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Dear Anna,

POTENTIAL IMPACTS ON CONSUMERS FOLLOWING MARKET-WIDE SETTLEMENT REFORM – CALL FOR EVIDENCE

I write with our views on the introduction of half hourly (HH) settlement. To address the questions in your call for evidence I primarily rely on projects led by Northern Powergrid but I also make reference to other work where relevant. After a summary of our key points the structure of this response then mirrors your call for evidence document – i.e. your four themes for domestic customers followed by your four themes for small business customers.

SUMMARY

- **We broadly support the introduction of half hourly settlement.** It introduces an important step to ensure that truly cost reflective tariffs may be offered to customers. In this way, the opportunities and savings are freed up from the move to a smarter and more flexible energy system.
- **However we think the introduction for HH settlement for domestic customers must be done carefully to avoid being inadvertently regressive.** The current arrangements socialise some of the costs and provide a degree of protection for vulnerable customers. Before introducing HH settlement for domestic customers Ofgem should be clear which classes of customers it wants to protect and how.
- We have two landmark projects that inform this response and that support the value to be gained from smart flexible approaches. These are the Customer-Led Network Revolution (CLNR) and Activating Community Engagement (ACE) projects.
- Ofgem is right to signal that there may be inappropriate impacts on certain customer groups. These impacts, particularly on low income customers, need to be understood and solutions created as necessary. But they are not a reason to stop the transition to half hourly settlement.
- Our own CLNR trials, referenced by Ofgem in its call for evidence, identified that the majority of domestic customers who opted for a static time of use tariff were able to observe savings relative to the control group. However, given that only a small majority made savings shows that this is not straightforward.
- **Social factors and reliable user-friendly technology are important factors as well as the pure economic value from the tariff.** However, to deliver a fair and efficient structure of charging it is important to seek cost reflectivity and then apply socialisation or protection for consumers where perverse socially- or politically unacceptable outcomes are predicted or observed.
- Our trials have shown that the usability of technology is a major satisfier or dissatisfier with customers.
    - Technology can engage customers when it is well matched to the commercial proposition and other social engagement.
    - There is a low tolerance from customers for technology that does not work first time.
- **Informed by this, our view is that to be most effective in the long term the technology allows customers to take control and set their preferences and then enables relatively passive customer participation in energy markets through seamless background automation.**

INTRODUCTION

1. Much of the evidence submitted here is from two innovation projects completed by Northern Powergrid:

   - Customer-Led Network Revolution (CLNR)[1]
   - Activating Community Energy (ACE)[2]

2. CLNR was a project we led that was funded through the Ofgem Low Carbon Networks Fund. Concluding in 2015, it was one of the largest trials ever conducted of Great Britain's customers' energy practices. In the trials we studied 11,000 domestic and 2,000 SME customers' electricity consumption and generation patterns. In partnership with Durham University we conducted 1,250 customer surveys and 250 face-to-face interviews (with 130 customers) to help understand the social dimensions of the trial participants' energy practices and their ability to be flexible in their electricity use. The trials majored on participation of domestic customers but small and medium enterprises (SMEs) were also engaged in some of the programme.

3. ACE was a project to seek new ways to engage with domestic customers and deploy demand side response (DSR) through gamification. It was funded through an Innovate UK call and through our Network Innovation Allowance. It concluded in 2018 and was one of the largest domestic DSR projects with over 2,000 customers engaged through social networks and in home automation. Competitions were run where participants could earn prizes dependent on the size and frequency of the DSR that they made available. A new project is now taking forward the learning to apply it to domestic customers charging electric vehicles (Gen Drive). This follow-on project is not yet sufficiently progressed to provide learning to inform this call for evidence. These projects are trialling tools that could be used to support the transition to the role of Distribution System Operator.

