

SETTLEMENT OF DYNAMICALLY SWITCHED METERS PSRG CONSULTATION (JUNE 2014) COLLATED RESPONSES

OVERVIEW

14 responses were received to the PSRG consultation on the 'Settlement of Dynamically Switched Meters' (issued on 2 June 2014).

No.	Company Name	Role of Parties/non-Parties represented
1.	Power Data Associates Ltd	Meter Administrator
2.	E.ON	5 parties / 7 non-parties Supplier, MOA, NHHDC, HHDC
3.	National Grid Electricity Transmission plc	Transmission Company
4.	British Gas	Supplier
5.	EDF Energy	10 parties Generator, Supplier, Party Agent, Consolidator, Exemptable Generator, Trader
6.	RWE npower	6 parties Supplier and Supplier Agents (NHH & HH)
7.	Electricity North West	LDSO
8.	UK Power Networks	4 parties LDSO (1 IDNO)
9.	Western Power Distribution	4 parties LDSO
10.	Scottish and Southern Energy Power Distribution	2 parties LDSO
11.	TMA Data Management Ltd	HHDC, HHDA, NHHDC and NHHDA
12.	ScottishPower	3 parties LDSO and Supplier
13.	Northern Powergrid	2 parties LDSO
14.	SSE Energy Supply Ltd	Supplier and party agents

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RESPONSES

1. What are the key opportunities and risks of moving from the RTS arrangements to the smart arrangements?	
Power Data Associates Ltd	<p>To utilise to significant investment that industry parties are investing, on behalf of customers into the smart metering infrastructure.</p> <p>The ability for technology to progress so that suppliers and customers can use smart metering to individually and dynamically adjust switching times. Whereas the RTS requires a site visit to change the customers group switching smart metering can communicate immediately (assuming comms work) to change the switching regime changes. The smart metering can select groups of customer on an infinitely wide range of criteria, where RTS is limited to a fixed number of groups shared across all suppliers.</p>
E.ON	<p>The current RTS arrangements limit customer choice. Tariffs benefit the incumbent supplier, with customers benefiting as a consequence. The move to smart arrangements will provide suppliers with the opportunity to offer more innovative Time of Use (TOU) tariffs.</p> <p>There could be a risk that because smart Meters require messages individually, rather than current arrangements where one message is picked up by many meters, that processes to support under smart arrangements could be complex and therefore expensive to implement for suppliers.</p> <p>However, we believe that it is too early to genuinely assess. Until DCC and a technical solution to dynamic switching is delivered most parties will be concentrating on working with the 'knowns' and getting core systems and processes in place and working robustly.</p>
National Grid Electricity Transmission plc	n/a
British Gas	<p>Looking at the number of existing RTS customers that are dynamically teleswitched (162k) it is difficult to see where the business case is to develop an equivalent RTS system under the new smart arrangements.</p> <p>Our view is that until such a business case is made existing RTS</p>

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	<p>meters will be replaced with smart meters with only static or semi-static functionality. Settlement would continue to be kept up to date using the existing SSC arrangements.</p>
EDF Energy	No response
RWE npower	<p>Some of the key opportunities and risks of moving from the RTS arrangements to the smart arrangements have already been highlighted within Section 6 'Implications of Change' of the PSRG consultation document and RAID documentation captured through previous PSRG work.</p> <p>As the consultation document outlines, under the existing RTS arrangements, a combination of the ENA, Group Code Sponsor and LDSO manage switching of dynamically switched loads. The equivalent for smart meters will be managed by suppliers. If there is a need to replicate existing arrangements, there is a requirement to introduce a new line of communication between LDSOs and Suppliers, particularly in the case of weather based or load shedding dynamic switching.</p> <p>Running different processes in parallel could present a risk during in a transitional period and consideration may need to be given to any dynamically switched customers that refuse a smart meter and how settlements operates for them in a market where the RTS arrangements no longer exist.</p> <p>Additionally, npower believe that the process for the application of new SSCs is potentially not as efficient as it could be and the industry could benefit from reviewing this process to see if any improvements could be made. If Suppliers choose to install smart meters with the existing SSC, the ability to recognise settlement data from smart meters in settlements would be reduced.</p>
Electricity North West	<p>Opportunities Demand response control Versatile supplier tariffs may result in more customer choice Replace ageing Radio Teleswitch (RTS) equipment</p> <p>Risks May create more Demand Control Areas (DCUSA Schedule 8) due to more of control from distributors to suppliers or an increase in network re-enforcement being required</p> <p>Settlements may be impacted in non-half-hourly (NHH) arrangements continue in preference to half-hourly (HH) unless robust controls put in place</p>

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	<p>Current restriction on number of supplier tariffs may result in dynamic switching being limited in use</p> <p>Impact on distribution networks should randomised offset not be utilised within the smart meters</p> <p>Governance of some aspects of dynamic switching as yet to be determined</p> <p>Full benefits of smart metering may not be achieved if all sites not settled on a HH basis.</p>
UK Power Networks	<p>There are approximately 580,000 radio teleswitches and 1,300,000 conventional mechanical time switches in use across UK Power Networks' areas. Approximately 5% of the radio teleswitches are operated in a dynamic or semidynamic manner. These devices are used to switch consumer's space and water heating load at times which are deemed 'off-peak' to both network operators and suppliers.</p> <p>The key feature of the current switching arrangements for both radio teleswitches and conventional mechanical time switches is that the on and off times that load is switched are spread across a wide operational window. This wide operational window, which has evolved over time, helps to avoid surges or peaks in demand across the network that would otherwise increase network costs by creating a requirement to reinforce the network. UK Power Networks believes there is considerable possibility of localised and potentially national risk that would be caused by surges in demand if the wide switching windows are not maintained with smart meter load switching.</p> <p>A further consideration is ensuring that there is an element of randomisation in the switching time of each meter so that when load is switched it switches near to the switched time rather than exactly at the time.</p>
Western Power Distribution	<p>The opportunities are new mechanisms for more efficient use of renewable generation and the distribution networks. The risks are that the same mechanisms could also reduce the diversity of consumer behaviour and so threaten network security. Also, any change to consumer behaviour can affect the accuracy of NHH settlements. However factors such as the increase in renewables generation, the advent of electric cars, and the end of Radio 4 longwave, all mean that conserving the status quo is not an option.</p>

