

By e-mail to: regulation@nic.gov.uk

Regulation Study Call for Evidence
National Infrastructure Commission
Finlaison House
15-17 Furnival Street
London
EC4A 1AB

12 April 2019

Dear National Infrastructure Commission,

ELEXON's response to your consultation 'The Future of Regulation Study Call for Evidence'

We welcome the opportunity to respond to your call for evidence.

ELEXON is the Code Manager for the Balancing and Settlement Code (BSC) – electricity market rules governing the 'meter to bank' process, including imbalance prices calculation every half hour. We are responsible for managing and delivering the end-to-end services set out in the BSC and accompanying systems that support the BSC. We manage the industry rules (or the code) on the end-to-end model that include not just the assessment, but also the development, implementation and operation of changes to central systems and processes.

In addition, through our subsidiary, EMR Settlements Ltd, we are the Electricity Market Reform (EMR) settlement services provider, acting as settlement agent to the Low Carbon Contracts Company (LCCC), for the Contract for Difference (CfD) and Capacity Market (CM). EMR services are provided to the LCCC through a contract and on a non-for-profit basis.

Since the introduction of the Ofgem Significant Code Review (SCR) process, ELEXON has been fully involved in shaping and delivering a number of programmes and have made the agreed changes to the central market arrangements to facilitate new generating technologies and electricity demand patterns and profiles. We have shared our detailed views and suggestions on the specific policy initiatives and programmes with relevant teams at BEIS; Ofgem; National Grid Electricity System Operator; Energy Networks Association; and a number of electricity Distribution Network Operators. Additionally, through our customer and market entry support teams, we regularly communicate with existing and new electricity market participants. We base our observations and suggestions below on our direct experience of providing assistance and guidance to both large and small electricity suppliers, generators and new market entrants as well as companies working on developing new business models (and innovation) in energy markets.

Part of our corporate strategy we aim to provide market solutions, which unlock the benefits of innovation to our customers and the end consumer, as such we have recently implemented our own version of a regulatory sandbox to provide more options for innovators entering the electricity market, in close collaboration with Ofgem. The sandbox enables derogations from the normal rules, to enable innovative products and services to be tested. Our sandbox is the first of its kind for the British energy codes. We also have a highly regarded market entry service to provide new entrants with the information and support they need to enter into the electricity market.

Our responses apply to the energy sector. The views expressed in this response are those of ELEXON Ltd alone, and do not seek to represent those of the BSC Panel or Parties to the BSC. In our response

below, we are not responding to all the questions in your call for evidence. We have only included those questions for which we are providing a response.

If you would like to discuss any areas of our response, please contact Alina Bakhareva, Strategy and Market Advisor on 020 7380 4160, or by email at alina.bakhareva@elexon.co.uk.

Yours sincerely,

Angela Love,
Director of Strategy and Communications

THE FUTURE OF REGULATION STUDY CALL FOR EVIDENCE: ELEXON'S RESPONSE

Future changes

2. How might the scope, functions or activities of economic regulators need to adapt in light of future changes?

- 2.1 All three regulators identified in the consultation already have statutory duties to further the interests of consumers and promote competition. Supporting innovation in the relevant sector (and between the relevant sectors, given consumers' interests do not follow the boundaries drawn by sectoral regulation) can and should be seen in the context of these existing duties.
- 2.2 We believe that rather than introducing a new statutory duty, the government should be clear that effective fulfilment of the existing statutory duties includes supporting innovation. This avoids needing to introduce a duty couched in terms of other, existing duties (as we believe any duty to support innovation should not extend to supporting innovation which damages the interests of consumers or restricts competition).

3. How might the increased availability of data impact regulation in future? Can data increase the pace at which regulation responds to change, enabling innovation?

- 3.1 We believe data and easy access to data is key to unlocking the next wave of innovation in the electricity/gas/heat and transport/EV (Electric Vehicle) sector. In the energy sector, we are aware that Ofgem has been developing additional data and technology expertise.
- 3.2 We also welcome the Energy Data Taskforce run by the Energy Systems Catapult, which should produce further recommendations on the use of data in the sector to support innovation and drive efficiency. ELEXON actively contributes to the work of the Energy Data Taskforce.
- 3.3 In addition, ELEXON has commenced work on upgrading our own systems to create a scalable and flexible digital platform for the energy industry to enable new business models and easier access to data and facilitate the changing structure of the energy market.