DOMESTIC CUSTOMERS

Engagement with energy usage

Question 2.1: Individual domestic consumers will differ in their ability and/or willingness to engage with how they use electricity.

a) What are your views on the forms of communication most likely to facilitate/encourage consumers to engage with their energy use to help them make informed choices?

b) What specific information about their energy use could encourage consumers to engage? Please consider how this information is presented and how regularly it is communicated.

Question 2.2: Aside from communication, what other measures or initiatives would encourage consumers to become more confident about engaging with their energy use? This engagement may be direct, or through an intermediary/third party.

4. The CLNR project demonstrated that domestic customers showed interest and were willing to accept smart meters as an aid to understand, control and reduce their energy use. Time of Use (ToU) tariffs also proved popular with domestic customers when combined with a smart meter, with tariffs being easily understood. Behaviour was studied in two surveys of smart meter trial participants, conducted in summer 2012 and spring 2013 providing 1,284 responses. In terms of awareness, knowledge and confidence in energy efficiency decision-making and purchasing, the two highest scored responses in this area were: firstly 'I am confident that I have the right skills to make informed decisions in energy efficiency' (2.94 out

[1] The main source or learning from the domestic and SME customer trials are contained in the report – Developing the smarter grid: The role of domestic and small and medium enterprise customers (ref. CLNR-L246), 2015. Appendix 4 references the relevant subsidiary reports. http://www.networkrevolution.co.uk/project-library/developing-the-smarter-grid-the-role-of-domestic-and-small-and-medium-sized-enterprise-customers/

[2] ACE is described on the following web page with links to project reports - https://www.northernpowergrid.com/news/northern-powergrid-encourages-other-network-operators-to-benefit-and-empower-customers-with-mobile-apps-following-groundbreaking-north-of-england-trial

of 5.00) and secondly 'I only buy appliances with high energy efficiency ratings even if they cost more.' (2.90 out of 5.00).

5. We found that trial participants found In Home Devices (IHDs) to be a valued part of interventions for managing energy within the home. It was found that people used the IHD in at least three distinct ways:

   - to better manage the household budget;
   - to provide oversight on what families are doing; and
   - to challenge themselves to save energy.

6. Each of these uses contributed to the identification of energy saving potential. Participants also reported thinking of smart meters and IHDs to be the 'same thing', or at least two parts of a whole. For the vast majority the IHD is the smart meter because it is the means through which they are provided with information, and it looks 'smart' because of its digital display, its real time information and the way it physically resembles other devices associated with domestic technology (smart phones, portable devices etc.). The vast majority (90%) of participants found the IHD easy to understand and we did not record a significant drop-off in engagement with the IHD over the duration of the trials which were between 12 and 24 months in duration.

7. Most of those on the TOU trial who were surveyed said they considered that they used less energy overall. However, analysis of the data showed that there was no statistically significant difference in total annual electricity consumption between the TOU customers and those on a standard tariff with a smart meter (the control group).

8. Mobile games could become an important tool for energy companies as they seek to manage power demand and keep costs down for customers. ACE was a unique project where more than 2,000 customers competed for cash prizes by turning off washing machines, televisions, lights and other home devices, in the first ever trial to show how a mobile game can incentivise households to reduce their consumption at times of high demand. The idea was to engage customers through mobile games that offer a fun solution to help manage this demand, rewarding our customers for reducing their consumption at peak periods.

9. At periods of high demand players received an alert saying "It's GenGame time." The more they reduced their consumption the more points they earned , increasing their chance to win cash prizes online.

10. Developers tracked user behaviour and made around 20 updates to the app to optimise performance and improve engagement. One challenge was how to keep people engaged when there were only two or three GenGames a week. DSR happens infrequently such that when you do not do anything most of the time there is a lot of time waiting. The solution was to develop a fun game called GenBlast, which people played at any time to win "power-up" points. GenBlast gives players suggestions about how to reduce energy consumption and by keeping power low they can win more. Players could use the power-up points they won at GenBlast to improve their performance in GenGame, and by doing so earn more points to enter for prizes.