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<p>Scottish and Southern Energy Power Distribution</p>	<p>Reliable remote configuration lies at the heart of the proposition that smart metering will bring to Customers and Industry as a whole as any smart meter which operates a tariff change could be operated in a similar fashion as current RTS arrangements. However, to replicate the RTS arrangements, micro management is required. This will put greater reliance on accurate information thus, when not managed adequately, Network Operators may see an increase in peak demand / load pick up / coincidence of demand ultimately forcing reinforcement cost ahead of need.</p>
<p>TMA Data Management Ltd</p>	<p>The main risk is to not use the opportunities offered by smart metering because of the current model. What is possible should always be kept at the forefront when there is a step-change in technologies rather than remain constrained by what already exists. The most flexible option must be chosen to ensure that DSR response tariffs can be implemented and used practically as it is one of the main opportunities offered by Smart Metering.</p>
<p>ScottishPower</p>	<p>The biggest driver for change is the uncertainty/risk over the future of the BBC Radio 4 long wave broadcast. A SMART replacement is needed to be able to guarantee that we can fulfil our dynamic tariff obligations. Once digital switchover happens (estimated to be 2018-2020) the meters will not receive the dynamic switching times.</p> <p>The main issue will be the transition from a mass broadcast system to an individual meter communication for switching times. The only opportunity we can think of is that a SMART system will allow the customer tariff to be changed remotely without the need for an asset replacement.</p> <p>The best option would be to use half hourly load profile data to give the actual data at the time it was used. This would give accurate data for settlement purposes.</p>
<p>Northern Powergrid</p>	<p>There are risks for LDSOs if the processes required between Suppliers and LDSO (for agreeing the switching times) and between the Supplier and SVAA (for exchanging the switching times for dynamically switched meters) are sufficiently complicated so that suppliers move RTS customers onto static tariffs thus denying LDSOs of a tool for managing network demand.</p>
<p>SSE Energy Supply Ltd</p>	<p>We agree with those opportunities and risks identified within the PSRG Consultation paper (PSRG31/01).</p>

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2. For Suppliers: What are your plans, including indicative timescales, for rolling-out smart Meters to Profile Class 2 and 4 customers (with particular regard to replicating or changing the current SSC)?

If you have been unable to plan, what does your planning depend on?

Power Data Associates Ltd	n/a
E.ON	Our current roll out includes SMETs 1 meters in Profile Class 2 and 4 to customers with static or semi static, non RTS SSC's. Where customers would benefit from a change of SSC this would be offered but only within the simpler static or semi static categories. Given that there is no current solution for smart dynamic switching, we are concentrating on planning delivery to those customers that can be supported under the current smart arrangements.
National Grid Electricity Transmission plc	n/a
British Gas	Our planning will depend on DCC availability, meter variant availability, customer requests and potential new propositions for heating load customers.
EDF Energy	Our intent is to roll out smart meters to Profile Class 2 and 4 customers starting in 2016 and continuing until 2020. These timescales are driven by the implementation timescales for the DCC, we do not want to have to maintain multiple systems and processes to be able to manage our smart meters. Our intent when rolling out smart meters under the DCC to these customers is to install meters with static timeswitching regimes that either replicate the existing timeswitching regime (where it is static) or, as closely as possible, replicate the existing semi-static (or dynamic) switching regime. However, our customers may wish to choose to move to an alternative timeswitching regime for their smart meter, which may result in a change.
RWE npower	<i>npower's expectation within existing industry arrangements is to replicate the current SSC upon installation of a smart meter. However, this could be subject to change.</i> Constraints and dependencies in being able to plan effectively relate to development and manufacture of any additional auxiliary hardware. Multiple element smart meters are not on the horizon of being available from any manufacturer yet and neither are ALCS or HCALCS. Moving through the deployment process will support with additional intelligence around dynamically switched meters. Minimising the risk of any initial uncertainty would be better for the

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	customer experience during roll out.
Electricity North West	Not applicable, supplier only question.
UK Power Networks	n/a
Western Power Distribution	n/a
Scottish and Southern Energy Power Distribution	n/a
TMA Data Management Ltd	n/a
ScottishPower	Plans would be dependent on the availability of variant SMETS2 meters from manufacturers. Presently timescales from manufacturers would indicate base specification SMETS2 devices to be available Q3 2015 with variant meters at some point after. Where Economy 7 customers require a single element metering solution this can be accommodated within normal roll out plans, twin element metering solutions, being a variant would be dependent on the availability of metering equipment. When replicating these tariff arrangements we would not envisage any change to current SSC/TPR combinations.
Northern Powergrid	n/a
SSE Energy Supply Ltd	The roll-out of smart metering is a complex activity commencing with the stabilisation of the new systems and processes provided by the DCC during the Initial Live Operation phase. It is anticipated that at the start of mass roll-out the simpler tariffs will be addressed (PC 1 and 3). The availability of fully tested meter variants is also a factor and these are likely to become available during 2016. It is our current expectation that we will trial meter variants that will support dynamic switching later in 2016 to enable these tariffs to be included in our deployment plans going forward.

