



Strategy consultation for the RII0-ED1 electricity distribution price control: Outputs, incentives and innovation

Prepared by the

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The Electricity Storage Network™

The Electricity Storage Network™ is the UK's industry association for the promotion of electrical energy storage. Current members include electricity storage manufacturers and suppliers, developers of electricity storage projects, users, electricity network operators, consultants, academic institutions and research organisations.

The Electricity Storage Network™ works on behalf of its members to respond to and address issues affecting the development and utilisation of grid-scale electricity storage within the UK power system. This includes special interest meetings, liaising with the media, responding to consultations, providing a unified point of contact for those interested in electricity storage and promoting the value of storage within the UK power system.

We strongly support UK energy storage solutions for the UK electricity system and by promoting local innovation in electricity storage we support wider UK industry.

Introduction

We welcome the opportunity to comment on Ofgem's Strategy Consultation for the RIIO-ED1 Electricity Distribution Price Control: Outputs, Incentives and Innovation, as DNOs produce their business plans for the ED1 price control period of 2015-2023.

We have not answered all the specific questions but made comments, some of which are related to the questions posed in the consultation

Low Carbon Technologies (Section 3, Q1)

It is unclear what is defined as a Low Carbon Technology (LCT). Presumably Ofgem expects LCTs to be based around Low Carbon (renewable) generation. There are other LCTs, such as Energy Storage, which would facilitate the connection of renewable generation at a range of scales. Are Low Carbon loads, such as heat pumps and electric vehicles are considered to be part of the suite of LCTs that a DNO needs to connect to their network?

Currently Ofgem do not propose offering a specific incentive to DNOs to ensure that LCTs are connected and presumably this is because of the licence conditions that require connections to be provided to anyone who asks.

Incentives often lead to distortions in interests, particularly if a particular LCT does not receive the incentive. A broad system-wide approach is required and DNOs should be incentivised to connect a full range of LCTs particularly if the LCT facilitates a cost effective approach to managing and maintaining the network.

Uncertainty about the Future (Section 3, Q3)

The next price control period will be 8 years long and DNOs are being asked to prepare business plans now for final submission in 2013, which require these organisations to attempt to predict the changes in the DNO system 10 years in the future, a duration which Ofgem and DECC freely admit is going to be a period of significant change in the GB Electricity System. Furthermore some of the likely influences on the GB system are external to the UK (e.g. EU Target model / Third Package) and

even in the UK there is great uncertainty on the outcomes of Electricity Market Reform (EMR) and the yet to be published new Energy Bill. This increased uncertainty means that Ofgem must provide a well developed structure for allowing the DNOs to respond and adapt to changes in the System. This necessary flexibility should also extend to innovation to allow DNOs to adopt new technologies as they become available. The current mechanisms for making alterations to a business plan under DPCR5 are inflexible and if this was to continue into RII0-ED1, then the ability of a DNO to respond to new innovations and System changes would be severely compromised.

RIIO-ED1 has a mid-term review point and an Uncertainty Mechanism and it should be ensured that the Uncertainty Mechanism allows DNOs to respond rapidly to System and policy changes and to utilise new technologies as they become available. We are not convinced that the mechanism proposed offers the required flexibility.

Smart Meters (Section 3, Q5)

A great deal of political will and effort has gone into making the case for Smart Meters. It is unclear how a Smart Meter will better allow the distribution of the costs associated with the connection of LCT demand and generation.

The current understanding of Smart Meters indicates that data from individual households will be centrally held and provide data at a 30 minute time resolution. Smart Meter data will not be available in real-time and DNOs will need real-time data to better manage their networks. Data which is only available post real-time will only be of use to Suppliers for billing purposes.

The value of Smart Meters in delivering the hoped for Domestic Demand Side Response (DDSR) is likely to be limited and indeed attendance at DNO Stakeholder events indicate that DNOs believe that DDSR will contribute only 1% of peak load by 2023. This is significantly below suggested targets from Ofgem and DECC. There is a large body of scientific research literature that indicates DDSR provides only very limited reduction in peak loads or peak shifting. Placing so much emphasis on Smart Meters limits the take up and deployment of other techniques which may be more relevant to securing the system in the future.

We feel it is worth pointing out that domestic electrical energy storage could achieve similar results to DSR, without the need for extensive controls, smart meters and procurement of smart appliances.

Socialising Costs of LCT Connection (Section 3, Q5)

Where a DNOs network is not constrained then connecting generation will cause little increased cost to the customer and in this situation the cost of connection could be socialised. However, when the network is constrained then reinforcement costs may be very considerable (£5-10M), as it needs to include consultation, planning, construction and hardware. Such reinforcements will increase as distributed generation (and indeed LCT demand, such as electric vehicles and heat pumps also cause constraints) connections increase. Where the cost of connection incorporates reinforcement it would seem inappropriate to socialise that cost.

For larger projects, either LCT demand or generation, the cost of connection should be borne by the developer (user pays).

The costs of connected distributed storage appear not to have been considered, and there will be distortions if different methodologies apply to DNO owned and operated storage and independently owned and operated storage.

Line Losses (Section 5)

The causes of losses in the system are often based on the results of historical actions and require many years to resolve. Only a fundamental rethink of the way that a DNO operates will lead to significant reductions in losses. Losses are proportional to energy used, and the role of reducing energy consumption through energy conservation and energy efficiency should also be considered. The role of distributed resources, including distributed to community energy storage, is important in addressing such system losses.

Innovation (Section 10)

It will be essential that DNOs are able to consult and update their innovation strategies throughout the RII0-ED1 period. Some areas of technology are making rapid progress and continual review is necessary to ensure that new opportunities are not lost. The same ability to update and modify should apply to the wider business plan to allow DNOs to respond to changing system requirements during the price control period.

We agree that the suggested level of detail in innovation strategies is the _minimum_ required and that innovation strategies should be a priority in the business planning process. The potential role that energy storage, at various scales, could play in distribution networks should be considered as part of the innovation strategies.