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06 March 2012

National Grid Electricity Transmission response to Ofgem's consultation on "Promoting smarter energy markets"

National Grid owns and operates the high voltage electricity transmission system in England and Wales and, as National Electricity Transmission System Operator (NETSO); we operate the Scottish high voltage transmission system. National Grid also owns and operates the gas transmission system throughout Great Britain and through our low pressure gas distribution business we distribute gas in the heart of England to approximately eleven million businesses, schools and homes. In addition National Grid owns and operates substantial electricity and gas assets in the US, operating in the states of New England and New York.

In the UK, our primary duties under the Electricity and Gas Acts are to develop and maintain efficient networks and also facilitate competition in the generation and supply of electricity and the supply of gas. Our activities include the residual balancing in close to real time of the electricity and gas markets.

Executive Summary

National Grid Electricity Transmission (NGET) welcomes the opportunity comment on Ofgem's consultation: "Promoting smarter energy markets". This response is on behalf of National Grid Electricity Transmission plc in its capacity both as the National Electricity Transmission System Operator (NETSO) for GB and the Transmission Owner (TO) for England and Wales. We are supportive of this work and its aims to scope a strategy to shape market development from the platform of smart metering.

We have responded to this consultation noting that the 'current market arrangements' are focussed around the retail markets. Any development here will need to be co-ordinated with the balancing market, whether existing or future. The interaction between the two markets may increase complexity and hence will require additional sophistication in the tariff structure to optimise market benefits to different stakeholders.

The market development needs to take into account the overall benefits to consumers through lower supply chain costs. For consumers to benefit, they will need to understand how they can make the market work for them.

The market needs to be transparent so stakeholders are aware of what can and cannot be contracted for at any point in time. This will avoid double counting and reduce impact on security of supply due to the lack of visibility. As an example, step changes in demand over the half hour as prices change may lead to unpredictable demand effects, which network operators will need to be aware of.

Suppliers should be allocated demand by each half hour for their consumers. However, they will need to get the right blend of incentive, penalty and risk for consumers so they are not fully exposed to risks over which they have no control. Suppliers are best placed to develop tariffs to achieve this.

If you would like additional information on our response to this consultation response I would be pleased to discuss further.

Craig Dyke

Future Transmission Networks
National Grid Electricity Transmission

CHAPTER: Three – Enabling retail market development

Proposition 1: *Time-of-use tariffs should help many consumers lower their energy costs, but improved engagement will be needed to help all consumers make informed choices.*

Proposition 2: *More efficient use of demand-side response can lower overall energy costs, but this will need coordinated changes to regulatory and commercial arrangements.*

Proposition 3: *Innovation in energy services would increase the consumer benefits of smart metering and can happen without major change to the regulatory framework.*

Proposition 4: *Consumers will have more payment options, without changes to regulatory arrangements beyond those envisaged as part of the smart metering roll-out.*

Question 1: *Do you agree with the propositions set out in this chapter?*

We broadly agree with the propositions set out in this chapter.

Question 2: *For each proposition, have we identified the elements of current market arrangements that could help or constrain the realisation of benefits for consumers?*

We note that the ‘current market arrangements’ are focussed around the retail market. Any retail market design needs to be co-ordinated with any balancing market arrangements, both current and future. The interaction between the two markets will require additional sophistication to the tariff structure. For example, a supplier may offer a ‘System Operator’ tariff whereby consumption is either delayed or brought forward to meet the needs of the system operator (for distribution and/or transmission).

Any retail market design will require a demand gate closure, similar in timing to that used in the Balancing Mechanism, to ensure the NETSO can balance the national system in the last hour and a half against a fixed baseline – this would not preclude for example a DNO using demand response for a post-fault action (because it would typically be small in volume). This is a basic but significant requirement to ensure security of supply is not compromised.

Further to this, the market needs to be clear and transparent to ensure that parties are aware of what is truly available to be contracted for in the market as a demand side response service, to avoid double counting (e.g. network operator and supplier both believing they have access to the same demand at the same time).

Any party should not be left either exposed financially as a result of another party’s action. For example a supplier should not be exposed to imbalance as a result of an action taken by a demand side aggregator. Similarly, security of supply should not be compromised for one party by the action of another. The regulatory and market frameworks need to be developed to ensure a party is only exposed to risks within their own control.