11. Developers also learned that timing of engagement mattered significantly. By placing ads on Thursday and sending out equipment first class to arrive on Saturday, they could increase the number of people setting it up from 35% to 75%.

12. These and other improvements cut the cost of recruiting customers by around 90% to a couple of pounds per person.

13. ACE trialled a much more dynamic approach for a more dynamic world. It creates a personal connection which we could also explore for other purposes such as fault reporting and energy saving advice. The lessons of GenGame are now being used in a follow-up project called GenDrive which is exploring how mobile games can incentivise electric car drivers to use their vehicles to support the UK energy grid. This £400,000 project involves a variety of partners and is part of the Vehicle-to-Grid competition, funded by

the Office for Low Emission Vehicles (OLEV) and the department for Business, Energy and Industrial Strategy (BEIS), in partnership with Innovate UK.

Willingness to load shift

Question 2.3: Based on any relevant evidence you have collected,

a) what proportion of consumers would be price responsive?

b) what enablers would be important and what barriers might exist?

c) what volume of load shifting from peak to off-peak periods (%) will a consumer be able to offer?

Question 2.4: A number of different approaches to load shifting exist.

a) Which approaches to load shifting (direct, or indirect, with or without automation) would domestic consumers be more likely to prefer and respond to?

b) What are the risks and benefits of these approaches?

c) How could those risks be mitigated?

d) Would certain types/groups of consumers favour certain approaches?

e) Would certain types/groups of consumers be at greater risk of detriment from certain approaches?

These approaches could include but are not limited to:

- *ToU tariffs*
- *Tariffs reflecting capacity-based charges, which may involve a defined access limit or different types of access option as described in paragraph 2.6 and Appendix 4*

Question 2.5: Which parties (eg suppliers, other third parties, network companies, community schemes etc) do you consider could be best placed and/or trusted to facilitate these above approaches?

Question 2.6: Certain consumers may face barriers that prevent them from load shifting.

a) What barriers exist that may prevent consumers from load shifting?

b) Which particular groups of domestic consumers may face greater or more significant barriers than others?

c) For particular consumers are there certain types or levels of consumption that there will be less scope to flex (ie are there any forms of consumption that consumers would consider as "essential" and be unable to shift, such that suppliers, network companies or third parties should not be able to offer to reduce consumers' usage below this limit)?

Question 2.7: Do you have any views about the scale of any distributional impacts? How may these be mitigated?

14. The CLNR trials demonstrated that ToU tariffs enabled by smart meters can benefit both customers and distribution network operators (DNOs). The ToU tariffs were popular and easily understood (85%) by domestic customers with the majority (78%) considering that use of the tariff was causing them to reduce their energy consumption. When results were measured, the actual number who saved money was in the majority (60%); albeit reduced on the number who expected to see savings.

15. The ToU tariff was more effective in shifting demand out of the 4pm to 8pm peak, than delivering overall reductions in energy usage, with up to ca. 10% lower demand in this period than the control group.

16. From the local powergrid perspective the trials proved that customers were willing and able to offer flexibility, by shifting demand out of network peak (4pm to 8pm). Customers' annual maximum peak was lower on average by 261 W (6%), from 4.188 kW to 3.927 kW, particularly focused on weekdays and winter months and there were no statistically significant new peaks created either side of the 4pm to 8pm time band. However on the small number of days of the highest maximum peak demand, the static ToU tariff price signal trialled was insufficient on its own to materially shift the network peak which is the desired outcome for the network.

17. In order for DNOs to maximise the benefits domestic customers can provide, ToU tariffs would therefore need to be used as part of a solution that could also include: dynamic tariffs and / or critical peak pricing.

18. The CLNR project was especially successful in recruiting and monitoring customers to engage in its Time of Use (ToU) trials. Customers were recruited in partnership with British Gas (BG) from their existing Foundation stage smart meter customers, plus those who met BG's smart meter criteria. Recruitment actually exceeded the original target and was particularly successful with a high 8% response to the direct mail campaign, with over 800 customers consenting to the trial versus the original target of 600. This was deemed a high response rate for a campaign with an existing customer base to see if they wanted to pilot a new (trial) tariff.

