

## **Smart Metering Implementation Programme – A call for evidence on data access and privacy**

Response by CE Electric UK

CE Electric UK is the licensed electricity distribution business for the north east, Yorkshire and parts of northern Lincolnshire, operating through its two licensed subsidiaries, NEDL and YEDL. We welcome the opportunity to take part in this consultation. We have taken part already in a number of interactions with DECC and its consultants on the subject of smart metering and look forward to continuing to make a constructive contribution to this initiative.

Our detailed responses to the questions, including an appendix with detailed comments on the technical specification, are below, but it may be helpful to summarise our views on the key issues below.

CE Electric UK has taken a full role in discussions in the various working groups including the Hothouse and Ofgem Data Privacy workshops, often as sole DNO representative. In addition we have worked with other DNOs and Engage Consulting to develop the ENA's thinking on privacy issues and to develop a generic Privacy Impact Assessment (PIA) following guidelines from the Information Commissioners Office. It is hoped that this PIA will be published very shortly.

Our key points are:

- ENA have commissioned Engage Consulting to carry out a Privacy Impact Assessment on the use of smart metering data by network operators. This will be submitted as part of the response by the Energy Networks Association to this consultation.
- CE Electric UK has identified five data areas relating to customers data that DNOs need access to in order to maintain an efficient and economic network:
  1. The data that DNOs get now and need for current regulatory purposes, eg to support registrations, to identify customers and their suppliers for fault management, and the data needed for DUoS billing to recover our income.
  2. Consumption data and other network-related data required to meet current regulatory requirements (e.g. the development of an efficient, co-ordinated and economical system) for network planning, DUoS tariff design and accurate revenue recovery forecasting.
  3. Customer status data – information on power outages, remote disconnections and self disconnections for management of no-supply calls and vulnerable customers.
  4. Data to help manage the development and operation of low carbon technologies (e.g. PV, heat pumps, EVs)
  5. Data to help manage the development of smart customer response.
- Customer status data (number 3 above) would need to be delivered in real time in order to provide customer service and is required to enable us to perform our regulated duties.
- We are aware that half hourly 'consumption' data is classed as personal data. We are supportive of the principles developed as part of the ENA PIA which would see:
  - Detailed consumption data aggregated by the DNO in a secure environment;
  - Aggregated data used by planning and operational areas of the business in order to comply with our regulated duties;
  - Network-related data, such as voltage data, being available for use by planning and operational areas of the business in a disaggregate form; and
  - Detailed data would only be made available in the future where we can justify that aggregated data is insufficient to either analyse a network issue or develop an optimum solution. Such a scenario is likely to occur in parts of the network where customers have installed low carbon technologies. The unusual nature of their demand/generation characteristics and the potential impact on the quality of their own and neighbouring electricity supplies justifies on regulatory grounds more detailed data being provided to DNOs. In such a scenario data would need to be used in a secure environment.
- Data aggregation for DNO purposes is best carried out by the DNO itself, with the application of appropriate safeguards, because of the complex and dynamic nature of the mapping of customers onto distribution networks.

CE Electric is currently a meter asset provider (MAP) and may become a smart meter MAP. It is essential that MAPs have access to sufficient data from customers' premises as well as from the data communications company (DCC) to safeguard their investments. The information we envisage a MAP would require would include basic supplier registration information for a site, the equipment register (by serial number) for the site and the meter status for the site.

