Northern Powergrid's response to Ofgem's call for evidence on 'Future supply market arrangements'

KEY POINTS

- We are seeing unprecedented change in the energy system. The progress of smart technology and the digitisation of the economy are pervasive trends which will fundamentally change the dynamics in the energy market. **A fundamental review of the market is appropriate in order to deliver outcomes needed by society.**
- In common with the Cost of Energy Review, this timely call is raising questions about the supply market model that looks increasingly outdated in a smart flexible energy system. **Enabled by new technology, customers are now beginning to take their place at the hub of the energy system.** The changes taking place are wider than the supply market. Any decisions need to be taken in an energy system context considering issues like transition to Distribution System Operator (DSO) in parallel.
- To properly address the issues raised, Ofgem and Government must together, **fundamentally review and decide what is being targeted** with fiscal interventions, regulations and market structures. Specifically:
  - which costs to socialise to deliver acceptable social outcomes and who pays for desired environmental policies, through which route;
  - whether to maintain or change universal service obligations;
  - which parts of the market to subsidise to promote security of supply and decarbonisation; and
  - what balance of public and private operations will best deliver efficient investment and drive service improvements for customers.
- In particular, a **solution is required to the regulatory distortions leading to behind the meter schemes** where self-supply causes inequitable social outcomes:
  - The driver has been the ability to avoid policy costs in electricity bills - creating lower costs for those participating and higher bills for the customers unable to take advantage.
- **The current arrangements have grown incrementally through time while the energy practices of many customers have changed or will change radically**. It is the right time for Ofgem to review, clarify and potentially reset some of the roles in the market:
  - Ofgem's analysis of the three primary supplier roles currently (settlement agent, customer risk management and customer protection) is a useful platform to start an assessment of which key functions could benefit from innovation and competition.
- **Change is occurring in the networks sector too – in particular the analysis and transition towards the new DSO role in electricity.** Ofgem should review those role requirements alongside the supply market roles in order to consider a whole system view of effective service delivery to end customers.
- Further, Ofgem should promote **innovation in the whole energy system** removing regulatory barriers that tend to siloed thinking and risk sub-optimal customer outcomes:
  - Opportunities exist to expand 'network only' innovation funding and ensure that the position on DNOs not owning and operating storage does not stifle innovation.
  - The *de minimis* thresholds in the distribution licences could be calibrated to permit DNOs to take controlled but valuable steps towards becoming DSOs, 'priming the pump' for more widespread competitive market-based mechanisms to emerge over the medium and long term.

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Responses to Ofgem's call for evidence questions

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

1. The principles offered by Ofgem are valid. We offer a few more. But we also suggest that Ofgem considers with the Department for Business, Energy and Industrial Strategy (BEIS) whether any changes are necessary to the fundamental precepts underpinning the wider energy system before converging on principles related to the supply market.
2. We are at a time of big questions being asked by Ofgem and others. In parallel to this call for evidence, BEIS is consulting on the Dieter Helm Cost of Energy Review that recommended a number of radical alternatives to the fundamentals that underpin the current arrangements. Ofgem and Government must together consider how some of these wider issues could impact on their thinking. In particular:
   a) Which costs to socialise to deliver acceptable social outcomes and who pays for desired environmental policies, through which route?
   b) Should existing universal service obligations be maintained or modified?
   c) Which parts of the market to subsidise to promote security of supply and decarbonisation?
   d) What balance of public and private operations will best deliver efficient investment and drive service improvements for customers?
3. Additionally we offer further thoughts:
   - on perversities created by the manner in which environmental taxes are recovered;
   - regulatory niches;
   - the impact of the parallel considerations of the transition to the role of DSO; and
   - principles that should be further considered with respect to customer data protection.

Incremental development through time of the current supply market arrangements has led to a number of fiscal and regulatory niches where some parties exploit a position inequitably.