Competition and innovation

5. How has competition impacted on investment, innovation and outcomes for consumers across energy, water and telecoms since privatisation?

- 5.1 In general, we believe the competition has had a positive effect on the investment and outcomes for consumers.
- 5.2 Affordability is and will remain a key consideration for energy policy. Consumer bills contain a mixture of costs, such as pass through costs for the use of system services (e.g. for networks which are subject to Ofgem price control), policy costs (renewables schemes, smart meter rollout, Electricity Market Reform), costs to serve, wholesale costs and margins. Investment is required to transform the energy market and this is likely to create an increase in energy bills before consumers can reap the benefits. In the immediate future there is likely to be increasing debate on who should bear the costs of energy industry transformation. For example, who

should bear the costs: energy consumers or taxpayers; and should electricity consumers alone bear the costs of decarbonising the electricity market? We believe that the arrangements to transform the energy market should be structured to ensure that no one group of consumers is left behind and that there is no free riding.

- 5.3 We believe there is a need to consider how the fixed costs of existing infrastructure should be paid for, in light of greater self-sufficiency by consumers. New regulatory design should seek to avoid further costs from any proliferation of the central services that support the energy market. At present, a number of service providers deliver centralised, but essential services that facilitate the competitive markets. Some of these services are modest but still run for a profit, whereas others are provided on a not for profit basis, for example ELEXON. Government and Ofgem have historically created new central services (e.g. Data Communications Company for the smart meter communications or the Low Carbon Contracts Company and Electricity Settlements Company for Electricity Market Reform) when it adjusts the energy market design. However, this adds to an already complex market structure and creates additional interfaces for industry participants and complexity for new entrants. We believe consideration could be given to design and deliver an end-to-end energy market that is fit for purpose for the new challenges and that is future enabled. We believe a recently launched joint BEIS/Ofgem Energy Codes Review is an ideal opportunity to look at these issues.

7. When has regulation been too slow to adapt to changing market circumstances and what have been the consequences for consumers and investors?

- 7.1 Utilities are highly regulated. In the energy industry, there is a hierarchy of regulation starting at European Directives and Regulations, down through domestic legislation, regulations, licences, and finally Codes and codes of practice.
- 7.2 Activities in the energy sector are licensed on a per-function basis. The licences are relatively restrictive, and may encourage segregation of duties. Indeed, there has been a trend for business separation in the energy sector, partly due to licence restrictions. This could present a barrier to the commercialisation of innovative ideas, particularly where they arise within a company not licensed for the activity in question. In the energy sector, Ofgem may need to consider further the nature of the licences and the impacts they have on cross-sector models.
- 7.3 We have frequently found that innovations in the market are hampered at some point in the legislative hierarchy. Recently, Ofgem has introduced a sandbox to address restrictions in the licences ([Innovation Link, regulatory sandbox](#)), and we (ELEXON) have introduced our own sandbox to address restrictions in the BSC ([Electricity Market Sandbox](#)). However, subject to ongoing consideration, our sandbox may be limited by the requirements of European legislation, legislation that may not have been written with the required degree of flexibility to facilitate innovation.
- 7.4 The reason legislation may not facilitate flexibility highlights one of the conundrums of utility policy – finding the balance between standardisation and regulatory certainty for long-term investment decisions (power plant investments are made for multi-year lifetimes) and innovation. One drives efficiency by streamlining interfaces and harmonising approaches, the other by radically changing how something is done or introducing new services not previously considered. The two are often incompatible, or at least difficult to reconcile.
- 7.5 Additionally, the hierarchy of regulation and the way in which it is implemented has led to a fragmented and hard to navigate landscape for energy market participants. There is therefore

an initial barrier of comprehension that must be overcome, to determine where in the energy market an innovation may fit, and which regulations apply to it once operational. We believe that consolidating the code governance landscape would be beneficial to innovators.

- 7.6 As you may be aware, BEIS and Ofgem are now running a joint review into Energy Codes. As noted earlier, we have previously indicated our views on the fragmented landscape of Code administration in energy market and suggested a few solutions. We are now working closely with the joint BEIS/Ofgem team to develop a practical, implementable solution.