## **Appendix 1 – Digest of Consultation Questions**

1.	Please submit any further evidence, such as surveys or consumer research, regarding privacy issues and smart metering. In particular is there evidence available about the effects of the availability and aggregation levels of more granular data (for example daily)?
	ENA have commissioned Engage Consulting to carry out a Privacy Impact Assessment on the use of smart metering data by network operators. Part of this work has included liaising with consumers and consumer groups. This will be submitted as part of the response by the Energy Networks Association to this consultation.
2.	To what extent would different rules for access to data between suppliers and third parties be expected to impact on the development of an energy services market (in terms of product and tariff innovation and / or entry to the energy market by third parties)? What are the particular data uses to which these concerns apply?
	n/a
3.	Are there any data uses, apart from those set out below, where the arrangements for access to data could have an impact on the benefits of the programme? How does this analysis differ for the gas market?
	n/a
4.	What types of energy services and energy advice could be provided by the market (by suppliers and / or ESCOs / potential new entrants) that require access to specific levels of data? What level of data granularity (frequency, time-lag) are needed to provide such services and what is the potential impact of these services in terms of percentage energy savings? Please provide empirical examples and explain the basis of any assumptions and distinguish between gas and electricity.
	n/a
5.	Should theft management be considered a regulated duty for which suppliers should have access to a certain level of smart metering data? What level of data would be required and how would this be used to manage theft? Please provide practical examples.
	Yes theft management should be considered a regulated duty, suppliers should have sufficient data to ensure that the settlements systems are updated thereby ensuring that stolen units are not treated in the same manner as genuine system losses.
6.	Does data need to be collected from all customers all of the time, for theft management, or could there be a trigger for accessing more detailed data (for example where theft is suspected)?
	Sufficient data should be made available to ensure that assessments can be made using energy usage patterns which can lead to further investigation and if necessary the requirement for further levels of data.
7.	What level of take-up of time-of-use tariffs could be expected under different scenarios for access to data? What information is needed to design time of use tariffs? In particular would sample or anonymised data be sufficient?
	Some customers may be able to benefit more from time of use tariffs than others and so the take up will vary according to the nature of the customer's requirements. Therefore, suppliers will need to understand how the consumption profiles of such customers differs from the norm. Such an analysis will inevitably be statistical and therefore involve data from a range of customers. It is difficult to see how the collection and processing of the right dataset can be satisfactorily contracted out to a third party. The dataset required and the resulting analysis will be informed by the results of the analysis so, in practice, individual HH data will be required directly by suppliers.
8.	Do you agree that individual half-hourly data is not currently required for suppliers to meet their obligations in relation to settlement? Over what timescale are any changes to settlement likely to take place and what might the implications be in terms of data requirements?
	There are at least two issues here: <ul style="list-style-type: none"> <li>• What is the minimum dataset required for BSC compliance; and</li> <li>• What data is reasonably required for suppliers to make an informed judgement on elective HH settlement</li> </ul>

	<p>Under current BSC obligations, suppliers do not need individual HH data. A BSC consultation is currently under way on changing the BSC to require full HH settlement; even this would not necessarily require suppliers to have access to individual HH data as, for the purposes of settlements and DUoS billing, HH data could be aggregated by supplier and customer type.</p> <p>However, until HH settlement is mandated, suppliers retain the choice to submit part of their portfolio to HH settlement. This is related to the question of designing more sophisticated tariffs: just as some customers may be better served by time-of-use tariffs, suppliers may be better served by HH settlement of some of their groups of customers. Detailed HH data on customer groups is required to inform this decision.</p>
9.	How far would aggregated or sample data provide suppliers with what they need in the area of wholesale hedging? Please provide examples of how the data would be used and where possible quantify potential benefits and costs.
	Suppliers' wholesale risk is related to the consumption their customers are deemed to take under the settlements process. Therefore, until customers are settled HH, suppliers do not require individual HH data.
10.	What level of data would be required and how would this be used to manage debt? Please provide practical examples.
	n/a
11.	How would suppliers envisage using daily data to support debt management and what evidence do they have to support claims of additional savings that could be achieved with access to daily data as opposed to less frequent data?
	n/a
12.	How could smart metering data be used to identify and protect vulnerable consumers? Should such activity be considered a regulated duty and are any licence changes needed to create particular duties on suppliers in this area?
	<p>It is difficult to see how smart meter data can be accurately used to identify vulnerable customers (either positively, to protect them, or negatively to take advantage of them). It would be difficult, without further information which could be seen as an invasion of privacy, to distinguish between low or zero usage as a result of self-disconnection or from a house unoccupied for a period of time.</p> <p>However, the meter registration database could usefully record customer vulnerability in order to provide a flag against remote disconnection and to provide information for suppliers, DNOs and MOPs in relation to speedy reconnection.</p>
13.	Do you consider that use of data by network companies to support them in maintaining an efficient and economic network should be considered a regulated duty?
	<p>Yes. We believe that the use of data by network companies to maintain an efficient and economic network should remain a regulated duty. We have identified five data areas relating to customers data that DNOs need access to in order to maintain an efficient and economic network:</p> <ol style="list-style-type: none"> <li><b>The data that DNOs get now and need for current regulatory purposes</b>, eg to support registrations, to identify customers and their suppliers for fault management, and the data needed for DuoS billing to recover our income. Since this clearly falls within current regulated duties, this will continue to do so in future.</li> <li><b>Consumption data for network planning and/or duos tariff design</b>. Network operators currently design and operate networks based on the best information that is reasonably available and recognise that the availability of smart metering data will enable the efficiency of network design and operation to be enhanced. We recognise that in many cases aggregated data would be sufficient to undertake network analysis, both for planning and tariff purposes. However in parts of the network particularly where there is a high penetration of new technologies e.g. microgeneration, heat pumps &amp; electric vehicles aggregated data will not be sufficient to identify the most efficient solution to network issues and more granular data will be required. The degree to which aggregated data would be suitable as a basis for network analysis depends on the location of the aggregation points on the network e.g. LV service joint or HV feeder. For these purposes, the delivery of the data is not time-critical. We believe that such data is required to enable</li> </ol>

