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Dear Neil,

Future Supply Market Arrangements

We are grateful for the opportunity to respond to this call for evidence on behalf of National Grid. This is a joint response from National Grid Gas Transmission and National Grid Electricity Transmission given the supply market is dual fuel. Our response consists of two high level answers that address the topics on guiding criteria and barriers to innovation. The themes explored in both responses also carry relevance to the other two questions in the consultation.

Understanding consumer needs and delivering consumer value is central to the role of the energy industry. To achieve this, market participants need to ensure consumers are able to engage with the energy market and have access to clear data so that they can make informed decisions about how they manage their energy. There needs to be the appropriate protection for vulnerable consumers, and safeguards in place to prevent misuse of consumer data. In order to drive consumer value there is a need to remove market distortions so that competition can increase and drive innovation through removing barriers to market entry.

Guiding Criteria to Evaluate a Successful Supply Market

Q1. What are your views on the criteria? Are there other criteria that should guide our assessment of current and possible future market arrangements?

We are broadly in agreement with the criteria suggested by Ofgem. As outlined in the call for evidence, the primary role of the supply market is to act as an interface between the consumer and the upstream energy market. Consumer access to energy is an essential service; it is vital that the supply market model functions in a way that works for all consumers irrespective of their engagement levels. The model must ensure vulnerable consumers are accounted for; and that all consumers, regardless of their engagement with the market, have direct access to a supply of gas and electricity. All market participants must have a duty of care for their consumers and alongside this, the supply market model needs to be structured in a way that is robust and ensures that there is the right consumer protection in place so that the consumer doesn't suffer if their energy service provider becomes financially unsustainable.

An additional guiding criterion should be the provision of transparent information and data to consumers so they are able to make informed decisions around which energy service they choose and the provider they contract with. When consumers are choosing their energy service they should be aware of exactly what they are paying for. Consumers who have chosen to pay premium rates for the supply of their energy are entitled to receive a service that is reflective of this. Conversely, consumers who choose to pay less for their energy need to understand the services they are receiving for their money and should be made aware of what risks they may be exposed to as a result of these. That being said, there should be a minimum service expected of energy service providers and the right consumer protection in place to ensure consumers always have access to a supply of energy.

As part of our role as the Electricity System Operator (ESO), we are facilitating the Charging Futures programme which is looking at significant reforms of electricity charging arrangements and access to the

network. The programme is driving change in three main areas: access rights to the system; identifying how network charges can incentivise user behaviour; and the Targeted Charging Review that is reducing charging distortions across transmission and distribution networks. As part of the programme, the Charging Futures Forum creates an opportunity for industry to engage with and shape the reform process¹. As lead secretariat of Charging Futures, our role involves ensuring all network users, including the end consumer, are able to engage with the outputs of the Charging Futures Task Forces. Market participants must ensure the right price signals are made available to consumers and are an accurate representation of the cost of energy. Through Charging Futures we are reforming charging arrangements and working collaboratively to help ensure the right price signals are reflected to consumers; we are also looking to give consumers a better opportunity to respond to these price signals. Similarly as System Operator for gas, we are leading a proposal to amend the gas transmission charging regime. This is aimed at better meeting the relevant charging objectives and customer and stakeholder provided objectives for transportation charges; and also to deliver compliance with relevant EU codes. We anticipate implementation of any changes to be from 2019.

A criterion should also be developed around helping consumers to think about when they use their energy; for example charging their electric vehicle at a time when demand is low and therefore buying their electricity when it is less expensive. Aiding consumers in understanding how they can benefit from engaging with the energy market is becoming increasingly important as we move towards a more decentralised energy network and increasing amounts of renewable generation. The changing energy landscape means that the challenges the SO faces in balancing the system today are different to those faced in the past, and this pace of change will continue into the future. Our ongoing Future of Gas programme² has led us to believe that the gas market faces significant uncertainty as to what may be required in the future, with potential demand levels significantly higher or lower than today.

The supply market should be structured such that it encourages consumer engagement by rewarding them with tangible benefits as a result of their participation. This has the potential to have a positive impact on market participants on the other side of the supply market, and these visible benefits for consumers shouldn't be lost in the supply model. Although increased consumer engagement is the objective, it is not acceptable to force it by exposing those who aren't engaged to unreasonable variable tariffs. The supply market must be able to adapt to significant change in a reasonable time frame compared to today; such as a proliferation of hybrid heating systems or a significant move towards decarbonising the gas system through hydrogen. We may need to consider whether the traditional definitions of "gas" and "electricity" need to be broadened, for example to consider "heat" as the end product. This would need to be accompanied by a greater role for energy service providers or networks in determining the lowest cost and lowest carbon source of heat supply.