19. During recruitment, it became clear that there were customers to whom the prospect of a smart meter installation proved to be an additional and strong incentive for recruitment to the ToU trial.

20. BG offered the tariff, branded as an 'Off-Peak Saver 3-Rate tariff' and as it was a research trial customers were protected so that they would not be disadvantaged if their bills rose higher than BG's Standard tariff. It is not possible to say how the trial results would have been different if this 'safety net' had not existed.

21. The three-rate tariff was designed to move consumption out of network peak (4-8pm on weekdays). The tariff consisted of three registers R1, R2 and R3, each priced in relation to BG's standard tariff in the market at that time. The peak period was priced at 99% above the standard rate (x1.99) whilst day was priced at 4% below the standard rate (x0.96) and off-peak at 31% below the standard rate (x0.69).

22. The ToU customer was therefore encouraged to use less electricity in the R1 period and more in the R3 period to make the most savings financially; that is to shift electricity use from the peak period into the evenings or weekends. The three bands are detailed in the table below:

Tariff Band		Times	Price in Relation to the Standard Rate (1.00)
Weekday	Day (R2)	07:00 – 16:00 (Mon – Fri)	0.96
	Peak (R1)	16:00 – 20:00 (Mon – Fri)	1.99
	Off Peak (R3)	Mon: 00:00 – 07:00 Mon – Thurs : 20:00 – 07:00 Fri: 20:00 – 00:00	0.69
Weekend (R3)		All-day	0.69

Table 1: Time of Use Tariff structure trialled in CLNR

23. Our primary research output with regards to the ToU tariff was a comparison between a control group of ca. 8,400 smart meter customers (on a flat rate tariff) and 575 ToU trial customers aligned and monitored over a 12-month period (1 October 2012 – 30 September 2013).

24. Our particular interest was the extent to which a ToU customer would modify their behaviour, and therefore their demand profile, to exploit lower electrical energy costs at off-peak times and whether this generated any unintended consequences such as new peaks in the shoulder periods (each side of the peak hours).

25. In terms of the timing of appliance use, the most popular (54%) response from our survey was that the IHD had caused participants to change the time they used certain appliances. Consumption shifting prompted by both the ToU and the IHD was focussed most commonly on a small number of key flexible activities, such as laundry and dishwashing. In contrast the IHD alone provided a response in reducing consumption activities such as lighting, showering and heating.

26. On ACE, with £350 of cash prizes available each month, players reduced their electricity consumption by an average 11%. Although the average was 305W, some cut as much as 4.9kW, turning off appliances such as electric vehicles, caravans, hot tubs and tropical fish tank heaters for short periods of time.

27. Looking further afield, social factors and reliable user-friendly technology are important factors as well as the pure economic value from the tariff. The Irish smart meter trials in 2010 demonstrated that the value of the tariff saving did not have a significant influence on the energy practices of trial participants. This suggests to us that sometimes irrational human factors (community influences and technology acceptance) could be more important influences on behaviour than the pure rational economics and fiscal incentives.

Adoption of innovative technology

Question 2.8: How could innovative technologies or solutions enable more consumers to provide flexibility, either individually or collectively (eg through a community approach)?

Question 2.9: We want to understand what specific concerns or risks of detriment may exist with the use of technology and innovation to enable flexibility.

a) What barriers exist for consumers to access these enabling technologies/innovative products?

b) How could these barriers be overcome?

c) Are there any particular concerns which may apply for certain consumer groups, eg vulnerable consumers (affordability and practicality)?

d) What further protection measures should be considered alongside these technologies?