	<p>us to undertake our regulated duties.</p> <p>3. <b>Customer status data – information on supply interruption, remote disconnections and self disconnections for management of no supply calls and vulnerable customers.</b> This data is needed to provide and enhance the service provided to customers in relation to quality of supply and is needed in real time to be useful. This clearly falls within the definition of regulated duties.</p> <p>4. <b>Data on existence and operation of low carbon technologies (PV, heat pumps, EVs)</b> Low carbon technologies (LCTs) installed at the domestic level have the potential to create challenges for the operation of networks, both for network planning purposes (see 2 above) and for local operation of the LV network through impact on voltage and the local capacity of the network. This is already an issue for CE Electric, in some parts of the network, and will only grow in future as more LCTs are installed. Information about the existence of photovoltaic installations is provided to DNOs through the G83/G59 processes, but there is at present no requirement for notification of installation of heat pumps or electric vehicle charging. Data from smart meters could provide essential information about the location to supplement data from the development of a formal notification process. In either event data would enable the impact of LCTs to be assessed and hence ensure that electricity supplies in the neighbourhood are kept within statutory limits. We recognise that further work is needed on the volume and extent of data that is economically justified to develop efficient networks and believe that it is reasonable for early indicators of issues to be developed so that full half hourly data sets are uploaded only where reasonably required. As an example, smart meters will have the functionality to send alerts when voltage falls outside specified limits and DNOs will need access to these alerts. They would provide some assurance to the DNO that it is complying with its regulatory duties in relation to supply quality and give an early indicator of imminent issues. In such cases, especially where a pattern of alerts suggests that the customer's demand/generation characteristics are atypical, regulatory duties would justify more detailed consumption data to be uploaded, aggregated and analysed. Where this initial analysis identifies that further analysis is required, access to disaggregated data may be justified to maintain the quality of supply both to the customer concerned and neighbouring supplies. The delivery of this data is not time-critical.</p> <p>5. <b>Data to support smart customer response.</b> The future development of smart grids implies greater two-way interaction between the customer and other parties (energy supplier, aggregator and/or DNO). Whilst it is very likely that this closer interaction would provide additional transparency of data requirements we believe that, as indicated above, data required to at least assess if a 'smart' solution was appropriate to address a particular network problem would be available as 'regulated duties' data. This data required to implement a 'smart' solution would clearly be time-critical.</p> <p>To summarise, data under 3 and 5 above would need to be delivered in real time, and both are clearly within the scope of 'regulatory duties' or, in the case of area 5, by agreement. In other areas, the data is not time critical, but CE Electric UK is strongly of the view that half hourly 'consumption' data, together with other data which is thought to be generally not classed as personal data e.g. voltage related data, is needed to ensure that networks are efficiently designed and operated i.e. to comply with our regulated duties. In addition, where customers have installed LCTs, the unusual nature of their demand/generation characteristics and the potential impact on the quality of their own and neighbouring electricity supplies justifies on regulatory grounds more detailed data being provided to DNOs on a site by site basis.</p> <p>CE Electric is currently a meter asset provider (MAP) and may become a smart meter MAP. It is essential that MAPs have access to sufficient data from customers' premises as well as from the DCC to safeguard their investments.</p>
14.	Do you agree with the requirement for such data to be anonymised or aggregated wherever possible, and how should this be monitored?
	<p>CE Electric UK accepts that in many cases, especially now and in the next few years, data which is anonymised through the process of aggregation could be adequate to undertake network analysis provided the aggregation is appropriate. For example data aggregated to the HV/LV distribution substation would be adequate to determine if the substation is operating within its capability; data aggregated to an LV service joint would also enable a detailed analysis of the loading on an L V feeder. However, in both these cases if remedial action was required a detailed understanding of customer demand would enable the most efficient solution to be implemented e.g. setting cost reflective DUoS tariffs, negotiating DSM contracts etc. In summary there is a need for data not only to establish if there is a real or latent network problem, but also to establish the most efficient solution. We believe that there would be merit in providing further clarity of how data could be reasonably aggregated not only to establish whether there is a network issue, but also to identify the most efficient solution. It should be possible to learn from analysis of data from LCNF projects to increase the industry's knowledge in this area.</p>