Regulatory consistency

8. Where could regulators work together more consistently to meet future challenges, achieve efficiencies within the regulatory system or to promote better outcomes for consumers, investors or society?

- 8.1 There are a number of steps utility regulators and other sector participants can take to support public trust and promote innovation, further competition and, ultimately, better outcomes for consumers. These include but are not limited to:

- Sharing and encouraging the uptake of best practice
- Providing support services specifically to innovators to ease them into the sector
- Identifying areas of the sector which are in particular need of, or particularly susceptible to, innovation
- Identifying non-negotiable areas of regulation, and areas where the rules are more flexible
- Providing resources or mechanisms to change restrictive rules which are outdated, not fit for purpose, or poorly constructed
- Guiding innovators towards projects or organisations currently supporting innovators in the sector
- Identifying current or future change programmes which will create additional opportunities for innovation
- Providing funding options for innovation in price controls and opening up competitive innovation funding to non-price controlled, not for profit, bodies such as ELEXON that are currently excluded from such competitions.

10. What is the case for or against a multi-utility regulator covering energy, digital and water?

- 10.1 There are a number of reasons for and against a multi-utility regulator in our view. We believe it needs to take into account the differences between the sectors and the benefits brought about by a single multi-utility regulator.
- 10.2 A possible case study can be developed on the back of a few recent examples of combining or creating new government departments. For example, BEIS was formed in 2016 as a merger between the Department for Business, Innovation and Skills (BIS) and Department of Energy and Climate Change (DECC). Another example includes OLEV (Office for Low Emission Vehicles) that works across government to support the early market for ultra-low emission vehicles. If these examples can be proved successful and there is a high probability that the

learnings will apply to the joining of regulators, it will help build the case for creating a multi-utility regulator.

Theoretically, a multi-utility regulator should make sharing of best practice and a single consistent approach, e.g. principles-based regulation, easier to apply, as well as saving overhead costs for consumers. This will benefit any regulated organisations that operate across the different sectors, as well as providing a single point of regulation, but not really affect those who operate only in one sector.

Policy and regulation

11. Is the traditional role of economic regulation, to mimic the outcome of a competitive market, sufficient to ensure future investment and to meet the needs of current and future consumers, and if not, how might this role need to change?

- 11.1 With the recent technological advances in consumer facing products and services, the traditional business models are changing dramatically. As expected, consumers' response to the new business models is mixed, with some categories fully embracing the change, while others may not be willing or able to make a full use of the new products or services.
- 11.2 The role of economic regulation has been based on the non-digital competitive market – quite naturally, as the principles for economic regulation was developed 20-25 years ago. In order to insure the economic regulation continues to serve its purpose – to mimic the outcomes of a competitive market – the economic regulation needs to take into account the changes to the digitally-enabled competitive market.
- 11.3 Future consumers will continue to react differently to changes in services. One useful approach may be to apply the concept of technology adoption curve or technology adoption life cycle when thinking about the future consumer. The technology adoption lifecycle is a sociological model that describes the adoption or acceptance of a new product or innovation. Based on their attitude and propensity to adopt new services, consumers are clustered into stages: innovators, early adopters, early majority, late majority, and laggard. Each of those stages exist simultaneously and needs to be taken into account for the purposes of the economic regulation.

12. What should be the boundary between government setting policy and strategic direction and independent regulation in these sectors? Do the existing duties and functions of regulators need to be adjusted to reflect this?

- 12.1 Increasingly, we see the convergence between various sectors, e.g. energy and transport through EVs (Electric Vehicles) and electricity and heat. Different government departments need to be consistent when setting policy and strategic direction for those cross-sectoral markets. The same approach needs to be extended to regulation.
- 12.2 A good example is EV charging infrastructure roll-out. The transport network usage and future planning cannot be covered by an energy regulator as it is outside the scope of its work. A government led programme of design and implementation may be needed to ensure that the future charging network fulfils social as well as commercial requirements and is provide in a

cost-effective manner. While many government/regulator-led initiatives are already underway (EV Energy Taskforce, the Data Taskforce, Ofgem's Future Supply Markets review), there is a need for a greater coordination between those well-intended initiatives in order for the industry and investors to help deliver on those strategic changes.

