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20 May 2015

Dear Jeff

### **NON-TRADITIONAL BUSINESS MODELS: SUPPORTING TRANSFORMATIVE CHANGE IN THE ENERGY MARKET**

I am offering this response to your consultation on behalf of all the UK-based Berkshire Hathaway Energy-owned businesses. We welcome this conversation at a time when important developments are taking place in the wider energy market with many of these changes involving networks. As Ofgem has highlighted, there is some overlap with the related consultation on the provision of quicker and more efficient connections. As we did in our response to that consultation, we major in this response on the guiding principles that should be considered when evaluating the value of and optimal arrangements for new business models.

In our dealings with customers and other stakeholders we have noted many of the same drivers and areas of activity as you have identified in the consultation document. We largely agree with the content of the consultation document as it provides a reasonable account of the activity taking place and the key questions for consideration. As for the earlier connections consultation we offer key principles that should be considered prior to changes being made to the regulatory framework with a view to facilitating new business models where they can release value for the customer. We are keen to develop dialogue with Ofgem and other key stakeholders to expand on these principles or to provide more information about the detailed responses we have made in answer to the consultation questions.

I include two appendices. In the first, we set out the key principles that we consider are relevant. In the second, we provide responses to each of the questions posed in your consultation document.

Please make contact if you wish to discuss any aspect of this response.

Yours sincerely

A handwritten signature in black ink, appearing to be "Jim Cardwell".

Head of Regulation and Strategy

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## APPENDIX 1 - KEY PRINCIPLES

These are the principles that we believe should guide policy makers considering the part that can be played by new business models.

**We support a healthy competitive market where the customers benefit and the best companies thrive, delivering better products and services through innovation**

- Competition applies downwards pressure on the total cost of energy and uplift in the quality of customer service.
- It is right to investigate new propositions that aim at improving better and fairer network access for all.
- Incentives should be used to drive the appropriate outcomes using objective criteria.
- Customers should benefit from lower prices and improved service regardless of who provides the service.
- A level playing field is ultimately required for incumbents and new entrants.
- The creation of network 'ransom strips' is to be avoided - customers must not be forced to connect to one network when an alternative neighbouring network offers them a lower cost and potentially more effective option.

**While there is a multitude of drivers and benefits behind the consideration of new business models, security of supply must not be comprised in the interest of low carbon**

- In the eyes of our customers, the trilemma is not evenly balanced - our interactions suggest that in their eyes it is security of supply that should take prominence.
- However, we also recognise that for some stakeholders - particularly environmental groups - their priority is the reduction of greenhouses gases.
- These views may be balanced by recognising that the pursuit of low carbon goals should be viewed as additive to the more longstanding priority area of security of supply (i.e. we should be aiming to satisfy both goals and not target carbon reduction at the expense of security of supply).

**Outcomes must be good for consumers as a whole and not benefit one sector at the expense of material downside to another**

- Improvements need to put customers in control of their energy use and their bill; while avoiding unnecessary complication.
- Communities should benefit from localised demand-side response offsetting generation and network constraints - a win/win for customers and energy companies.
- We must continue with policies that drive incremental and 'just in time' network development in order to minimise the risk of unnecessary capacity and stranded assets.
- Any new funding/investment products must enable lowest total energy cost solutions to thrive to benefit customers while also delivering a secure and appropriate long-term return to investors.

**Maintain fairness - do not create the opportunity for 'free riders'**

- Cost-reflective charges are a fundamental precept.
- Locational price signals are important for connection customers to incentivise economical system development.
- We must also avoid socialisation of costs that inhibits the right economic decisions being made on least cost solutions.

- Cross-subsidies between connection and use of system charges or between customer types should be avoided.
- At the same time, the development of cost reflective *local* network tariffs/commercial products may enable local energy solutions to be deployed to achieve the lowest long-run total energy costs that hitherto may have been inhibited by lack of access to upfront capital by stakeholders, or other constraints. Appropriately structured, these commercial products *would not* represent a cross-subsidy between connection and use of system charges or customer types as the related costs are recovered from the beneficiaries.
- ‘One-size-fits-all’ depreciation periods must be avoided - the period needs to be matched to the economics in each situation such as the intergenerational funding for long-life assets, the cost of capital trade-off and the risks of default.
- Stimuli in the form of subsidies to encourage certain outcomes are a matter for government policy.