3. Do you agree with the conclusion of the 'Future Changes' section?

Please provide details of how any solutions for transitioning the current RTS Metering Systems to smart metering could take into account these future changes.

Do any new arrangements for notifying dynamic switch times need to be in place for the start of the mass roll-out of smart metering, scheduled for late 2015?

Power Data Associates Ltd	No The industry needs to develop a HH settlement option now.
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	<p>Individual customers with smart meter will wish to utilise HH settlement, particularly in the I&C sector. There are sectors of the existing domestic customer base that are suffering with the current profiling, such as domestic CHP, which is preventing the market development of this technology. HH settlement does not need to be mandated at this stage, but the option needs to be there to deliver it so that the sectors that can benefit have the ability.</p> <p>The industry needs to develop a co-ordinated interoperable solution now, otherwise there is a risk that certain parties will develop various inoperable solutions, each of which may trigger piecemeal changes to governance arrangements.</p> <p>Any investment of time and effort in "interim" solutions will be a distraction, and ultimately a wasted investment of time and resource.</p>
E.ON	<p>Yes, we agree with the conclusions.</p> <p>We do not believe that new arrangements are required for the start of mass roll out. Most suppliers will be working on delivering to the majority of customers and ensuring that systems and processes are robust before delivering to the more technically difficult customers, although customer needs will be considered when planning. Given that the majority of RTS customers are in remoter areas, it is likely that a larger proportion of them will be in areas where no communication is available, which will also delay delivery to this segment.</p>
National Grid Electricity Transmission plc	n/a
British Gas	<p>We agree with the conclusions of the "Future Changes" section of the consultation.</p> <p>We do not believe that there are currently any smart meter variants in the market that can support dynamic load switching. Once these are being used in volume we will need to put in place rules around how suppliers notify settlement of the new switching times each time these are changed. One solution may be to mandate the use of HH settlement for those suppliers who choose to offer tariffs to consumers with dynamically switched heating load.</p>
EDF Energy	<p>We agree with the conclusion of the 'Future Changes' section and specifically the point that that there is too much uncertainty about these future changes to look beyond the immediate issue of transitioning from RTS to smart meters. The focus for the industry for the next few years should be ensuring the success of the implementation of the DCC and the mass rollout of smart metering.</p>

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	<p>We think the impact of these future changes will not be felt in any significant way before 2020, which is when we believe universal HH settlement should start to be introduced as a result of the smart metering rollout.</p> <p>If any Suppliers are intending to install smart meters that will be dynamically switched from late 2015 then clearly arrangements will need to be put in place to ensure that the switching times are notified, to ensure the accuracy of profiling and to mitigate the impacts on other Parties. As noted above, we are not intending to roll out smart meters that will be operated dynamically.</p>
RWE npower	<p>For the most part npower agree with the conclusions contained within the 'Future Changes' section. However, when considering Universal HH Settlement, it is important to recognise that this will only resolve the issue of allocating volume to the correct settlement periods if the customer consent position is changed and the collection of half hourly data becomes a regulated obligation. There will be some customers who have only allowed for monthly data to be collected. Similarly, as mentioned in response to Question 1, there could be customers that remain on traditional metering as they refuse the installation of a smart meter. They will lose the ability to switch load when the existing RTS arrangements come to an end.</p> <p>Dynamic Time of Use (e.g. critical peak pricing)</p> <p>npower believe that there is a significant different between dynamic load switching and Time of Use tariffs. Load switching will actually result in a change to the network load where as Time of Use switching is very much optional and dependent upon customer choice (the customer could decide to pay more rather than reducing their load). Time of Use pricing will map consumption to one of the 48 Time of Use registers on the electricity meter so it could be more effective to set up a new SSC for the tariff type and map consumption to the associated TPR. This would then feed into settlement after the consumption occurred.</p> <p>Other load types</p> <p>It has not yet been confirmed whether SMETS2 meters can support concurrent Time of Use registers. This would have an impact on any new types of controllable load that were introduced. npower agree that additional load profiles would need to be created as the profile shape for future technologies could look very different from one another. Accurate profiles could only be created once smart meters and ALCS are installed, using the actual half hourly data as a basis.</p>

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	<p>Smart appliances and load control by internet / mobile telephony</p> <p>In the scenario where a customer/third party has control over load management, there is no way for a Supplier to provide a forward view of load switching. The only way to form an accurate view of the effect on the load of these behaviours would be to obtain half-hourly consumption from the meters.</p>
Electricity North West	<p>We agree that there is a short term need to maintain the accuracy of settlement during the earlier stages of the smart meter roll out, but believe that the ultimate aim should be the removal of NHH profiling and the use of the HH data to ensure that the full benefits of smart metering are realised. It is recognised that there is not likely to be 100% penetration but the use of default HH profiles should suffice rather than having industry processes supporting a very small percentage of the market, both in numbers and consumptions, once the roll out is effectively complete.</p>
UK Power Networks	<p>Yes, we agree with the main premise of the conclusion for the 'future changes' section. However, the assumptions do not include the possibility for aggregated HH data from smart meters to be used in settlement in place of time banded profiled HH data or full individual HH settlement.</p> <p>We feel that the current standard settlement configuration auxiliary load switching time should be replicated when a smart meter is installed. This will avoid any major step change in network demand usage and also allow a consumer to continue with their familiar switching times at least in the short term. This will avoid the need to have new arrangements for notifying dynamic switch times. The worst case scenario would be for a supplier to have a standard configuration for their switching time where all auxiliary load is switched at exactly the same time.</p> <p>Dynamic time of use tariffs could subsequently be introduced by the supplier. If HH consumption is collected at meter level and aggregated at settlement level there would be no need to notify the BSC of the switching times as there would be no profiling requirement.</p> <p>There is further work required to understand how future network load management will be coordinated between suppliers and consumers to avoid network reinforcement.</p>
Western Power Distribution	<p>I agree that there is much uncertainty surrounding these issues. Dynamically switched smart meters are likely to be a part of future</p>

