P272 Impact Assessment Responses

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

Impact Assessment issued on 22 July 2011

We received responses from

Company	Role of Parties/non-Parties represented
EnDCo	HH Supplier
SmartestEnergy	Supplier/ consolidator/ trader
IMServ	HHDC, HHDA, HHMO, NHHDC, NHHDA, NHHMO
CE Electric UK	Distributor
Good Energy	Supplier
Western Power Distribution	LDSO, SMRA, MOA
RWE npower	Supplier/ Generator/ Trader/ Consolidator/ Exemptable Generator/ Part Agent
Haven Power Limited	Trading Party – Supplier
Independent Power Networks Limited	LDSO, SMRA
TMA Data Management Ltd	NHHDC, HHDC, NHHDA and HHDA
Electricity North West Limited	Distributor
UPL	Meter Operator and DCDA agent
Lowri Beck Services Ltd	BSC Agent
Scottish and Southern Energy	Supplier/ Generator/ Trader/ Party Agent/ Distributor
IBM Ltd (for and on behalf of ScottishPower)	Distributor / Supplier
Siemens Metering Services	Party Agent (HHDC, HHDA, HHMO, NHHDC, NHHDA, NHHMO)
UK Power Networks	Distributor
British Gas	Supplier
Stark Software International Limited	HHDC/DA, NHHDC/DA
G4S Utility Services (UK) Ltd	NHHMoA, NHHDC, NHHDA
E.ON Energy Solutions Ltd	Supplier
GDF SUEZ Marketing Limited	Supplier
EDF Energy	Supplier/Party Agent (& Generator/ Trader/ Consolidator/ Exemptable Generator)

Impact Assessment by BSC Parties

Question 1: What are the impacts on your organisation of implementing P272 by 06 April 2014?

Responses

Respondent	Response
EnDCo	Minimal. System data type changes only As we are HH only we already process all our clients using HH settlement. (Including Elective HH)
SmartestEnergy	Half hourly products will be developed for customers all the sooner.
IMServ	We have based our response on volume in line with our current HH market share. We currently provide all of the required services and so there would no additional training or up-skilling requirements. We were originally certified for operating at volumes in excess of the numbers currently being debated and have experience of working at high volume therefore the potential for the need for requalification is considered to be low. The main impact would be on system capacity to manage the additional retrieval, processing and data storage, and the additional equipment or infrastructure needed to support this. Additional headcount would be required to manage exceptions. We believe that all such changes could be managed within any of the proposed timeframes. We have previously managed large migrations, for example ERS to PRS and several large customer specific CoMC and therefore have the relevant experience to deal with the process. At a high level and based on the above assumption we would anticipate recruiting no more than 10 additional staff.
CE Electric UK	If the majority of suppliers choose to carry out a bulk change of customers to half hourly then our current internal processes would be affected in terms of managing registration data against a volume of customers within our half-hourly billing system along with the time taken for the billing systems to both process and produce the invoices. We also need to consider performance issues with the systems involved (internally and externally i.e. DTN).
Good Energy	We will need to substantially increase our charges to affected customers leading to significant political damage as business organisation cry foul. Larger organisations may be able to absorb costs or minimise them though in-house data collection. Thus creating a commercial disadvantage to smaller suppliers.
Western Power Distribution	The benefit of this modification is improved quality of data in settlements and more accurate DUoS billing. We support it in principle but are concerned over the potential cost to us. As we raise an invoice for each HH MPAN we will need to create a new HH DUoS billing account for each MPAN subject to a change of measurement class to HH. We estimate that this could take the equivalent of a year's clerical