**Risk and return need to be matched and we must avoid ratcheting them up with no associated benefit for customers that justifies the move**

- Customers will not be best served by the risk and associated cost of capital being any higher than it needs to be. Cap and collar mechanisms may usefully limit the risk and return for customers and for investors.
- Speculative or anticipatory network reinforcement must be funded with an appropriate rate of return that recognises the uncertainty inherent in the design of the regime. Relevant factors include who carries the risk of the increased capacity being required and counterparty credit risk for connectees who do not pay up-front.

**Not all customer groups are equally impacted by changes - policy makers and companies need to consider disproportionate effects on the most vulnerable**

- Vulnerable customers in particular must be protected from escalating service and price risk issues.
- We have already recognised the disproportionate effect that power cuts have on the more vulnerable customers.
- With new business models, the key risk to avoid is transferring cost to the fuel poor.
- At the same time, new products and services may offer solutions to vulnerable customers that are proportionately more valuable to them in terms of controlling their energy costs as a large part of their living costs. Our approach should seek to deliver such benefits to these customers at the earliest opportunity wherever possible.

## APPENDIX 2 - RESPONSES TO CONSULTATION QUESTIONS

### Chapter one: Introduction

#### **What is your view on our definition of non-traditional business models?**

The definition provided in the consultation paper corresponds to the new developments in the energy market that Northern Powergrid is witnessing: new products and services are being offered by a variety of players, motivated by a variety of reasons, on a variety of scales.

In the main, the most important point in the definition is that non-traditional business models (NTBMs) comprise a diverse group of market participants.

#### **How we can engage with NTBMs more effectively in the future?**

We trust that this consultation will provide an opportunity for Ofgem and other stakeholders to expose the range of models that exist and build relationships with NTBM market actors. It should also serve to identify the areas that need the most engagement to develop solutions to overcome barriers and deliver sustainable benefits to customers.

### Chapter two: Drivers for NTBMs

#### **We would like to hear your views on the drivers for market entry. Do you think there are other important drivers?**

We agree that low-carbon energy transition, rapid technological innovation, lack of customer engagement and trust, and a greater focus on affordability and supporting vulnerable customers are drivers for the current NTBMs.

We are already involved with two further drivers that are not explicitly listed by Ofgem. Both are motivated by the priorities of the wider agenda of national and local government: i.e. a political and a civic energy agenda. Perhaps, these are implicit in or some part of the other drivers that you have listed but we consider there is value in setting them out more explicitly and highlighting their presence.

The political driver refers to government policy. Specifically, in seeking to address perceived market weaknesses policies have been developed to introduce market mechanisms such as subsidies for renewables and capacity auctions. In turn, these new policies create a commercial environment favourable to the development of new business models.

The 'civic energy' agenda has grown in popularity in recent years, promoting local ownership of decisions and potentially of local energy assets. One of its aims is to capture the value of an investment in the community. This, for instance, is a core tenet of the push for community and municipal energy, and is also closely linked to the city devolution agenda.

### Chapter three: Our understanding of NTBMs

#### **Have we accurately described the NTBM environment? Have we missed something?**

The definition of NTBM puts the emphasis on the variety of offerings, players, and motivations. It creates the possibility of a future energy market that is in strong contrast with the way that the market is traditionally represented and regulated: i.e. a clear cut matrix of retail or

wholesale markets, transmission or distribution networks, gas or electricity. As such, we understand the willingness of Ofgem to try and gain better clarity of this emerging trend. At the same time we also remain alert to a risk associated with this exercise that consists of categorising something that we are still trying to understand, is still moving, and that we cannot fully predict. A key risk is that the exercise to develop understanding of wider market ideas has the potential to lag the pace wished for by new market pioneers. We advocate that a set of guiding principles be established by policy makers to understand and guide the development of new models. In order to contribute to this objective we have provided some principles for Ofgem's consideration in appendix 1 to this response.

Northern Powergrid's own awareness and understanding of NTBMs is indeed mostly covered by the descriptions or models provided in Chapter 3; with the additional nuance that these models are not mutually exclusive.