15.	Would suppliers be expected to advise consumers of network company usage of data given network companies do not have a direct relationship with customers?
	We recognise that the consumer needs to understand how DNOs would use their smart meter data and how privacy and security of the data would be managed, despite the DNO not having a direct relationship with the customer. It would be less confusing for the customer if the use of smart meter data was explained in a single document and, given the relationship between the supplier and the customer, it seems reasonable that suppliers take the lead in this area. However DNOs will need to provide this information to suppliers so that it can be incorporated into the information provided by them. This could be backed up with information on the DNO website. We would also note that DNOs retain their connection agreement relationship with customers and whilst this is done in aggregate to large groups of customers it is worth considering how this contract may be amended and used for this purpose.
16.	Are there any alternatives to a basic opt-in or opt-out approach to consumer choice such as some form of prompted choice? What are the practical and consumer protection considerations in relation to different options(for example when and how)? From a consumer perspective what alternative approaches and vehicles (for example letter, email, phone) to seek customer consent are there?
	n/a
17.	What evidence is there of likely take-up rates that could be achieved through different approaches to consumer choice?
	n/a
18.	What current and future technical options exist for energy consumption data minimisation / privacy enhancing technologies? How might aggregated or anonymised data be provided in practice? Would this imply additional services to be provided by DCC?
	<p>Where it has been established that aggregated data from Smart Meters is sufficient to enable a DNO to fulfil its regulated duties, we envisage that the data would be available via the DCC for uploading into a secure internal DNO process where the data was aggregated at the required level. If data was aggregated at too high a level e.g. a HV/LV distribution substation, it could not be used to undertake analysis on the LV network. It may well therefore be most efficient to aggregate this at a low level, e.g. LV service joint or branch as the data could then be used for a range of network analysis studies. We are however mindful that there is a need to aggregate sufficient customers' data for it to become anonymous, and that that further rules will need to be developed in cases where there are a small number of customers supplied from a service joint / node. Once the data had been aggregated and checked, the granular data could either be deleted or securely retained for a defined period. Deleting the data would provide greater comfort for customers, however this would mean that the DNO would not have the historical data available to identify the optimum solution. Retaining the data securely would be preferable since this would mean this information would be available as required.</p> <p>This is best carried out by the DNO itself since the dynamic nature of distribution networks means that an aggregator would need to understand the mapping of each Smart Meter onto the relevant part of the network and understand that the mapping changes on an ongoing basis as networks are operated. Because of this complexity we are firmly of the view that, with the application of appropriate safeguards, the DNO should carry out any aggregation.</p>
19.	What parts of the privacy policy framework do you think should be delivered by regulation and why?
	We recognise that data privacy is important
	We recognise that data privacy is important and confirm that CE Electric UK will comply completely with the DPA and ICO requirements / guidelines. Taking a leading role in the development of the ENA Privacy Impact Assessment is an illustration of this commitment.
20.	What is the most effective way to set out any sector specific protections around privacy (e.g. licence conditions or other alternatives)?
	n/a
21.	What practical options for authentication would provide the right balance between allowing easy access to consumer data in the home while providing the necessary privacy protection? Are there any other issues or options that the programme should be considering in developing the approach in this area?

	n/a
22.	Are there other issues that need to be considered to make using the HAN a viable route for access to data in the home, from either a process or consumer perspective?
	n/a
23.	What sort of arrangements would provide an appropriate balance between providing ease of access for consumers seeking to sign up to new services and adequate protection for consumers' data when accessed via DCC? Do you have any suggestions for alternative approaches?
	n/a
24.	Are there other issues or options that the programme should be thinking about for the Foundation Stage or for non-domestic customers to facilitate access to data?
	n/a
25.	Do you have any suggestions as to how the Foundation Stage can be used to further learn about our approach to data access and privacy?
	n/a