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	<p>efficient use of both renewable generation and distribution networks. The logic of having a mass rollout of smart meters dictates that settlements should be ready to for suppliers and consumers to utilise the full functionality.</p>
Scottish and Southern Energy Power Distribution	<p>Yes we agree. High level requirements need to be put in before the roll out.</p>
TMA Data Management Ltd	<p>Yes, we do agree that NHH profiling would need to cater only for additional load types if Universal HH settlement is not adopted or for the interim period prior to its implementation, we also agree that there is too much uncertainty about the uptake of these additional load types to take into consideration for a decision on whether the dynamic switch times should be communicated to the SVAA.</p>
ScottishPower	<p>While in the main we concur with the conclusions reached in the 'Future Changes' section the roll out of smart meters and their impact going forward is still uncertain, therefore at this time as suggested it seems more appropriate to focus on an issue that is happening, that is how we can transition from RTS to Smart Metering systems.</p> <p>We do not believe that the arrangements need to be in place for the start of the smart meter rollout given the complexities surrounding the issue of dynamic switching at present. We believe this area will be the final component of the smart meter roll out and as such any new arrangements will only be required at a later date.</p>
Northern Powergrid	<p>We agree with the conclusions of the "Future Changes" section. The scenario summarised in the key assumptions could lead to significant profiling uncertainties - the Supplier would be able to report the tariff switching times, but there would be little visibility of the type or volume of load actually being switched.</p>
SSE Energy Supply Ltd	<p>The DECC SMIP has recognised that smart meter variants are required to support existing tariff arrangements. It is also anticipated that the initial solutions will be developed over time to accommodate changes as benefits are identified. There is a requirement to establish a stable and efficient infrastructure to support the mass deployment programme which is already a complex activity. Therefore we are not seeking to introduce further change for a period as this could compromise a successful introduction of smart meters for our customers.</p> <p>Considering our earlier comments there is not a dependence on being able to support dynamic switching for the start of the mass roll out. However, provision should be made to deliver appropriate</p>

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	solutions by third quarter 2016 to facilitate dynamic switching via smart metering for the 2016/17 winter period.
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4. Do you agree that no changes are needed to the BSC or Code Subsidiary Documents (CSDs) to accommodate static/semi-static switching using DCC-serviced smart Meters?

Power Data Associates Ltd	It is unclear how many of the customers are still actively using the teleswitch functionality which may have been installed many years prior. Subsequent changes within the household, change of tenancy, change of heating system, etc. may mean that, after discussion between the supplier and the customer, it may be opportune to simplify the tariff arrangements. For many years, a number of suppliers have changed customers to single rate charges, but left the multi-rate metering installed to minimise the cost of change.
E.ON	Yes we agree.
National Grid Electricity Transmission plc	n/a
British Gas	We agree that no changes are required. The existing SSC arrangements can cater for static and semi-static switching.
EDF Energy	We agree that no changes are required to the BSC or Code Subsidiary documents to accommodate static/semi-static switching using DCC-serviced smart Meters. Allocation of a metering system to an appropriate SSC (either new or existing) will enable the switching times to be appropriately accounted for in profiling.
RWE npower	Yes, npower agree as the existing SSC/MDD process can be used but this will need to be revisited with any solutions/options that are progressed going forwards.
Electricity North West	<p>In the context of the section within the document covering this question then this is correct. However, we are not in favour of using the same SSC that relates to a teleswitch arrangement on a smart meter installation since this would be sending conflicting information on what load a distributor may be able to control and may result in distributor network concerns.</p> <p>Once the industry start to install SMETS 2 meters, offering the capability of numerous dynamic switching regimes, changes are likely to be required to ensure the accuracy of settlement. Perhaps one of the changes that may need to be required is for those suppliers that wish to utilise dynamic switching regimes to settle HH thereby</p>

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	<p>minimising industry change to the NHH market. Such an obligation also needs to consider Ofgem's electricity settlement reform associated with profile class 1-4 and other industry modifications such as the ability to bill HH data (DCP179/P300).</p>
UK Power Networks	<p>Yes, we agree that no changes are required to the BSC or CSD. However, as stated above we feel that suppliers should ensure that the new smart meter auxiliary load switching time is based on continuation of the current SSC.</p>
Western Power Distribution	<p>No changes are required regarding static and semi-static switching regimes.</p>
Scottish and Southern Energy Power Distribution.	<p>We agree.</p>
TMA Data Management Ltd	<p>Yes, we agree that no change is required to the BSC or Code Subsidiary Documents to accommodate static/semi-static switching using DCC-serviced Smart Meters.</p>
ScottishPower	<p>We agree that no changes appear to be required for either the BSC or CSD's at this stage.</p>
Northern Powergrid	<p>This appears to be a relatively easy to implement option that will meet the LDSOs initial requirements and hence we would support it. Our understanding is that it basically replicates the existing switching times and records them and in doing so provides a known baseline from which other changes could be made.</p>
SSE Energy Supply Ltd	<p>We agree that little or no change to the BSC or BSCPs would be required, pending a more detailed review.</p>

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5. If the maximum 'Randomised Offset Limit' of 1799 seconds is used for network management and system / energy balancing purposes, would this present an excessive risk to Settlement accuracy, given the inaccuracies already inherent in profiling and the existing 'drift' inherent in switch times where load is switched by time-switches?