Market participant aggregation of data, at the appropriate level and within the controls of the Data Protection Act, can provide many benefits to market participants, but it is essential that there is the right data protection and security in place to ensure that infringements on consumers' personal data are not abused by businesses for commercial gain. For the SO, access and provision of data enables us to anticipate and react to changes and has potential to reduce aspects of uncertainty, for example energy forecasting. This will ultimately drive consumer value as it reduces the need for trading on the day which can have higher cost implications and result in higher consumer bills.

Barriers to Innovation

Q2. What are the most significant barriers to disruptive new business models operating in the retail market? Please draw a distinction between regulatory barriers and commercial barriers (eg there may not be enough potential consumer demand to justify market entry).

Many of the barriers currently faced by disruptive new business models are being dealt with by the gas and electricity charging reviews, Charging Futures Task Forces and the Governments Smart Systems and Flexibility Plan; we have highlighted a few below.

There are various commercial and regulatory barriers that may be preventing new and innovative smaller companies from participating in the market. One of the biggest commercial challenges is the inherent economies of scale that over the years have led to the market being dominated by a small group of very large suppliers. Many of the financial and regulatory burdens of being a supplier are largely fixed, making them

¹ <http://www.chargingfutures.com/about-charging-futures/>

² <http://futureofgas.uk>

easier to manage for large companies than small companies, creating a higher barrier to entry for small new companies.

Until now the supplier hub model has worked well and the majority of consumers have been supplied by a longstanding, well established company. These large suppliers have high value brands, which they have invested in for many years in the past and expect to benefit from for many years in the future, giving them a strong incentive to manage risks well and look after their customers. As the energy landscape is changing, there is a need for more innovative technologies and business models to deal with today's challenges. Changes to the current supplier model could provide an opportunity to increase innovation in the sector, helping new companies to enter the market and accelerating the shift to new technologies and business models, but this acceleration could come with increased risk. A key part of innovation is accepting that some of the new ideas will fail, when this happens in a small start-up company this can mean the failure of that company. A key challenge in changing current supply market arrangements will be ensuring that greater innovation does not come with an unacceptable level of risk for consumers. When it comes to gas there may need to be consideration around whether the appropriate business models and regulatory regimes exist today, and if not whether this will represent a barrier to innovative new markets such as hydrogen or carbon capture utilisation and storage. As the SO would like to highlight that at present (and for the foreseeable future) there is a significant amount of change in the industry, including wide ranging changes to the existing licence frameworks and associated codes. When considering more fundamental changes to the supply market model it would be beneficial to also take into account the ongoing and planned incremental changes to these frameworks and codes (such as those being discussed through the Charging Futures Forum or ENA Open Networks Programme) to ascertain whether a more targeted set of changes to the supply model could provide similar benefits to consumers.

Low consumer engagement is another barrier to the introduction of new business models reliant on the participation of energy users. Flexible demand provided to the network could make a significant difference to the challenges faced in balancing the system. Consumers could benefit from providing this flexibility, but on an individual basis, the value they would realise from their actions might be too small to persuade them to invest their time and effort in understanding and engaging with commercial propositions. Alternatively changes in technology, business models and behavioural norms could reduce barriers to engagement so far that most consumers choose to participate for even relatively small rewards. As the move towards a more decarbonised and decentralised energy industry progresses, there is a growing requirement for flexibility from a diverse range of sources, but the uncertainty surrounding demand side flexibility can present a challenge for the investment required from businesses to develop their capability. Businesses also need to have the ability to access revenue streams in order to make these investments. As the ESO we are doing many things to help facilitate the involvement of these new business models including our Power Responsive programme³ and work on System Needs and Product Strategy⁴. This includes working with industry to raise awareness of building confidence in flexibility opportunities, supporting the evolution of future flexibility markets and increasing accessibility for smaller players in order to create a level playing field for all market participants and technology.

Yours sincerely,

[By email]

Chris Bennett

³ <http://powerresponsive.com/>

⁴ <https://www.nationalgrid.com/uk/electricity/balancing-services/future-balancing-services>