4. On occasions, the interaction of the fiscal / levy regime with the current supplier hub model has some far-reaching implications that are perverse for an equitable whole energy system and should not be replicated by future supply market arrangements.
5. As they seek to maximise the revenue stream from the combined heat and power (CHP) system installed, local authorities in the Northern Powergrid region are implementing or considering the option to act as unlicensed energy suppliers over private wires.
   a) This option is currently the easiest in the current licensing framework and the most appealing because it deducts from the electricity price the cost of the regulatory overhead and policy costs that would otherwise be levied (i.e. avoiding a 'tax' that is paid by other customers).
   b) It means that development of the heating and electrical infrastructure takes place 'behind the meter'. As such, an inefficient system is created potentially with duplication of electricity networks in the same streets and the cost recovery for assets then being avoided by those customers leaving the regulated network fall on other consumers. This works to the disadvantage of the generality of customers.
   c) Domestic customers are often left out from the benefits of this local supply model but bear the cost of it through higher bills as they carry the avoided environmental costs and the costs for recovery of the network charges. There are also potential issues of customer

protection and service levels, as the distribution service ends up being delivered by independent distribution network operators (IDNOs) or licence-exempt network operators whose service standards are not as well scrutinised (and potentially not as well provided) as the regional DNO.

d) Building a private wire to maximise income, and to bypass the current supply licence framework (and in doing so environmental and social levies/taxes), is an infrastructure solution to a commercial and regulatory issue. We believe that customers deserve a commercial solution to a commercial issue.

6. Working with BEIS, Ofgem should evaluate the problems that are being created by the application of environmental levies and taxes to energy bills with the aim of applying taxes in a way that creates fewer perverse incentives. The inefficient development of networks (driven by customers seeking to avoid taxes) is just one such example and we would encourage policy makers to consider the pros and cons of where they apply environmental social levies/taxes.

The new role of DSO could have a significant impact on the future supply market arrangements.

7. We recognise, as did the call for evidence for 'A smart flexible energy system'[1], that, in the future, customer engagement will be guided by energy services (buying and selling energy) as well as network services (customer flexibility offered to balance the system). The active distribution system means that the supply market cannot be considered in isolation.
8. Many of the points Ofgem describes in its document are consistent with a sensible vision for the future energy system. Enabled by new technology and the advent of improved data, customers will be at the hub of the energy system.
9. Through the Energy Networks Association Open Networks project[2] , electricity distribution and transmission companies are collaborating to consider the future role of a DSO and what this would entail. We consider that the DSO will be central to enabling customers' participation in both energy and networks services markets.
10. Ofgem must therefore consider the thinking on both sets of market arrangements at the same time.
11. Ofgem's analysis of the three primary supplier roles currently (settlement agent, customer risk management and customer protection) is a useful platform to start an assessment of which key functions could benefit from innovation and competition and where supplier or intermediary obligations could be graduated between different actors in the future.
12. It would be beneficial to compare and contrast such analysis with the emerging understanding of a future where the system operator and DSOs operate, in order to test the thinking in both areas and ensure that any changes considered are complementary. The Open Networks collaboration is a good source for this consideration of future roles for network operators.

In terms of customer protection, access to good quality information by the customer is as important as regulation of service providers.

13. In current models which offer complete freedom of choice to customers (i.e. 'however they chose to do so, without undue restriction', as described in the consultation letter) there is always a risk, or a perception of risk, for poor customer protection due to lack of regulation. The most recent good example is heat networks, (which are unregulated - or rather partially self-regulated through a voluntary code of conduct to which some networks adhere). This is creating

[1] 'A Smart flexible energy system', Ofgem, BEIS, November 2016.
[2] www.energynetworks.org/electricity/futures/open-networks-project/

enough cause for concerns that the CMA is launching a comprehensive study into domestic heat networks to ensure households are getting a good deal[3].

14. In order to encourage and allow new innovative models, the flexibility of a truly adaptable regulatory regime may come from accepting that Ofgem's role is not always to regulate through rules, or licences, but to provide clarity and information. This may only be temporary while the market settles in a structure that is easier to handle. The objectives would be for customers to make an informed decision, and to mitigate the levels of concerns around letting customers opt out of traditionally regulated systems. The focus ought to be on providing clear, unbiased information about risks and opportunities in engaging in the emerging market (such as guaranteed standards of service).

