



Smart Metering Prospectus

Non domestic sector

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Q1. Are there any technical circumstances where only advanced rather than smart metering would be technically feasible? How many smaller non-domestic customers have U16 or CT meters and what scope is there for full smart meter functionality to be added in these cases?

- Probably, particularly in the gas market for meters of U25 size or greater
- We have 5,600 U16 meters and 24,615 CT meters with our customers

Prohibitive technical circumstances – There may be technical circumstances where Smart variants need to be used rather than smart metering. These situations will entail extra cost and could cause customer inconvenience. For example, where the meter is underground and remote signalling is impossible then this could be overcome by hard wiring between the meter and the communications module, and / or fitting a signal booster etc. Ultimately installing smart meters aid interoperability and avoid stranded asset costs.

U16 meters – We have 5,600 of these meters installed

CT meters – We have 7,163 of Current Transformer meters with Small and Medium Enterprise customers, and 17,452 with Industrial and Commercial customers.

Scope for full smart functionality to be added to U16 & CT meters where possible:

Electricity CT operated meters – A CT meter does not carry the whole current. To enable the meter to disable / enable supply requires the installation of costly additional equipment.

Gas U16 meters – these are used in domestic premises for customers who have heavy gas usage, or by small businesses. We understand that meter manufacturers do not currently make pre payment versions of U16 meters. Should there be a need for Smart prepayment functionality in future U16 grade meters, then our best understanding is that U16 meters should not pose any more issues than prepayment U6 sized meters.

Q2. Do you agree with our proposed approach to exceptions in the smaller non-domestic sector?

- Yes

The sector – The smaller non domestic sector (generally small micro businesses), has potentially high day time discretionary load and it could therefore play a significant role in load management, particularly in periods of very tight system margin. We believe that businesses do not require the level of social protection that residents do.

IHD - Businesses should be free to determine what services they do and do not want and services with smeared costs should be minimised. Businesses will take different views on whether they want an IHD and what form it should take.

Prepayment – We believe that prepayment functionality and remote disablement/enabling of supply are beneficial to small business consumers. New and existing small businesses could benefit from having prepayment capability installed initially in order to build up credit history.



Management of bad debt - Remote capability to disable supply in particular will have the effect of controlling bad debt costs for suppliers and thence will reduce energy bills for small businesses.

Gas and power consistency - Installing such meters from day one for both gas (valve) and electricity meters will provide parity across both fuels. Including the valve for gas meters should have no material negative impact on the business case.

Q3. Are there technical circumstances that we have not considered that would justify further flexibility around installation of either smart or advanced meters?

- Not that we know of

The Prospectus outlines the following technical circumstances that we have considered:

Remote or underground premises - Communications signals will indeed be reduced underground (or in metal-clad buildings that are now being built). However, this problem is already faced where the power is 100kW and above and the advanced or mandatory half hourly meter sends a signal. There are technical solutions such as high gain aerials to get the signal outside the problem perimeter, albeit with extra installation complexity and cost.

Inaccessible meters – Meters can be closed off by brickwork or built into other structures, making it difficult to install smart or advanced meters without expensive relocation. Although the communications requirements for smart do add complexity, this is again a problem that is commonly faced with traditional meters. In our domestic trials this was the second most common reason for abortion of installation.

Signal – In our domestic trials, this was the most common technical reason for abortion of installation.

Meters with required access - U16 gas meters for example have ventilation and safety access regulations. If this were compromised it would need to be solved anyway, regardless of smart.

Critical power sources – Some sites have safety or production criticality from loss of power. This is not really a smart problem

Gas meter replacement - The only sure and safe way to achieve this, without an engineer/gas installer being present to test that gas appliances/equipment are off, is to incorporate an under pressure shut-off valve within the gas supply to protect all the appliances fitted (the suggested valve may incorporate this). An under pressure valve automatically shuts off the gas supply if the pressure falls below a predetermined level; the safety device needs to be reset by hand (also known as a manual reset low pressure cut-off valve (UPS0)).

Premises requiring 125 amps - Some premises which currently have 125 amp electricity meters with 125 amp fuses could be replaced by modern 100 amp meters, requiring an upgrade to a more complex and expensive meter in order to maintain the load capacity of the premises. However at RWE npower, we don't work with any cut-outs bigger than 100A so scaling up or down is not an issue for us.

Preclusion of exchange by DNO cut-out – In some cases the Distribution Network Operator (DNO) cut-outs will not allow the metering installer to complete the exchange of an electricity



meter. This is an existing issue. DNO cut-outs will have to be treated as they are now; if we can't work on them we report them back for a cut-out change and return later once DNOs or their contractors have replaced them.

Overall – overall we see these technical issues as not being smart related. However, they will be exposed by the exchange for smart/advanced/AMR meters and will create installation and back office exceptions, thereby impeding the rollout timescale and incurring cost. Some of the exceptions, for example cut-outs and metal clad walls, could be resolved by making DNO teams available at a moments notice to attend an installation when these issues are discovered. Alternatively, the installers could be trained and authorised to carry out some of the remedial work, which would have less impact on the customer and avoid re-visits and associated costs. The network operators would need to recognise the benefits they gain from having such activities delivered through the Smart metering deployment and recompense the Retailers or their agents accordingly.

Q4. Do you agree with the proposed approach that use of DCC should be optional for non-domestic participants in the sector?