Another phenomenon to take into consideration is the fact that incumbents will seek to adapt or transform their current business model in response to changing market conditions. For example, this could be to capture a new market opportunity, to mitigate loss of revenue, or to deliver on new expectations placed upon them by the supply chain. NTBMs may be introduced by incumbents as well as new entrants and the same questions should be asked about required regulatory changes and customer cost-benefit regardless of which organisation provides the service. For instance, generation utilities may find that an existing 'all-hours' generation model needs to evolve to capture the value of payments for capacity provision, provide energy system flexibility and mitigate the risk of reduced volume of units sold brought about by the progress of energy efficiency. Similarly electricity distribution network operators (DNOs) may have to create new commercial arrangements in order to maximise or unlock the benefit of demand side response (DSR)<sup>1</sup>. Another example of a predictable change in the business model of incumbents is found in the fact that no clear specific framework allows a DNO to operate a battery as part of smart grid (instead, DNOs have to operate it under an exemption to the requirement to hold a generation licence).

Finally, it is important to distinguish the 'commercial motivation' - that is dependent on or driven by government intervention (such as 'negawatt selling' and capacity auctions) - from that which isn't and for which the business case is perhaps less vulnerable to a change in government policy.

**We'd like to learn more about organisations using NTBMs. If you are prepared to discuss this, please contact us.**

We believe that, through this discussion exercise, Ofgem will gather evidence on most of the NTBMs that Northern Powergrid is experiencing or witnessing. However, we would be pleased to share further details with Ofgem on the kind of activity that we are experiencing to help inform the discussion.

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<sup>1</sup> As demonstrated by our Customer-Led Network Revolution (CLNR) project, to enable DSR to deliver distribution network benefit we will need to collaborate with energy suppliers and the transmission system operator.

## **Chapter four: NTBMs within current regulatory arrangements**

**Our main focus in this paper is on regulatory issues arising from future energy market transformation, but we recognise that there are relevant issues within current regulation. Please let us know if there are any other issues?**

We believe that Chapter 4 of the consultation paper provides an accurate description of the issues that have emerged from our own experience of NTBMs. We participate in some of the working groups or consultations that are mentioned as a potential source of remediation to the issues. Most recently, we have contributed to the Ofgem Community Energy Grid Connections Working Group, and responded to the Ofgem “Quicker and more efficient distribution connections” consultation. Further, we expect incentives within the RIIO-ED1 price control to drive improvements in our services (e.g. the incentive on connections engagement (ICE)) through effective collaboration with customers and other stakeholders.

An issue that receives limited coverage in the consultation paper is that faced by the electricity storage and heat sectors. Heat and electricity storage do not benefit from clear regulatory rules, and this may influence investor confidence, as well as affect the development of derived products and solutions. In general, this raises the question of the desired scope for Ofgem: is the ambition to regulate the entire energy market, and if not, where should the line be drawn? This is also a good example of where NTBMs may not be so easily compartmentalised. In our recent experience, the development of electricity and heat networks by local authorities is an area where new models are emerging.

We believe it is important to highlight that regulation can extend beyond rules set by Ofgem, to include the legislative framework set by government. The negawatt market is an example of such a case, and the “issue” or barrier to development, as argued by some, is that the market is discriminated against in favour of generation sources in the capacity market. Another element of this extended definition of regulation is the effect that government subsidies for renewable generation have on the energy market. Unsurprisingly, this points to the government as a major stakeholder in the NTBM discussion and its participation is therefore vital.

## **Chapter five: Market effects of NTBMs and future challenges for regulation**

**What are the benefits of different NTBMs to energy consumers?**

**Are these benefits experienced by all energy consumers or only those directly receiving the NTBM’s services?**

**Are there additional wider benefits to the energy system and beyond it?**

NTBMs cover a variety of products and services targeted at many different customer types. There are as many benefits as there are new offerings. We think that Table 1 provides a good comprehensive overview of these. A clear and continuing focus on benefits to customers and the wider economy is important to ensure that the energy sector focuses on what matters and delivers the related improvements.

**Which of these benefits should be taken account of in regulatory policy-making and decision-taking and why?**

We think it is important to keep sight of the fact that energy infrastructure “underpins the operation of a successful economy and allows other infrastructure networks, including

transport and communications, to function”<sup>2</sup>. The essential electricity distribution service we provide is a vital part of the energy infrastructure. Security of supply is a recognised priority. In parallel, taking more prominence in recent years has been the wider responsibility in the sustainability agenda (environment and social obligations). Therefore, we suggest that in the discussion on NTBMs, the wider societal benefits are understood as well as the more focussed priorities of the energy market as a whole.