While we support the retail sectors freedom to pursue commercial strategies in a smart energy market, security of supply and system costs need to be considered in tandem with the retail market. The goal of the smarter energy market should be to optimise the overall solution and not to maximise a party’s commercial position.

We agree with Ofgem’s example in paragraph 3.10 where it is highlighted that consumers may actually be disadvantaged by moving to a time-of-use tariff. It should also be recognised that some consumers are currently disadvantaged because their actual energy consumption profiles is less costly to deliver than others, but they pay the same unit price based on a generic profiled class. We see this as a key challenge in creating a successful smarter energy market. Any proposition of a time-of-use tariff by a supplier to a consumer must outline clearly what consumption can and cannot be shifted to off peak. Consumers should benefit from being able to manage their consumption away from peak periods, but not be fully exposed to additional costs if they can’t. Suppliers will need to manage any subsequent imbalance and the skill will be to get the right blend between incentive, penalty and risk for consumers and their overall position. Any risk for consumers must only be to something to

which they can actively manage and can receive recompense for. This is an area that Ofgem need to consider further.

Consumer engagement is paramount to making time-of-use tariffs a success and the end consumer needs clear practical advice and maybe even the roll out of technologies from suppliers to help them manage their demand.

The consumer has benefited through the current market arrangements by the System Operator using demand-side response to balance the electricity system. This has been successful because of the ongoing development of balancing services to remove barriers to entry, but is also because of the simplicity afforded by the current market arrangements through bilateral contracts between individual market participants as noted. As the number of market participants increases, including those parties that can benefit from demand-side response, a co-ordinated approach across the different regulatory frameworks is required to ensure the consumer realises the optimum benefit. A common definition of demand-side services should also be adopted (where achievable) to provide clarity to the consumer and demand-side user.

Question 3: *For each proposition, have we identified the key issues, such as the timescales for any changes to market arrangements?*

Please refer to our response to Question 2

Question 4: *Are there additional opportunities for development in retail energy markets that we should include in the scope of our work?*

As mentioned previously, any development in the retail energy market needs to be co-ordinated with any development in the balancing market.

CHAPTER: Four

Proposition 5: *Settlement arrangements should use actual daily (gas) and half-hourly (electricity) meter reading data in order to improve their accuracy and efficiency.*

Proposition 6: *The change of supplier process should be reliable and fast, so that customers can confidently switch supplier on a next day basis.*

Proposition 7: *Electricity data processing and aggregation services should be procured centrally in order to reduce costs and support fast customer switching.*

Proposition 8: *The Smart Energy Code should be used as a vehicle to consolidate existing industry codes dealing with retail issues in gas and electricity to facilitate market development and reduce administrative burdens.*

Question 5: *Do you agree with the propositions set out in this chapter?*

We broadly agree with the propositions set out in this chapter

Question 6: *For each proposition, have we identified the right sources of costs and benefits associated with achieving them?*

We broadly agree with the sources of cost and benefits identified for each proposition

Question 7: *For each proposition, have we identified the key issues, such as the timescales for any changes to market arrangements?*

Similar to Ofgem's example in paragraph 3.10, moving to half-hourly metering may mean that some consumers (for example those who are at home all day) will pay more for their electricity. This again presents a challenge that is key to the success of a smart energy market.

We support the premise that change of supplier should be reliable, fast and seamless for a customer. However, it needs to be recognised that this change of supplier, if it includes a change of tariff and there is sufficient volume being moved around, may affect the level of demand-side response available to the market. This may preclude demand-side response as a tool that is restricted to being used in a short term forecast (say day ahead only). In this example, this uncertainty around demand side response availability may preclude it being used to optimise network investment or as a firm system security tool. A market framework needs to be designed that allows consumer freedom of choice to realise the benefits of a smarter energy market, and also provides a network operator certainty, far enough ahead of time, that a demand side response service is available and firm.

Question 8: *Are there additional opportunities to reform market processes that we should include in the scope of our work?*

Please refer to our response above regarding interaction between retail markets and those markets required for system balancing.