- 12.3 Additionally, in case of the energy sector regulator - Ofgem, its scope of work has increased beyond the original scope of economic regulation to include the delivery of a number of environmental programmes. While this is a function that, undoubtedly, needs to be performed the question remains open as to whether Ofgem, as an economic regulator can be seen to be impartial when it performs delivery functions itself while regulating some equivalent schemes performed by others, which are not 'in house'. We are unclear if this model is unique to Ofgem and the energy market.

13. Has there been a lack of clarity over strategic goals? What is the cause of this and what has been the impact on investment?

- 13.1 In the energy sector, the government and Ofgem have published a joint "Upgrading our Energy System: Smart Systems and Flexibility Plan". We believe the Plan sets clear priorities for the sector and proposes a number of specific actions.
- 13.2 While this is a much-needed initiative, we believe there is a further need to provide an overarching, comprehensive view of the future energy system. This will allow the ongoing initiatives to deliver consistent and compatible outcomes.
- 13.3 For example, in case of electricity storage, the variety of storage technologies and proposed uses have put pressure on the central market arrangements (licences and energy codes) to clarify the roles and opportunities for storage. Ofgem and BEIS recognised the need to provide clarity in the Smart Systems and Flexibility Plan in July 2017. They have committed to making changes to the legislative and licensing arrangements to make the role of storage clearer. As part of its Targeted Charging Review, Ofgem has also challenged the industry to resolve concerns it has with how certain network charges may put storage providers at a disadvantage compared to other generators.
- 13.4 ELEXON is actively involved in initiatives seeking to clarify the role of storage:
- Changes to the Generation Licence - we contributed to Ofgem's developing thinking changes to the generation licence to clarify the role of storage¹.
 - Calculating FCLs (Final Consumption Levies) – we are working with the Low Carbon Contracts Company to develop a solution that supports the exclusion of certain supplies to storage facilities from the calculation of Capacity Market and Contracts for Difference Charges².

¹ ELEXON, '[ELEXON's response to Ofgem's consultation on the regulatory framework for storage](#)', November 2017

² ELEXON, '[280/11 – Proposed approach to providing metered data for calculation of Final Consumption Levies](#)', July 2018.

- Residual demand network charges - we are actively contributing to the development of changes to the Connection and Use of System Code³ ⁴ and Distribution Connection Use of System Agreement⁵ to resolve concerns raised by Ofgem in its Targeted Charging Review with how certain network charges are levied on storage providers.
- GC0096 'Energy Storage' – we sit on the working group, which seeks to clarify the role of storage in the Grid Code.

13.5 Whilst it is positive that there are a variety of initiatives seeking to clarify the role and treatment of storage, we are concerned that there is a risk that these initiatives develop solutions that are inconsistent with each other because they are not being developed in a co-ordinated or coherent way. There is a need for a clear overall vision for storage and coordination of its implementation, otherwise there is a risk that the current initiatives are not progressed in a timely manner that they do not align with one another. In light of these concerns, by actively contributing across the initiatives we are doing what we can to ensure they are developed effectively and consistently with each other.

14. Are the government's principles for economic regulation* – accountability, focus, predictability, coherence, adaptability and efficiency – fit for purpose; and if not, how should they change?

14.1 The government's principles for economic regulation seem fit for purpose.

15. How can regulators act in the future to support public trust in the regulatory system for water, energy and telecoms?

15.1 Please see answer to question 8.

³ [CMP280 'Creation of a New Generator TNUoS Demand Tariff which Removes Liability for TNUoS Demand Residual Charges from Generation and Storage Users'](#) and [CMP281 'Removal of BSUoS Charges From Energy Taken From the National Grid System by Storage Facilities'](#)

⁴ We responded to the CMP280 Workgroup Consultation and proposed an alternative solution that seeks to build on the original proposal by ensuring generators registered by suppliers are also included in any solution. Please note that National Grid has not yet published responses to the consultation. A copy of our response can be provided on [request](#).

⁵ [DCP319 'Removal of residual charging for embedded generators in the CDCM'](#) and [DCP321 'Removal of residual charging for embedded generators in the EDCM'](#)