Power Data Associates Ltd	The HH market has tried to quantify time drift of metering systems (due to clock errors) over many years. It has been extremely hard to quantify, and may vary in the future if the volatility of the prices each HH increases. Irrespective the correct volume of energy is in settlement. As it is a parameter which can be changed remotely, it is probably not an issue to be too concerned about at this stage, but to revisit in several years, once more practical experience is gained.
E.ON	No. We don't believe that the risk would be excessive and certainly no greater than in current process. HH settlement would resolve the issue.
National Grid Electricity Transmission plc	<p>We would like to draw attention to the benefits to all consumers that can be achieved depending on the switching regimes adopted and how these can affect the system balancing process.</p> <ul style="list-style-type: none"> a) From a system operation perspective, half-hourly pricing is a simplification of what is actually happening as the marginal price can vary widely within half an hour. b) Any creation of step changes in demand causes increased balancing costs (ultimately leading to increased BSUoS charges) and can also create operational risk on the system in terms of frequency control. c) Randomisation up to 1799 seconds is valuable in avoiding very fast load changes, and balancing costs would be reduced by adopting the largest randomised offset limit. d) However, a load change that occurs over a period of 1799 seconds is still relatively fast in balancing terms and, depending on the volume, would still require procurement of balancing services to ensure that frequency could be controlled as the change occurred. Costs would be minimised in a regime where the switching was managed in such a way that additional procurement of balancing services was not directly required. e) Any switching regime that spreads the load change more smoothly over a period of say 30 minutes would help move the impact from balancing services timescales to normal market operation and mitigate any potential interaction between those consumers who are receiving the benefit of a dynamic switching tariff and the wider market that is paying the balancing costs to manage the impact of the

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	<p>switching.</p> <p>Therefore, for reasons of both cost and security of supply, it is important that the switching regime is predictable and reliable and we believe this should be considered alongside the risk of potential settlement inaccuracy. The charging system is about both encouraging efficient use of electricity and allocating costs accurately; it would appear a little perverse to design a regime that was scrupulously fair at allocating costs but which, in doing so, increased overall costs as well as increasing operational risk.</p>
British Gas	<p>We do not have the data available to assess whether this would present an excessive risk to settlement. However intuitively this would not seem to present an excessive risk.</p>
EDF Energy	<p>If the maximum value of 'Randomised Offset Limit' of 1799 seconds were to be used in support of network management then this does create a risk, but given that actual offset is randomised within the limit it is not clear that this is any greater than the level of inherent inaccuracy based on the current equipment installed.</p> <p>It is also worth noting that Suppliers are likely to endeavour to minimise, as far as possible, the level of randomisation applied by a smart meter, as it is not a good customer experience to have switching at a time significantly different to tariff expectation, especially given that smart meters are generally expected to have an increased level of accuracy.</p> <p>The randomisation limit of 1799 seconds (29m59s) was designed to support a future requirement of smart grids that we do not expect to materialise before 2023. Therefore this issue should be addressed by HH settlement reform and should be framed as a future rather than current risk in relation to dynamic switching.</p> <p>Note that the level of randomisation to be applied to smart meters is currently being discussed under DCP204.</p>
RWE npower	<p>The drafting within DCP204 is seeking to require suppliers to apply a Randomised Offset Limit of greater than 600 and less than 1799 to smart meters with existing load switching as a minimum. It could be that the Randomised Offset is configured in all meters but the need to do this is not yet clear and the DCP204 consultation is asking for views as to whether it is preferable to configure this on installation of all smart meters or only those that do not have a single rate. npower agrees that it does not present an excessive risk to settlement accuracy, given the context of the existing arrangements but the move to use of Randomised Offset capabilities from an uncertain amount of clock drift could have some impact on the profile of</p>

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	<p>volume across the whole market. Longer term, it may be worth considering the impact of Randomised Offset in the context of universal HH settlement.</p>
Electricity North West	<p>We believe that it will not cause a risk to settlement accuracy. It is more likely to improve it when judged against the current inaccuracies that exists on the current timeswitch and teleswitch arrangements.</p>
UK Power Networks	<p>No, we do not feel that this presents an excessive risk to settlement accuracy. Furthermore we believe that HH consumption should be collected from smart meters and aggregated in settlement avoiding any need to profile time band data into HH consumption.</p>
Western Power Distribution	<p>The 1799 seconds randomised offset (ie average 15 mins switching delay) represents a reasonable compromise between settlements accuracy and network security.</p>
Scottish and Southern Energy Power Distribution	<p>We do not see this is an excessive risk. We believe there could be benefits from development of new profiling data.</p>
TMA Data Management Ltd	<p>Profiling is inherently inaccurate, it is its nature. We do not think that if the maximum 'Randomised Offset Limit' is used, it would present any more of an excessive risk to Settlement accuracy than currently exists.</p>
ScottishPower	<p>We agree with the Elexon assumption that a Randomised Offset Limit of 1799 seconds would not present an excessive risk to settlement accuracy. It also seems sensible to use the maximum time as the smart meter roll out begins and as it gathers pace then carry out periodic reviews of the Offset limit until such time as an optimum period can be determined.</p>
Northern Powergrid	<p>We do not believe that this would present an excessive risk to Settlement accuracy.</p> <p>From a LDSO perspective, we would like to retain the full flexibility to set the Randomised offset limit to 1799 seconds (unless it could be demonstrated that there would be an unacceptable impact on settlements accuracy) as this would enable the existing functionality of the RTS to be replicated in smart meters. Due to the inherent drift and inaccuracies in the mechanical and electrical timeswitches, there are errors / uncertainties in the existing settlement arrangements. These issues will be eliminated by the smart meters as the switching times can be set more accurately and the times will not drift, so it is likely that even with a randomised offset limit of 1799, any settlement inaccuracies due to timeswitching would</p>

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	reduce overall.
SSE Energy Supply Ltd	The intention of the introduction of a randomised offset is to ensure that we don't create inadvertent peak demands due to the increased time accuracy of smart meters and removal of the drift which is inherent in existing metering systems. The initial offset has been determined as 10 minutes which will provide a reasonable replication of current switching patterns. The provision for increasing the offset is simply to enable this facility to be utilised should the need arise due to a generation, grid or local network constraint. It is not thought likely that the offset will be changed in the medium term and other options could be introduced such as to spread load switching over a number of half hours if switching times become an issue.