We are comfortable for the wider benefits of NTBMs to be considered in cost-benefit analysis to justify a regulatory decision as long as it is recognised to whom they accrue and how these correspond to the distribution of costs. This ensures that the industry continues to focus on providing benefit to customers in areas that are valued such as quality of supply, social obligations and protecting the environment.

**Are there energy system costs or risks from any of the NTBMs? How might these be addressed?**

Again, the term NTBMs covers a variety of products and services, targeted at many different customer types, so there are as many costs or risks as there are new offerings. We think that Table 1 provides a good overview of these.

A key risk is that the cost of the programmes set to encourage NTBMs (or to allow customers to engage with new technology) is shifted onto the non-participating customers. To avoid this risk, we believe that inter- and intra-generational cross-subsidies should be well understood and debated widely before regulatory decisions are taken one way or another. One of our key principles is to avoid burdening the fuel poor with further costs where the associated benefits do not justify this action. Ofgem could seek to consult widely and inject creativity in the range of alternatives proposed (including lessons learnt from other countries) in order to stimulate engagement and find a consensus.

**How will NTBMs help to drive innovation within the energy system?**

In general, NTBMs are a form of innovation, so they introduce or accelerate innovation by their very nature; either directly or indirectly. This is true for instance for a point made in the discussion paper: increased customer engagement may have a knock-on effect in terms of accelerating the adoption rate of innovative solutions, such as demand side response.

From a DNO perspective, we anticipate that the energy market will, in time, provide a multiplication of off-the-shelf network management solutions or smart grid enablement technology. This will benefit our ability to deliver on our innovation strategy, and, by extension, our ability to deliver benefits to our customers.

In general, many services offered by new entrants, such as demand response, supply, storage and energy efficiency compete against the incumbents’ business models. The competitive pressure creates a context favourable for innovation, as companies seek to differentiate their offer, ensure its relevance for customers and thereby sustain or grow revenues. More generally, competition should apply downward pressure on the total cost of the energy and uplift the quality in the service delivered to customers. Ultimately, a level playing field is preferable for incumbents and new entrants, as policy makers should promote fair competition

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<sup>2</sup> National Infrastructure Plan 2013, HM Treasury, December 2013

for all and not promote particular competitors. The customer should benefit from lower prices and improved service regardless of who provides the service.

**How could NTBMs potentially transform the energy market and what fundamental challenges to regulatory arrangements could this entail?**

We propose two specific challenges:

- Customers may take on a risk against which the regulator has historically protected them from. We are witnessing this in an active situation that is likely to result in a local, unregulated private-wire distributor, and an unlicensed electricity supplier. Another active example is committing to a largely unregulated monopoly district heat provider.
- In addition, and specifically in electricity distribution, distribution system operators which do not own any assets may emerge. The regulatory challenges were recently discussed in a consultation driven by the Council of European Energy Regulators<sup>3</sup>.

**How could regulatory arrangements change to accommodate NTBMs?**

Regulatory arrangements currently come in the shape of regulator-led licence obligations and price-control settlements, and government legislation. We expect these to continue but adapt in content and scope following wider stakeholder engagement (required by an increase in the number and type of market participants), and a faster speed of response (required by stronger market pressures and commercial interests).

We believe that regulation should not hinder innovation or the multiplication of positive new market offers that also protect customer interests, particularly in respect of vulnerable customers. Also, it should not discriminate between new entrants and incumbents moving to adapt their service offering.

**What role do NTBMs and other parties have in managing energy market transformation and regulatory change?**

We believe that NTBMs representatives should be treated the same as any other stakeholder, and as such, be offered the possibility to engage with the regulatory bodies in the same way as traditional parties.

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<sup>3</sup>[http://www.ceer.eu/portal/page/portal/EER\\_HOME/EER\\_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/CROSSSECTORAL/PC\\_The\\_Future\\_Role\\_of\\_DSOs](http://www.ceer.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/CROSSSECTORAL/PC_The_Future_Role_of_DSOs)