28. On CLNR, In addition to the time of use trial we also conducted trials with other combinations of customer technology and tariffs:

- Domestic restricted hours and direct control trials were operated with either a smart washing machine or a heat pump with thermal store. The benefit from smart washing machines was limited and whilst the heat pumps successfully reduced individual customer peak load by 2.5kW, there were real barriers identified during this trial, specifically, the retrofitting of thermal store heat pumps proved to be particularly challenging.
- PV within-house balancing, both manually using IHDs and automatically triggered with hot water heating, was successfully demonstrated during this project. While the indications are that the benefits to networks are relatively small, developing ways in which PV owners can utilise their own generated electricity could provide value in areas where PV arrays are clustered.

29. The GenGame app in the ACE project was designed by a team of experienced game designers and developers. Players were recruited via Facebook from across Northern Powergrid's customer base. They downloaded the free mobile game app and were sent self-install equipment, which enabled them to monitor their consumption in real-time on their mobile phone.

30. A key conclusion was that customers had an understandable low tolerance for any technology that did not work 'straight out of the box'. Some of the early wifi enabled smart plugs were particularly unreliable and this had a major impact on the interest levels in the competitions.

Choice of tariff

Question 2.10: Do you have any views about whether consumers may prefer particular tariff types over others (for reference, some examples of ToU tariffs are listed in Appendix 2, and potential access options are described in Appendix 4)?

Question 2.11: Which types of flexible tariffs and offers are likely to be available following settlement reform, considering the potential network charging and access options described? Please identify specifically the types of tariff options which

a) suppliers are already offering or are developing

b) you expect may emerge following settlement reform

c) you expect suppliers may develop in response to more granular, locationally differing network charging signals and the availability of different access options for their consumers. Would you expect to see such tariffs, automation deals or offers targeted to consumers by location if underlying network charges varied locationally?

Question 2.12: Considering any tariff options or packages you have developed or may develop, please provide any evidence of consumers' attitudes or response to them.

Question 2.13: How far could principles-based obligations help ensure tariffs/choices are appropriate, including in relation to potential new access options?

31. All of the CLNR domestic interventions described above were successfully demonstrated and through time could form part of the future smart grid. By using domestic customer flexibility we have the potential to avoid the network peak load by 2030 being 10% to 50% higher than it is today (the range dependent on the amount of new low carbon technologies that customers deploy). It is this potential size of underlying load growth from new loads such as heat pumps and electric vehicles that offers the opportunity for us to save ca. £400m over the same timescale by using new smart grid solutions as opposed to traditional reinforcement of the network.

32. On the basis of our findings with the trialled 2020 distribution tariffs and the current technology costs, they are only likely to be cost effective in the next decade or so if used to deliver benefits for energy suppliers as well as avoiding network reinforcement. Therefore successful implementation requires development with energy suppliers.

33. Overall the findings confirmed that ToU customers reduced their consumption during the peak period, when compared to the baseline control group. In addition no new peaks were created in the shoulder periods ToU customers as a consequence. We share the findings in more detail here:

- Time of Use tariffs proved popular and were easily understood by domestic customers.
- The majority (60%) saved money on their energy bills (from £30 - £350) and demand in the 4pm to 8pm peak was up to ca. 10% lower than the control group.
- We identified that the household practices of laundry and dishwashing were most commonly used to flex the times at which electricity was used.
- It was also clear from our qualitative learning that the older generation and those with younger children tended to find it most difficult to flex their use of electricity compared to others in the trial.
- Further development by the industry and policy makers of both the tariff design and customer engagement methods are needed in order to better incentivise the desired peak load shift at the time it matters most for network operators (typically winter peak).
- More sophisticated tariffs, such as dynamic time of use (trialled by the separate Low Carbon London project) or critical peak pricing, may be beneficial, but this needs further research.
- The value to DNOs of domestic time of use tariffs will increase with more electric vehicle charging or electrical heating in the form of heat pumps. Both effectively double the household load.

34. On ACE we were testing how if you aggregate lots of small actions into one prize pot and create a £100 monthly prize it becomes much more interesting. The hypothesis was that the alternative, a 10p tariff discount, is not going to change customers' behaviour.