6. Do you agree with the relative merits/drawbacks of the four short-to-medium term options described in 'Options for change' Section 4?

Power Data Associates Ltd	Yes. Clearer demonstrates a need to develop a framework to enable HH settlement.
E.ON	Yes, although we do not believe that these customers will form part of early roll out. As stated in Q3, it is likely that most suppliers will concentrate on the majority of customers and leave the more technically difficult customers till later in the roll out. This will ensure that core systems and processes are thoroughly bedded in before adding customers which will suffer greater impacts if processes are hindered with teething problems.
National Grid Electricity Transmission plc	n/a
British Gas	We agree with the merits and drawbacks described in the "Options for Change" section.
EDF Energy	We agree with the relative merits/drawbacks of the four short-to-medium term options described in 'Options for change' Section 4. In addition it is worth noting that the implementation of Option 2, mandating HH metering for dynamically switched meters/circuits, could create a barrier to switching for affected customers, at least initially. Some Suppliers may not initially have capability to take on customers that are settled on an HH basis, and would need to undertake a change of measurement class back to NHH, which would, with this option, also require static switching, in order to be

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	able to operate that customer.
RWE npower	Yes, npower agrees with the merits/drawbacks included under 'Comparison of high-level options'.
Electricity North West	<p>Option 1 – we believe that they would have to move to clock SSC but have concerns over the option to use elective HH arrangements. Distributor tariffs for using such an arrangement are on a site specific basis with capacity charges and customers would have to opt for the HH data to be made available to both suppliers and distributors. If there was a significant take up of this option then system changes would result as discussed in a number of industry meetings and change proposals looking at how to bill such customers.</p> <p>The assumption on the NHH market is correct unless someone sponsored a change to improve the process in this area. The overall outcome is a misallocation of energy resulting in a worse situation than the present arrangements.</p> <p>Option 2 - as indicated above there are issues related to HH settlement however we would argue that the industry is attempting to remedy this situation by the introduction of new measurement classes under P300. We accept that this is subject to DCUSA DCP179 change proposal but if both are supported such use of the HH settlement arrangements could be utilised from April 2016. We therefore do not believe that there would be a delay in this area. There may be however a benefit in understanding the full implications for these (RTS) customers prior to installing smart meters but this is countered by the risk of not moving them in sufficient time to negate the lack of availability of the BBC service.</p> <p>Option 3 – this will be very difficult to control due to lack of mandating the process and add additional costs to the industry for a limited period of time.</p> <p>Option 4 – this does attempt to put in place a process with associated governance but at a significant cost.</p>
UK Power Networks	Yes, we agree with the relative merits/drawbacks of the options in section 4. However, we do feel that settlement should be conducted using aggregated HH consumption data for all smart meters. This would enable an Option 2a to be proposed.
Western Power Distribution	WPD agrees with the relative merits/drawbacks of the 4 options.
Scottish and Southern Energy Power Distribution	We agree.
TMA Data Management Ltd	Yes we do.

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ScottishPower	We agree with the merits/drawbacks of the four options
Northern Powergrid	n/a
SSE Energy Supply Ltd	<p>In line with the consultation, our views on the merits / drawbacks of the options are as follows:</p> <p>We broadly agree that option 1 will not provide advantages for Settlements that HH data should result in, most notably that we may track the shape of the load across the day. This would also negatively impact the ability to design new tariff products.</p> <p>The costs for option 2 and 4 would be high and as such would not be economic for an interim solution. Option 4 would also be placing additional and different responsibility on market participants that we do not consider to be advantageous to the market.</p>

7. What is your preferred option and why?

Power Data Associates Ltd	Option 1, interim changes and develop a HH settlement framework.
E.ON	Option A, would be our preferred option currently. We believe that it is too early to determine the most appropriate option so A would allow suppliers flexibility to deliver for the small numbers initially without incurring costs. It would also allow for learnings to inform a decision at a more appropriate time. There would be an incentive for suppliers to use HH settlement anyway in order to avoid the cost of notifying the SVAA of switching times.
National Grid Electricity Transmission plc	n/a
British Gas	At this stage our preferred option is to mandate HH settlement for those customers who want to take advantage of dynamically switched heating load. This would ensure accuracy of settlement and ensure that any additional costs are borne by those customers who benefit from these tariffs.
EDF Energy	We do not yet have a preferred option from a smart metering programme point of view. We are not planning to operate any dynamic switching (we would aim to put customers onto static switching if we gain them on CoS) so we would not look to operate under any of the options. The issue is going to arise when we gain customers that are dynamically switched and need to remain so because they are in Load Managed Areas. In that instance we would favour Option 3, as we would only be operating any dynamic

