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OFGEM Consultation on Mandatory Half Hourly Settlement

Siemens response

January 2017

Introduction

Siemens has a wealth of experience in the energy industry, covering generation through to transmission, distribution and retail. Worldwide, our market leading meter data management software has supported many major smart metering programmes, which have included a transformation of settlement systems and processes. In Great Britain, we are also a longstanding Supplier Agent, delivering high performing data collection and aggregation services to bill and settle domestic and commercial and industrial customers.

Siemens is broadly supportive of the mandatory transition to half hourly settlement. It will refocus energy forecasting and help stimulate innovation in new TOU tariffs, demand side management, energy storage and virtual power plants. These will all help in delivering the transition to a low carbon economy and lowering energy bills for consumers.

To assist with innovation and bring benefits to energy consumers sooner rather than later, Siemens calls for quick clarity on the Target Operating Model for Mandatory Half Hourly Settlement, in particular proposals for a centralised entity responsible for data collection and aggregation. Uncertainty here may restrict investment decisions during the elective phase of half hourly settlement and hinder early trials of new consumer offers. Also, we believe a decentralised, market-based approach is superior in many ways, as described further below.

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Response

Question 2.1 Do you have views on our proposed approach?

Siemens is broadly in agreement with the proposed approach but seeks an early decision on the Target Operating Model, in particular the proposal to centralise data collection and aggregation. Clarity here would improve the environment for investment decision making and ensure early innovation in the energy industry, bringing consumers early benefits through TOU tariffs, demand side management and energy storage.

Question 2.2 Our Impact Assessment will evaluate the costs and benefits of mandatory HHS for domestic and smaller non-domestic consumers. We will be seeking evidence of costs and benefits as part of that process. Do you have initial views on the costs and/or benefits? If so, please provide these with your supporting evidence.

Mandatory half hourly settlement will require Supplier Agents to upgrade their existing systems, replace existing systems or introduce new systems. Connections to industry systems will need to be revised and rescaled, along with modifications to accommodate new data flows. Furthermore, systems will need to be re-accredited to deal with additional meter volumes.

The cost of these programmes of work is likely to run into hundreds of thousands of pounds and will need to be considered against different types of benefits dependent upon industry role. For an independent Supplier Agent, the key benefits will be an increase in half hourly settlement work, potentially limited by the point at which such services become centralised. For an Energy Supplier the benefits are more wide ranging and may include lower imbalance costs from better forecasting/purchasing, lower purchasing costs from more informed trading and improved acquisition and retention of customers through more attractive tariffs.

Longer term, mandatory half hour settlement can help facilitate greater flexibility in energy use, supporting the system operator with network management issues, avoiding re-enforcement requirements for distribution network operators and lowering calls for less environmentally friendly peaking plant.

The table below summarises, at a high level, several benefits of half-hourly (HH) settlement compared to non-half-hourly (NHH) settlement:

NHH Settlement	HH Settlement
- Spot Meter Read - Annualized Advances (AAs) - Estimated Annual Consumption (EACs) - Profiling - Multiple Registered – Economy 7 - Representation of the average consumption shape, not individual consumption shapes.	- Accuracy - Demand Forecasting - Product Innovation - Energy Management Products - Customer Invoicing and accurate Bills - Reduced Energy Bills - Settlement Cash Flow - Reduce Dist. Use of System Charges - Better System Planning - Demand Side Response

Time-varying rates (TVR) are a key enabler for all of these benefits, and HH settlement is required to implement effective TVR. Consumers are rewarded for load shifting under TVR, because they pay lower off-peak costs for off-peak energy. However, in order to provide these discounts, retailers must gain the benefit of lower wholesale costs, a result that requires that TVR customers be HH settled.

Question 3.1 Do you think we have identified the necessary reforms? Are there other reforms that should be listed? If so, what are they and how would they fit in the proposed plan?

We believe that other significant industry changes, such as the Central Registration System and next day switching will have to be taken into consideration, particularly from a timing perspective. There will be finite resource available within the industry and capacity to cope with multiple changes in the same timescales will be limited by this.

Siemens also believes that careful consideration needs to be given to proposals for a central agent model for data collection and aggregation. This is likely to broaden the role and responsibilities of OFGEM to regulate such activities and will require system changes from the DCC on the basis that they would be billing Energy Suppliers and Network Operators for such services.

Question 3.2 What industry expertise is needed to deliver these reforms in the timetable we have given?

Supplier Agents from across all sectors of the industry should be engaged with inputting into this reform. There is a risk, based on observation of previous industry changes, that the developments are dominated by the largest suppliers, who have more personnel to draw from. Independent Suppliers should be incentivised to participate in the various forums, so that there is fair representation across the industry; resulting in an outcome that is equitable to all parties and of benefit to the greatest number of consumers regardless of their Supplier.

Question 3.3 How much expertise and time can your organisation provide? How does this interact with other Ofgem initiatives?

Siemens has a wealth of knowledge and experience in both non half hourly and half hourly settlement. Our experience extends beyond the UK, particularly in Europe, North America and South Africa where we have direct experience of working with regulators, energy suppliers and distributors on many major smart metering programmes and associated settlement reform, adopting both centralised and decentralised settlement delivery models utilising interval data (hourly and quarter-hourly data).

Siemens will look to respond to key industry consultations and attend select workshops where there are implications for our core business. Furthermore, we are happy to explore alternative mechanisms for sharing our wealth of experience in other energy markets with OFGEM if this is considered of value.