Respondent	Response
	work for one person although we may be able to reduce this if we can automate parts of the process. (We have not been able to fully assess the potential for such automation in the time available for this assessment). Following the initial set up, the new billing records will need to be maintained and we estimate that this will require an additional 1 to 2 staff on an ongoing basis. The substantial increase in HH data that we will need to process and store will require hardware upgrades. Billing system changes will be required to accommodate the change to the formats of the HH DTC flows.
RWE npower	We believe that the timing of the removal of the DUoS pricing differential to be a major barrier to implementing P272 by 06 April 2014. As a Supplier, we would wish to start to move these sites over to HH settlement prior to 06 April 2014 providing it is commercially viable to do so. We would need a sufficient timescale to complete the transfer of these sites by 06 April 2014 and develop systems and processes at least cost. Any narrowing of this timescale would significantly increase system and process costs. P272 proposes the mandatory use of HH settlement for sites that are currently NHH settled. It should be noted that this has considerable implication for customers in terms of the Carbon Reduction Commitment Energy Efficiency Scheme (CRC). This Modification could potentially bring customers into the CRC (either as full participants or as information disclosers) who would otherwise not have qualified. In view of this, we would suggest the Modification Group communicate these concerns to those involved with the development of CRC policy.
Haven Power Limited	Our end to end systems and business processes would be impacted if P272 were implemented. We would need to make changes across our business and the following functions would be affected: Sales, Pricing, Position Management & Demand Forecasting, Registration, Customer Account Management & Billing, Management Information and Financial Reporting & Accounting. Currently, Distribution Use of System charges and Settlement Charges for HH are higher than those for NHH MPANs. We would be unable to absorb any increases arising from the Change of Measurement Class (CoMC) and these would need to be passed on to each customer. For MPANs already on supply, there would be additional work to re-price and advise the customer of the new charges. We believe that prior to any consideration of P272 or any similar modification, there should be a commitment from the relevant parties to re-balance charges accordingly to ensure that customers moving from NHH to HH are not penalised simply to provide the industry with HH data for settlement.
Independent Power Networks Limited	Currently IPNL has only a small number of customers in PC 5-8 so in terms of increasing volumes of D0036s we expect the impact to be fairly minimal. Our DUoS billing system would however need substantial upgrading to allow for any changes to the DTC for

Respondent	Response
	increased resolution of HH flows. Some changes may also be necessary to deal with PC 5-8 customers if the migration is staged and/or suppliers are allowed to elect the NHH/HH settlement. Our DUoS billing system service provider has indicated that a period of at least 12 months from acceptance is required to implement the systems changes required.
TMA Data Management Ltd	The impact depends on whether it is implemented as a bulk change or as a business as usual process when the appropriate metering is installed. Please see answers to questions 2 and 3.
Electricity North West Limited	The impacts of implementing P272 by 6th April 2014 are: • Increase from 6,000 HH customers to 22,000 HH Customers (Currently 16,000 NHH customers on profiles 5-8) • The increase in the volume of daily HH data for the extra 16,000 sites. • The processing of the extra data and table space required to hold this data. • This would be a large change for ENWL 50 – 100 man days. Although there is a significant change to our systems we are supportive of the modification because of the benefits that it offers the industry.
UPL	Firstly, we believe that the issue of customer choice has not been given sufficient consideration and is paramount in this process. If there are insufficient demonstrable benefits to affected customers then effecting change will be problematic. UPL provide both industry agent services as well as 'direct to customer' data services. Accordingly we act as MOP & DCDA agents for a number of large customer portfolios where advanced metering has been installed (driven by the customer) to address both estimated billing and provide direct profile data for energy analysis. We have sought the opinion of our major customers and they have confirmed that they would need to see some direct, tangible benefit to convince them to change from NHH settlement to HH settlement. Current practice in the HH market is to have direct agreements for MOP services between customers and their agents. For many of our customers (end users) this would not be an obstacle and would be welcomed as having more direct control and choice over agent appointment. For our electricity supplier customers, however, this would require the potential establishment of many thousands of individual agreements with consumers whose willingness to enter into such agreements will be premised on the benefits they perceive in doing so.
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	We are happy with this date, conditional on all market agents being ready, and a suitable UoS charging structure for Measurement Class E confirmed before P272 is accepted. Should this charging structure follow the 'SuperCustomer' methodology, we would expect changes to the DTN flows D0036 and D0275, to denote whether the HH data to be either Measurement Class C or E settled, and sufficient notice