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	switching for meters at the request of the Network Operator(s), in which case they would set the times and should remain responsible for notifying them to the SVAA for settlement purposes.
RWE npower	<p>npower's preferred option is to manage settlement of dynamically switched meters within the existing framework (Option 1). We believe that time is needed, with a volume of deployed smart meters in the field to assess the market, before changes are made to industry wide systems and processes. Although in the most part, the changes that are referenced in the consultation could effectively be 'interim' solutions until universal HH settlement is introduced, the date at which this has the potential to be introduced is yet to be determined, if at all. If Suppliers initially mirror existing SSCs risk associated to this option should be mitigated somewhat.</p> <p>Dynamic switching products are likely to be aligned to Smart Grids, and in particular to resolve network capacity constraints or generation shortfall. Once innovative dynamic switching for domestic customers becomes more prevalent, changes to existing arrangements become more viable. When the market demonstrates the need and there is an appropriate business case to support it, Option 2 and mandating HH settlement could be an option.</p>
Electricity North West	Our preferred solution is Option 2 for the reasons given in the previous question. We need to avoid duplicated processes for the NHH and HH market and embrace smart metering and HH settlement.
UK Power Networks	We would prefer a variant of option 2 where HH data is collected from the smart meter and then aggregated into settlement
Western Power Distribution	WPD manages the RTS system as wholly static or semi-static within the 4 WPD licenced areas. Option 3 where dynamic switching is co-ordinated between the DCC and RTS systems is therefore not applicable and WPD prefers the RTS system to be managed within the existing framework until Radio 4 longwave is switched off. Newly installed (or newly reprogrammed) dynamically switched smart meters would either be option 2 – "mandated HH settlement", or option 4 – "supplier specific SSC". In the short to medium term, option 4 is therefore the preferred solution for dynamically switched smart meters.
Scottish and Southern Energy Power Distribution	Option 3 – Due to timescales and regulatory impacts.
TMA Data Management Ltd	Option 2 is our preferred option. Option 2, mandating HH settlement for dynamically switched customers is the best option for short,

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	medium and long term. It ensures that dynamically switched customers are accurately settled, it negates the need to change the SVAA systems, it offers the greatest flexibility to Suppliers to offer innovative tariffs and it is using current proven processes that Suppliers, LDSO's and Agents are familiar with.
ScottishPower	Our preferred option is Option 4. We have chosen Option 4 as it provides a long term solution beyond 2020, in addition it makes each Supplier responsible for setting their own switching times, thereby ending the current 'piggy backing' on to the ex-PES Supplier switching times.
Northern Powergrid	We have no strong preference provided that the chosen option would not unduly restrict the take up of dynamically switched tariffs.
SSE Energy Supply Ltd	Option 3 is our preferred option. It is low cost and has a lesser impact on changing the responsibilities of market participants. Furthermore, it will allow parties to assess the benefits of these new arrangements and will allow us to learn and adapt from our experience.

8. Are there any other options that we should consider?

Power Data Associates Ltd	No
E.ON	No, although other options may come to light as suppliers turn their attentions to delivering smart to more technically complex customers.
National Grid Electricity Transmission plc	n/a
British Gas	We have not identified any other options.
EDF Energy	None that we can think of at the moment.
RWE npower	npower believes that some consideration should be given to the provision of switching times by the DCC rather than individual Suppliers.
Electricity North West	We do not believe that there are any other options impacting the BSC. There may need to be changes to the Smart Energy Code and the DCUSA dependant on how the relationship between distributors and suppliers needs to be changed as control moves from one party

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	to another and we protect the interests of both parties
UK Power Networks	As mentioned previously, HH consumption data should be collected from smart meters and aggregated into HH settlement consumption data. This removes the need to profile HH data from meters that are capable of collecting HH data.
Western Power Distribution	None
Scottish and Southern Energy Power Distribution	No
TMA Data Management Ltd	No comment.
ScottishPower	No
Northern Powergrid	No comment
SSE Energy Supply Ltd	No

9. Do you agree that Suppliers should be responsible for notifying switch times?

Power Data Associates Ltd	n/a
E.ON	We believe that ultimately it makes sense to settle dynamic TOU customers HH which would negate this requirement.
National Grid Electricity Transmission plc	n/a
British Gas	We agree that suppliers should be responsible for notifying switching times
EDF Energy	This all comes down to who is driving the need for dynamic switching. As a Supplier we have no intention to undertake dynamic switching for our own purposes in the short term. It will only occur at the request of the Network Operator(s), in which case they should retain responsibility for reporting to settlement as per the current arrangements. We may identify a need to conduct dynamic switching for our own purposes at some point in the future; at that point it would make sense for us to notify those switch times, if at that time the meter continues to be settled NHH.
RWE npower	Yes, npower agree but only where the Supplier is responsible for setting switching times. Where 3rd parties or the customer are directly controlling switching the Supplier should not be responsible.

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	npower would like to see the use of the DCC explored further as an option.
Electricity North West	This set (9-12) of questions is specific to Option 4 and not an approach we would advocate however in response to the specific sub set of questions associated with this option it should be the supplier's responsibility until such time as a change allows for the distributor to undertake such activities. Such a responsibility however, should be automated via switching times being sent to the SVAA automatically as stated below.
UK Power Networks	The party that initiates auxiliary load switching should be responsible for notifying those times. This would normally be the supplier.
Western Power Distribution	Under option 4 the dynamically switched smart meter is on a supplier specific SSC so it is logical that the supplier notifies the new switching times.
Scottish and Southern Energy Power Distribution	We agree.
TMA Data Management Ltd	Option 4 is not a viable option and therefore there is no need to answer questions on how it should work.
ScottishPower	While it would seem sensible for Suppliers to accept responsibility for notifying switch times going forward it needs to be recognised that ex-PES Suppliers are in the main the current Group Code Sponsor providing switching times at present. Suppliers, who are not Group Code Sponsors and who have customers who are dynamically switched currently 'piggy back' on the switching times of those who are, will require to become responsible for their own process to enable them to dynamically switch their own customers should they wish to continue with this process.
Northern Powergrid	Yes
SSE Energy Supply Ltd	Yes, they are the only party that can do so.