- Yes for now

Changes over time - In time we believe that economy of scale will encourage non- domestic participants to use the DCC. This in turn will require non-discriminatory costs for access. It may be that the cost of maintaining services outside of the DCC will become prohibitive

Q5. If use of DCC is not mandated for non-domestic customers, do you agree with the proposed approach as to how it offers its services and the controls around such offers?

- Yes, broadly

DCC and energy services – We believe that the DCC privileged access to customer information should preclude it from offering energy services that use the DCC as described in the Prospectus. There may be some scope for regulated service provision in the future.

Q6. To what extent does our proposed approach to the use of DCC for non-domestic customers present any significant potential limitations for smart grids?

- Some limitations, but not excessive

DNO access to information - We understand the concerns of network providers, as there are multiple AMR communications solution operating in the non-domestic market. This does reduce the potential access to information for the DNOs for smart grid. However, in the timeframes over which smart grid will be developed, if DNOs feel that they need to access information from outside the DCC, we consider that this would indicate some deficiency in the smart system design that should be resolved.

Q7. Is a specific licence condition required to ensure that metering data for non-domestic customers can be provided to network operators or DCC, and should any provision be made for charging network operators for the costs of delivering such data?

- No, but some codes may help



Network requirements – It is for the networks to make the case. Since any change in consumer behaviour that may help the network must be stimulated by suppliers, then we believe broadly that network access to information should either be through suppliers (in the case of half hourly energy flows) or in parallel with them. At this point in time, suppliers do not collect data such as voltage, reactive power etc.. The smart grid information flows, consumer incentives and relationships, could develop in a number of ways. It is hard to tell at this stage what these may be, but it is certainly too early to apply licence conditions on this subject.

Charging – Whilst distribution company costs flow to suppliers and thence to consumers, provision of services to distribution companies at no cost has no effect on consumers. We do feel that charging for services at cost does maintain the discipline of ensuring that the cost of any service is outweighed by the benefits. Therefore we consider any requests for data via the DCC whether from supplier or network operators will incur transactional or service charges from the DCC.

Licence conditions and codes – It may be that any requirement is better handled by a code than a licence condition. For example, the Distribution Connection Use of System Agreement (DCUSA) could codify the requirements.

Q8. How can interoperability best be secured in the smaller non-domestic sector?

- It cannot readily be secured – but this is not a huge problem

Use of residential metering - Businesses with low consumption can request residential metering, which thence enjoys interoperability. For businesses with medium consumption, the metering costs represent a lower portion of the bill and a meter exchange may be a low relative cost. Such is the array of existing solutions in AMR and advanced, that interoperability between legacy solutions cannot be guaranteed.

Take-up – It would ideal if participants use the DCC, although they cannot be coerced to doing so.

Q9. What steps are needed to ensure that customers can access their data, and should the level of data provision and the means through which it is provided to individual customers or premises be a matter for contract between the customer and the supplier or should minimum requirements be put in place?

- Broadly speaking, we see this as a matter of contract, not regulation
- Business consumers can manage their own metering and appoint suitably accredited metering agents, but we do not believe that minimum requirements support business consumers

The data – Broadly speaking, the most likely datasets required are historic half hourly (electricity) and daily (gas) consumption data. If stored anywhere, it would be stored in fairly standard format. The initial carriage, thence storage and extraction, cost money and cross subsidy to businesses or agents is not appropriate.

Q10. Do you agree with our approach to data privacy and security for non-domestic customers?

- Yes, broadly



Data Protection Act – The consumption information would only in rare circumstances (such as sole trader) constitute personal information and therefore there are few circumstances where there are privacy issues. Since we have expressed the opinion that any codes or regulation should contextualise the Data Protection Act rather than add to it, then we believe that privacy codes would generally be unhelpful as they would distract attention from the Data Protection Act.

Q11. Is the proposed approach to rollout (for example in terms of targets and a requirement for an installation code of practice) appropriate for the non-domestic sector?

- We would be prepared to support a code of practice
- We do not support targets

The value of targets – As we mentioned in the previous response, we also recognise the value of targets, to engage consumers and the media in the national rollout to inform policy makers and suppliers and supply chain participants for the purpose of planning and provide confidence that the pace of rollout will be commensurate with that required to enable the Low Carbon Transition. At the same time, we believe it to be essential that consumers have meters installed on a voluntary basis and recognise the flexibility in timing that may be required as a result of assessing consumers' preferences, particularly following publicised experience in the early stages. In the early stages, positive consumer experience is very much more important than rollout pace. The result of this is that realistic indicative targets are sensible post DCC Go-Live and it may be appropriate to specify a date at which the programme is substantively complete and at which reasonable steps must have been taken to exchange each meter

Targets - We support rules that apply at meter replacement, but not rules at this time that force early replacement. We believe that the decision on whether/when to preclude non-smart replacement and to require reasonable steps proactively to install smart meters, can wait until 2012.

Code of practice - We are supportive of the aspiration to ensure that the customer experience of the smart meter rollout is a positive one. A code of a practice will ensure a uniform and consistent approach to rollout for customers, which needs to be broadly appropriate for domestic and non-domestic customers. However the separate requirements and motivations of SME customers needs to be taken into account; for example: i) specific seasonal and working day considerations will constrain installation timebands; ii) target customers who we have difficulty contacting for meter reads or gaining access to read meters. These customers may have debt building up and installing smart meters for these will allow us remotely to disable the supply / switch to pre payment sooner rather than later thus helping to manage the debt risk.