The volume and types of data from smart meters and other connected devices create both vulnerabilities and opportunities that any revised arrangements will need to manage.

15. The threat to cyber security (often combined with physical building security) is one of the fastest accelerating business risks to all sectors of the economy. The interconnectivity of the future smart energy supply chain introduces a new level of exposure to cyber-attacks. However, the industry is taking the right steps to mitigate these risks through the application of expertise and collaboration (including with government). Our approach must be to realise the benefits from interconnectivity while also putting in place 'fire breaks' and other mitigations to compartmentalise the impact of attacks when they occur.
16. In Northern Powergrid we have sought the ability to offer assurance to our stakeholders through working towards ISO 27001 certification which is best practice for managing and protecting our information assets; allowing them to remain safe and secure. We have obtained certification this year.
17. On the plus side, new data such as from the smart meter roll-out will offer significant opportunities to provide improved service levels for customers. As such Ofgem needs to ensure the supply market arrangements strike the appropriate balance between improvements for customers and data security.
18. We note Ofgem's reluctance to 'give traditional suppliers privileged access to information and control over process' and on that point, we would like to offer an alternative view. From a data privacy and cyber security perspective, it is safer not to spread data too widely. Rather it is better to keep it centralised with a minimal number of actors who can demonstrate:
    a) high standards of the data protection;
    b) high standards of cyber security; and
    c) little reason for conflict of interest.
19. These principles should be considered in the analysis of future market roles.

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).

20. Not all innovation will be delivered through operation of the market. Ofgem needs to exercise the full range of operational levers to boost innovation. A barrier that exists today is the siloed thinking on innovation where network innovation can tend to be viewed as separate from the innovation in the supply market. The value to customers of a whole system perspective to innovation should be considered by Ofgem.

[3] www.gov.uk/government/news/cma-examines-heat-networks

21. Opportunities should be explored by Ofgem to expand 'network only' innovation funding and ensure that the position on DNOs not owning and operating storage does not stifle innovation:
    a) The *de minimis* thresholds in the distribution licences could be calibrated to permit DNOs to take controlled but valuable steps towards becoming DSOs, 'priming the pump' for more widespread competitive market-based mechanisms to emerge over the medium and long term.
    b) There needs to be a re-think of the funding routes available to support a 'whole energy system' approach for innovation projects that targets the delivery of customer benefits from greater overall efficiency, widening the focus from the current 'network only' innovation.
22. On top of the distinction made here between regulatory and commercial barriers, we also introduce (prompted by the recommendation put forward by the 'Reshaping regulation'[4] report) the distinction between statutory regulation and industry codes and practices. This introduces a new clarity about where the issues lie, as well as describing the background to the creation of such a complex system.
23. There is significant interest amongst a number of our customers for 'local energy' whereby electricity is generated and consumed by customers located physically close to each other. It minimises transport costs and engages customers in the energy system such that they are more likely to want to flex their consumption to follow generation and seek ways to be more energy efficient in their consumption too.
24. The barrier that we have observed, in addition to that which is described in Ofgem's call for evidence document, is industry codes. It prevents the deployment of a network offering which, if paired with a retail offer, has the potential to facilitate the spread of local balancing schemes by offering cost reflective network tariffs. The specific barrier that we have identified is the inability to settle 'virtual meters' as such a concept is not recognised by the balancing and settlement rules[5]. Our proposal for a local energy scheme would be to define new arrangements for peer-to-peer trading arrangements for those customers that:
    a) operate a portfolio of distributed generation supplied within a defined network boundary such as the 'catchment' of a specific major substation; and
    b) operate control systems to manage the system to match demand with generation.
25. By so doing it may be argued that the upstream piece of network is used to a lesser extent than without the local balancing.
26. This would represent a commercial signal that reflects better the use of the DNO network through local balancing schemes. The infrastructure development costs of this approach are minimal (compared to the alternative of installing private wire) as the main change is to produce alternative tariffs.
27. Providing network tariff discounts to one group of users will increase charges to others. But there is a payback for all customers in that major upstream network reinforcement may be avoided, meaning network costs could be brought down in the long term.
28. Our customers would value a closer examination by Ofgem of the barriers to adopting these local supply models that span the supply market and network charging codes.