SMALL BUSINESS CUSTOMERS

Engagement with energy usage

Question 3.1: Individual small non-domestic consumers will differ in their ability and/or willingness to engage with how they use electricity.

a) What are your views on the forms of communication most likely to facilitate/encourage these consumers to engage with their energy usage to help them make informed choice?

b) What specific information about their energy use could encourage these consumers to engage? Please consider how this information is presented and how regularly it is communicated.

Question 3.2: Aside from communication, what other measures or initiatives would encourage small non-domestic consumers to become more confident about engaging with their energy use? This engagement may be direct, or through an intermediary/third party.

Question 3.3: Who would be best placed to help small non-domestic consumers to be more engaged with their energy usage? How would this vary with sector and company size?

35. Our learning on engagement with SMEs comes from the CLNR project. Our findings about SMEs are important because this was an area which had been little studied in the past and where data is limited. The results provided valuable new information about detailed SME activities.

36. We approached over 20,000 SMEs about participating in ToU, restricted hours and direct control trials. We recruited customers and undertook time consuming technical site surveys with a significant number. Whilst we found a high level of interest in the concept of demand side management, there were a number of factors with SME customers that meant that severely limited the number of customers who ultimately chose to part in the trials.

37. Survey results indicated that broadly the needs of the business meant that the uncertainty introduced by potential interruptions was unacceptable. Despite this we conducted a trial of the restricted hours trial with one customer, demonstrating that the restricted hours DSR can be successful in reducing load during the peak window. This potentially is of use to both suppliers and DNOs. The difficulty remains in recruiting suitable SMEs and meeting their concerns about being able to continue operating their mainstream business despite the intervention.

38. CLNR trials demonstrated that small and medium enterprises (SMEs) are particularly diverse. It is harder to characterise a 'typical' SME than it is for a 'typical' domestic customer.

39. DNOs will have to develop new, potentially bespoke methods, to engage with this diverse customer group.

Willingness to load shift

Question 3.4: Based on any relevant evidence you have collected,

a) what proportion of small non-domestic consumers would be price responsive?

b) what enablers would be important and what barriers might exist?

c) what volume of load shifting from peak to off-peak periods (%) will an small non-domestic consumer be able to offer? How would this vary with sector and company size?

Question 3.5: A number of different approaches to load shifting exist.

a) Which approaches to load shifting (direct, or indirect, with or without automation) would small non-domestic consumers be more likely to prefer and respond to?

b) What are the risks and benefits of these approaches?

c) How could those risks be mitigated?

d) Would certain types/groups of small non-domestic consumers favour certain approaches?

e) Would certain types/groups of small non-domestic consumers be at greater risk of detriment from certain approaches?

These approaches could include but are not limited to:

- *ToU tariffs*
- *Tariffs reflecting capacity-based charges, which may involve a defined access limit or different types of access option as described above and in Appendix 4.*

Question 3.6: Which parties (eg suppliers, other third parties, network companies, community schemes etc) do you consider could be best placed and/ or trusted to facilitate these above approaches for small non-domestic consumers?

Question 3.7: What barriers exist that may prevent small non-domestic consumers from load shifting? Can you identify:

a) Which particular groups of small non-domestic consumers may face greater barriers than others?

b) Are there certain types or levels of consumption that there will be less scope to flex, for particular small non-domestic consumers? Are there any which these consumers would consider as "essential" and be unable to shift, such that suppliers, network companies or third parties should not be able to offer to reduce consumers' usage below this limit?

c) Are any other protections beyond the current regulatory framework needed to ensure arrangements are appropriate and meet small non-domestic consumers' needs? Please identify any measures you consider would be beneficial and how these may vary with sector and company size.

40. CLNR results demonstrated that SME consumption per customer tends to be an order of magnitude higher than domestic consumption, making these energy users of particular importance for understanding both current and future demand.

