determined by the rate at which they demand to switch subject only to the capacity to install meters. The intention would be to require three months notice of an intention to switch to provide time for installing the STOD meter.

8.2 New build would have the cost of the STOD meter included in the connection charge and new connections would be able to change their supplier from the outset.

8.3 On this basis if the demand were there about 15,000 new customers and 30,000 existing customers could switch each year together with 175,000 existing keypad customers.

8.4 The cost of market opening would be kept to a minimum, there would be no large upfront cost as there would be with the “big bang” contemporaneous approach and market opening costs would be partly at least offset by the push towards cost reflective, less environmentally harmful generation. These factors could provide persuasive arguments for making keypad the normal STOD meter for all switching customers. Keypads have been installed at the rate of 30,000 per annum and – should demand for switching warrant it – keypad meters (or similar STOD meters) could be installed at this or a faster rate in the future and be standard in new dwellings. The cost of installing keypads in new dwellings would be covered by the connection charge. The cost of installing 30,000 new keypads per annum would be £2.25m per annum and would be partly offset by the programme for upgrading and replacing conventional meters.

8.5 The existence of a PES keypad based STOD tariff would provide all STS with a benchmark to compete against.

8.6 The only change that this would require would be the keypad meter to be manually read once a year, which happily coincides with Phoenix’s practice.

## **9. Metering Services.**

9.1 It has been generally accepted within Northern Ireland that metering should be managed on a common infrastructure service and fully regulated with revenues coming from all suppliers including PES on equal terms.

## **10. Reducing electricity consumption and the two tier tariff**

10.1 The Department of Enterprise Trade and Investment is committed to reducing electricity consumption by 1% per annum below what it would be on trend. While a number of measures – mainly energy efficiency measures – will contribute to this, it will be important to ensure that full market opening does not work to increase electricity consumption since a normal effect of

competitive markets is to increase consumption through wider choice and lower prices.

- 10.2 The market should therefore be designed so as to confer benefits on customers but not to encourage increased consumption. This could happen if the market put downward pressure on average prices but not on the marginal price of electricity.
- 10.3 One pricing mechanism which would work to reduce demand and - by complementing energy efficiency measures do so painlessly for customers - would be a two tier tariff requiring customers to pay higher prices once they have exceeded a bench mark figure – say 3000 kilowatt hours a year - while enjoying lower prices for the first 3000 kilowatt hours. In a mild form a two tier tariff already exists in that consumption above 7000 kilowatt hours per year does not attract direct debit discount.
- 10.4 As average consumption is just over 4000 kWhs the tariff should ensure that at this level customers are not worse off, below this level they are better off and above this level higher marginal prices provide signals to improve their performance.
- 10.5 Consideration should therefore be given to the practicability of incentivising energy efficiency by requiring all suppliers to charge higher prices once a household's consumption exceeds – say – 3000 kilowatt hours per year.
- 10.6 While a two tier tariff would be simple to operate with customers on the current profile system it would introduce a further level of complication with STOD tariffs. Would it for example imply two different rates for each band in the STOD tariffs and would this be practicable? In terms of reducing system costs and protecting the environment incentivising reduced consumption at peak demand may be more important than reducing consumption overall – which in any event may be left to the ESCos.
- 10.7 One possibility would be to introduce two tier tariffs for customers remaining on profile while making STOD available for those who want it. Customers would then have the choice of managing the quantity of electricity they use, managing the time when they use it or using it as freely as they wish but paying more for the right to do so. In this way the two tier tariff would serve as a spur to competition by incentivising those customers whom it penalises to look for other options.

## **11. Trial Opening**

- 11.1 As there are already 175,000 customers with meters which would be suitable for STOD tariffs it should be possible to allow STS to make offers to those customers with their own STOD tariffs
- 11.2 To provide a price cap to protect customers and to ensure that irrespective

of the demand for switching supplier steady progress is made towards cost reflective STOD tariffs it is proposed to seek an agreement with NIE to extend the PES price control to 2010.

## **12. Views**

**Views on the proposals in this paper should be sent (preferably by email) to Seamus O'Hare on or before 30 August 2005 as follows:**

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