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10. How should switch times be notified?

Is the Data Transfer Service appropriate for multiple notifications in short timescales?

If not, what other communication methods should be considered?

Power Data Associates Ltd	n/a
E.ON	Again we believe that it makes sense to settle these customers HH which would not require the notification of switching times.
National Grid Electricity Transmission plc	n/a
British Gas	The DTS would appear an appropriate mechanism for notifying multiple notifications
EDF Energy	The DTS would appear to be an appropriate communications mechanism for notification of switching times.
RWE npower	Yes, the Data Transfer Service would appear to be an option for the sending of switching times. Consequential changes may be required as this could introduce the need for a new dataflow. Any cost associated to the introduction of a new dataflow and the ongoing use of this should also be factored in to options for progression.
Electricity North West	Our view is that such triggers should come from the meter and automate the process to avoid manual intervention. This therefore may mean an interface with the DCC systems.
UK Power Networks	We believe that more work needs to be progressed in this area so that demand side management can be adequately coordinated between impacted parties.
Western Power Distribution	The existing "Teleswitch Contact Interval Data File" D0277 flow on the DTN is a good model and has the benefit that most of the infrastructure is in place. A copy of the flow going to the SVAA should also be sent to distributors and national grid who could estimate the co-incidence factors between the various SSC's and possibly foresee problems if (or as) the significance of dynamic SSC's increases.
Scottish and Southern Energy Power Distribution	We believe this should be kept with the DTS. It is appropriate as the daily notification seems also adequate for the short to medium term so we cannot see value to use any another means of communication at this time. Although it may have a cost associated with compiling this information into a DTN format, once done, it will benefit from the service.

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TMA Data Management Ltd	Please see answer to question 9.
ScottishPower	We do not believe the DTS is an appropriate method of communication for multiple notifications in short timescales, given that this in the main is a batch driven process that communicates data flows across the Data Transfer Network. In order for this method to work it is likely that new data flows will be required and given the timescales required to implement such it could be June 2015 at the earliest before they were available for use. However we do accept that if the switching times were notified a day-ahead then use of the DTS could be possible
Northern Powergrid	No comment
SSE Energy Supply Ltd	It is proposed that options are considered and the respective cost / benefit analysis be undertaken. It is important to understand what information Settlements requires and whether a simple solution such as a spreadsheet will suffice.

11. Should the Supplier (or notification agent) provide daily switch times or only notify switch times by exception?

Power Data Associates Ltd	n/a
E.ON	As above
National Grid Electricity Transmission plc	n/a
British Gas	Notification by exception would suffice
EDF Energy	Based on the information provided it would seem sensible for there to be notification on change, if dynamic switching is a rare event for a low number of meters then lower volumes of communication would seem sensible. However, a much more detailed impact assessment would be required as ultimately we should be looking to deliver the lowest cost solution.
RWE npower	npower do not have a strong preference and agree with the merits listed for both notification options.
Electricity North West	It should be when there is a change which can be facilitated as part of the automated solution of updating switching times to the meter.
UK Power Networks	See answer to question 10.

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Western Power Distribution	The most robust method is for daily notification of switch times
Scottish and Southern Energy Power Distribution	Daily switching times should be provided. This maintains the status quo.
TMA Data Management Ltd	Please see answer to question 9.
ScottishPower	Given that Suppliers, albeit ex-PES Suppliers, have always provided the daily switch times then we can see no reason as to why all Suppliers provide their own switching times. The only time notification should be given by exception is in exceptional circumstances.
Northern Powergrid	No comment
SSE Energy Supply Ltd	Our initial view is that only reporting by exception is required.

12. Do you agree that notifying intended switch times by Suppliers would be more practical and cost-effective than interpreting individual commands to/responses from smart Meters?

Please describe any alternative methods of collating switch times.

Power Data Associates Ltd	n/a
E.ON	Yes, but HH settlement would negate this requirement.
National Grid Electricity Transmission plc	n/a
British Gas	We agree that this would appear the more practical and cost effective mechanism
EDF Energy	We agree that this would be more practical and cost-effective.
RWE npower	Yes, npower agree that it is more practical to aggregate switching times so they are only notified at a group level and not at an individual meter level. Switching times could be notified by SSC.
Electricity North West	We prefer the set of commands from the meter to fully automate the process.
UK Power Networks	See answer to question 10.
Western Power Distribution	Under option 4, the meters are switched and settled in the aggregate in a manner analogous to the existing RTS system. Simplest is to model the notification on the existing method (D0277). Alternative

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	<p>methods of collating switch times would require an understanding of the DCC.</p>
<p>Scottish and Southern Energy Power Distribution</p>	<p>From an operational perspective, Supplier will decide in advance what the switching time will be (notifying intended switch times), nevertheless its translation into individual command (service request to smart meter) will also need to be performed.</p> <p>It is our belief that the latter will have the level of correct detailed instruction that will form the basis for Settlement accuracy in the long term.</p>
<p>TMA Data Management Ltd</p>	<p>Please see answer to question 9.</p>
<p>ScottishPower</p>	<p>We agree that notifying the intended switch times by Suppliers would be more practical and cost effective. We also believe that by notifying SVAA of the intended switch times could potentially assist in the Settlement process.</p>
<p>Northern Powergrid</p>	<p>This seems a pragmatic approach rather than reading switching calendars in individual relays on a regular basis which would be likely to increase DCC traffic and incur additional costs.</p>
<p>SSE Energy Supply Ltd</p>	<p>At this time we agree, on the basis that it seems unlikely there will be the ability to send individual price signals to individual customers, though this may be the long term aim it is not currently practical.</p>