41. The other key learning points were:

- The demand profiles of individual SMEs also vary to a much greater extent than households. They are heterogeneous in terms of their business activities, and hence also in terms of their overall demand for power and the timing of that demand during the day.
- Because of the considerable variability in the SME community, the overall results themselves do not have implications for network planning or operation, but do provide an important baseline.
- The fact that most SMEs do not contribute significantly to the evening peak is important. There could be value in targeting those that do have an evening peak.
- Smaller businesses tend to consume a higher proportion of their total electricity in the early evening peak period and have limited consumption overnight, such as those in leisure, and hospitality industries. Larger businesses consume electricity more evenly across a 24 hour period, but may have larger total consumption and power demand per hour during the peak. This suggests that in terms of DSR, larger businesses may offer more potential to be flexible by shifting demand to other times of day/night whereas smaller businesses may have relatively fixed electricity demand in the peak period.
- The proportion of total electricity consumption concentrated in the evening peak varies by sector with industrial businesses tending to consume a lower proportion of electricity in this period throughout the year while businesses in the agriculture, hunting & forestry, fishing sector consume the most.

Adoption of innovative technology

Question 3.8: Which technologies could be useful for small non-domestic consumers to help them offer flexibility and gain better control of their own energy usage, if they chose to do so? How does this vary with sector and company size?

Question 3.9: Who would small non-domestic consumers trust to provide an automation or load management service (eg direct control over their demand) to them, eg if using an innovative solution like battery storage? What specific protections may these consumers need? Would they be more likely to offer flexibility if it were automated?

Question 3.10: What are the circumstances in which a communal solution could bring more benefit to small non-domestic consumers (sharing risks/benefits of offering flexibility) and are there any specific protections needed?

Question 3.11: Which different sectors where small non-domestic consumers are active could benefit from innovative technologies that unlock flexibility and how could other sectors also benefit?

42. CLNR showed that for SMEs, some activities, such as lighting, are less susceptible to demand side management, although lighting load could be reduced significantly through timers, motion sensors and energy efficient lighting such as LEDs. Other loads, such as chillers, have the capability of being moved from peak time if business priorities permit.

43. There is also scope for better energy management, for instance setting timers to begin operation after the peak period.

44. The potential for SMEs to provide valuable demand flexibility centres on both the scheduling and the interruptibility of practices; some processes are interruptible and others cannot be stopped once underway. Interruptible practices could respond at short or no notice to a network intervention whereas re-schedulable ones can be moved in time in advance, and possibly on a regular basis if such interventions can be planned in advance.

Choice of tariff

Question 3.12: Do you have any views about whether small non-domestic consumers may prefer particular tariff types over others (for reference some examples of ToU tariffs are listed in Appendix 2, and potential access options are described above and in Appendix 4)?

Please consider how this may differ by different types of small non-domestic consumers, eg by sector/company size.

Question 3.13: Which types of flexible tariffs and offers are likely to be available to small non-domestic consumers following settlement reform, considering the potential network charging and access options described? Please identify specifically the types of tariff options which

a) suppliers are already offering or are developing

b) you expect may emerge following settlement reform

c) you expect suppliers may develop in response to more granular, locationally differing network charging signals and the availability of different access options for their consumers.

Would you expect to see such tariffs, automation deals or offers targeted to small non-domestic consumers by location, if underlying network charges varied locationally?

Question 3.14: Considering any tariff options or packages you have developed, please provide any evidence of consumers' attitudes or response to them.

Question 3.15: How could protections ensure tariffs/choices are appropriate, including in relation to potential new access options?

45. Although few conclusions on the impact of ToU tariffs on SMEs can be drawn from CLNR, there is clearly interest from SMEs in ToU tariffs and so further work would be useful. However, it demonstrates the need,

because of the heterogeneity of the SME community, to conduct monitoring both with and without the ToU tariff for the same SME types.

I hope that you find these comments useful and I would be pleased to discuss them further should you wish.

Yours sincerely,

Jim Cardwell
Head of Policy Development