The transition to half hourly settlement is clearly highly dependent upon the Smart Metering Implementation Programme, where OFGEM will be agreeing roll-out targets with Energy Suppliers and monitoring progress against these plans. Given the volume of advanced and SMETS1 meters that have been installed and will continue to be installed until 2018, the DCC's ability to adopt these meters will also be key.
OFGEM's Smarter Markets Programme also interacts with the transition to half hourly settlement. A Centralised Registration System will provide key data needed to support half hourly settlement. Next day switching, whilst not a dependency, should help encourage a shift to Energy Suppliers who seek to innovate with more competitive tariffs facilitated by half hourly settlement.

On a similar front OFGEM's efforts to reduce barriers to demand side management should increase Energy Supplier interest in half hourly settlement and its use in dynamic switching of load, or creation of virtual power plants through energy storage.

The Feed in tariff, which is administered through OFGEM E-Serve, will also need to change. Currently customers are deemed to be exporting 50% of their generation and those transitioning to half hourly settlement will be rewarded for actual export.

Question 3.4 What are the key risks and constraints to delivering to the timetable outlined?

Siemens believes the key risks are likely to be found in the multiple work streams and high levels of interdependencies. This reform programme comes at a time when Energy Suppliers are likely to be resource constrained and focused on testing new systems and processes which will allow them to deploy and manage SMETS2 meters.

Siemens also envisages that there are risks associated with insufficient quantitative data from the Elective Half Hourly Settlement exercise to contribute to the decision making. Decisions

could be made, at least in part on limited information, which could be anecdotal and may not give a full picture of the majority consumer response to Mandatory HH.

Question 3.5 Do you agree with the dependencies in Figure 1? If not, what changes would you suggest and why?

Siemens would agree that Figure 1 outlines a logical approach to the project. Although it shows a waterfall approach, it is possible that significant information gathered at later stages could force previous stages to have to be revisited.

Question 3.6 What are the barriers to making changes to central systems and industry rules by the first half of 2018?

Our initial opinion would be that it would seem challenging to both complete a full evaluation of the implementation of mandatory half hourly settlement and deliver the changes to central systems and industry rules between now and the first half of 2018. To the extent timing is important – and achieving the benefits of HH settlement suggests sooner is better – faster implementation is another of the benefits of a decentralised approach to data collection and aggregation. With this approach, the market develops at the speed of the fastest market actors and is not delayed by slower players. In addition, less regulation is required – for example, prices are established through competitive market forces rather than administratively – so less time is required to develop and implement regulations. We would assume that OFGEM would be seeking to consult on each of the key deliverables of the outlined programme of works.

Question 3.7 Do you have any other comments on the proposed plan?

Publication as soon as possible of indicative dates beyond mid-2018 as to the various follow-on stages would be helpful to us as an organisation to assist in our long-term business decision making, planning and resourcing.

Question 4.1 Do you agree with the conclusions of the ESEG and the PSRG (see paragraphs 1.8 – 1.10.)? Do you think anything has changed since they considered these issues?

Siemens broadly agrees with the conclusions of the ESEG and PRSG.

Roles and responsibilities (see paragraphs 4.2. – 4.7.)
Question 4.2 Do you agree with the scope of issues identified in this section? Are there any others we should be considering?

Siemens would suggest that any consideration of the potential for a central agent to manage data collection and aggregation must include the accompanying involvement of a regulator to set prices, review DCC system changes to recover charges from Energy Suppliers and Network Operators and evaluate the impact upon continued innovation in the sector through a lack of competition. Siemens has direct experience in other markets that use a decentralised approach, including Sweden, Finland, and California, and can provide further evidence on successful interval data settlement in those markets.

Settlement process (see paragraphs 4.8. – 4.17.)
Question 4.3 Do you agree with the scope of issues identified in this section? Are there any others we should be considering?

Siemens agrees with the scope of issues identified. Careful consideration will need to be given to NHH customers. In addition to those that have yet to have a smart meter installed, there will be a percentage that refuse a smart meter and a further percentage with a smart meter that refuse access to profile data. Thought will need to be given to how these customers are managed and the costs of managing existing or new NHH Systems.

Other than domestic and small business customers, there will also be customers with advanced meters that may not transition to a smart meter. This could call upon a need to retain existing HH Systems.

Policy enablers (see paragraphs 4.18. – 4.27.)
Question 4.4 Do you agree with the scope of issues identified in this section? Are there any others we should be considering?

Siemens would suggest that consideration needs to be given to DCC proposals to adopt SMETS1 meters. The timing of such a change and the volume of non SMETS1 meters that fall outside of this proposal will have implications for mandatory half hourly settlement and any plans to centralise data collection and aggregation services.
On the subject of settling export onto the grid, Siemens would suggest that consideration extends beyond micro-generation to the use of storage technologies, which could extend the value of generation.

Consumer issues (see paragraphs 4.28. – 4.38.)
Question 4.5 Do you agree with the scope of issues identified in this section? Are there any others we should be considering?

Siemens agrees with the scope of issues identified.

Question 5.1 What is the best way for us to use the expertise of stakeholders? What have you found helpful in the past?

Siemens believes that the best way to engage and utilise the expertise of a good cross section of stakeholders is to create suitably discrete industry sub-groups, which focus upon specific areas of subject matter expertise and/ or align with particular stakeholder interests. This needs to be managed carefully given the likely commitment of key personnel to the smart metering programme.

Any questions on the above responses should be initially addressed to:

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