[4] 'Reshaping regulation, Powering from the future' Laura Sandys, Dr Jeff Hardy & Professor Richard Green, October 2017.

[5] 'Business model innovation in electricity supply markets: The role of complex value in the United Kingdom', Energy policy 92 (2016) 286–298, Stephen Hall, Katy Roelich, May 2016.

Q3. What other supply market arrangements would provide a better default for disengaged consumers, whereby they are protected adequately and are able to access the benefits of competition?

29. The future of customer engagement will be influenced by any legislation enacted to introduce price caps. Price caps will have an impact on the competitive market and customers may respond in ways that may not be expected by policy makers. When considering engagement of consumers, Ofgem should continue to distinguish between different groups of customers that need differing approaches to protection.
30. The draft legislation being brought forward by Government to implement price caps could have a significant impact on the future landscape of the supply market. If enacted this will represent a move away from reliance upon competition as the mechanism by which customers are protected; instead more reliance will be placed on regulatory intervention. As such, the other steps that Ofgem is considering will need to be formed on the basis of whether and how this Government intention is enacted.
31. Ofgem should continue to prioritise customer protection for vulnerable consumers and the fuel poor. Collective switching as described in the call for evidence document seems workable, as does the model currently growing in popularity of a local authority acting as a not-for-profit supplier. Looking further forward, how the market structures that facilitate decentralised energy models and peer-to-peer trading can also address provision for these groups should be a key issue for this process to consider.
32. Through our Community Energy Seed Fund, now in its fourth year, we also have witnessed the role that community groups can play in helping vulnerable households turn their attention to energy matters and get involved in decisions[6]. We believe that Ofgem and BEIS should continue the initial efforts of the previous government in supporting community energy actors[7] with a view to enhancing market participation.
33. Another community energy example is our collaboration in the Energise Barnsley community project through the 'Distributed Storage and Solar Study'[8] innovation project. In this project we are exploring the value of domestic storage, often in combination with solar panels, for customers in social housing. It is demonstrating good levels of engagement by customers seeking to minimise their bills.

Q4. How big an issue is it that we do not currently regulate intermediaries in the energy market? Is there a case for doing so? If so, how would we best do it? We are especially interested in frameworks that enable a wider variety and increased number of market participants to provide supply.

34. Market power and system risk should be the principal determinants used by Ofgem to decide whether or not regulation of intermediaries is required. In the absence of market power, or pronounced system risk, there should be a presumption in favour of light regulation of such intermediaries.
35. In order to fulfil their role, intermediaries should be required to adopt certain standards – for example, the protection of data and putting in place adequate cyber security. There are alternative control measures that could be deployed such as technical certification, international standards, industry codes and contracts.

[6] We provide case studies of projects that the Community Energy Northern Powergrid Seed Fund has helped here: www.northernpowergrid.com/document-library/community-energy/community-energy-case-studies. New ones relating to the third year of funding will be available in May 2018.
[7] 'Community Energy Strategy Update', Department for Energy and Climate Change, March 2015
[8] More information on the project on: www.northernpowergrid.com/innovation/projects/distributed-storage-solar-study-nia-npg-011

36. The level of regulation should reflect what intermediaries are actually doing. In order to provide services to the system, intermediaries will typically require real-time data about energy flows on the system, operate trading platforms, intervene on home appliances, etc. All of this will require a focus on data protection as well as on compliance with commercial codes or service level agreements. The Regulatory Sandbox should help inform the type of protection that Ofgem may need to take on as new service offerings are deployed[9].

[9] ww.ofgem.gov.uk/system/files/docs/2017/07/update_on_regulatory_sandbox.pdf