Respondent	Response
	given of these changes, to allow for system readiness.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – Increased IT and administration support costs will be incurred in order to support the introduction of P272 and the resultant increased volumes (expected factor of x3) of HH settlement D0036 flows. We believe this will be replicated across all DNOs and throughout the whole billing process, including volume of accounts issued, validated and processed by suppliers. We expect the financial impact to be circa £100k per DNO. In addition, we consider there may also be a possibility of increased stranding costs as a result of differences in specifications between advanced meters and HH settled meters. We believe the customer impact of P272 may have been overlooked. Affected customers will be faced with the requirement to enter into metering contracts, which will have a knock on effect to MOPs. Affected customers' settlement charges will also increase and as will the costs of installing the necessary communications infrastructure to facilitate HH settlement. We have assumed that unmetered supplies will not be affected by P272. We would appreciate clarity on this point as UMS profile classes lie within the 5-8 range and the majority of SP Energy Networks' UMS portfolio is settled on a NHH basis. Supplier – System and resource costs would increase as a result of additional sites trading HH. Our internal systems would need to be expanded to support the additional HH sites and we would need to develop new requirements for meter reading and data storage. The current charging methodologies in place for DUoS and SVA could see a significant increase following the movement of PC5-8 sites to HH. These methodologies are based on the framework that a small amount of sites operate HH and as such incur higher charges than NHH settled sites. All Suppliers would need to undertake a full Impact Assessment of how these charges would increase following a PC5-8 migration and most likely the methodologies would need to undergo a full market review. Customer portfolio will also be impacted as the current costs in place for the arrangement of contracts and additional HH market costs will be applied to all sites currently settling in PC5-8. Customers will also be impacted by higher metering costs in the existing HH world and as a result this be reflected in the settlement costs that are applied. The migration activity required would pose significant cost and time implications. Undertaking a large scale Change of Measurement class exercise alongside the roll out of Smart meters will require additional resources and internal systems changes to ensure consistency between both work streams.
Siemens Metering Services	System and Process changes are currently ongoing in line with Smart Metering, so it is difficult to assess the impact of this Modification against systems that are not yet implemented. However P272 work would have to be managed via a large scale project to ensure successful transition. Potentially, we may have to go through Re-Qualification as an HHDC/ DA/ MO if this process involves a material change in the volume of

Respondent	Response
	mpans moving to HH settlement. Additionally, we may also have to go through Qualification in order to operate these agent roles against MPID(s) that we currently use for our NHH portfolio.
UK Power Networks	Our HH DUoS billing system is able to accommodate the additional accounts (c45,000) to allow site specific billing of PC 5-8 MPANs. However, to support the additional site specific DUoS billing it would be necessary for business process and systems to be changed in the areas of Connection Agreements, availability management and account payment. To support the increased volume of HH MPANs additional staff would need to recruited and trained. The increased volumes of HH DUoS accounts arising from this change should be accompanied by mandatory e-billing via D2026 for all Suppliers. It is thought that the marginal cost of receiving e-bills as a flow cannot be a barrier to small Suppliers who already have to bear the costs of processing all other flows. We would find it very onerous should suppliers choose to switch their customers into HH settlement as a 'big bang' either in April 2014 or at any other date. This is because we incur a material 'set-up' process for newly HH settled customers. We would prefer an extended migration process over at least a 12 month period.
British Gas	**Settlement Impacts** We know that by installing AMR we are able to improve our overall NHH settlement performance. If all PC 5-8 sites are to be removed we believe the 97% target for NHH sites should be reviewed before P272 is implemented. Elexon should have the data to enable them to model the effect of removing all PC 5-8 and calculating the effect on overall NHH performance. Under the current arrangements for our PC 5-8 sites only 1 read per month is submitted to settlement. The proposed performance level of 99% by R1 would be very challenging and arrangements to collect HH data would need to be put in place. The additional costs of this are included in the Agent impacts section. We believe the Change of Measurement Class (CoMC) process needs to be reviewed. Currently our CoMC process is carried out at the same time as a meter exchange. We would need to develop our internal CoMC process to be able to work without a change of meter. **Agent Impacts** Currently the MO DC and DA agents appointed to our PC 5-8 sites are not HH accredited. We would therefore need to decide whether to ask our agents to go through the HH accreditation process or put all our sites through a change of agent process. We will also need to develop a new commercial model for PC 5-8 HH agent services. Currently the majority of our over 100kw HH sites have meter operator agents contracted directly by the customer. In the PC 5-8 market we believe customers will want this costs bundled into their overall contract price. Based on our existing agent costs for HH MO,DC and DA we assess the additional costs for all our PC 5-8 sites would be in the region of

Respondent	Response
	several million pounds **Forecasting Impacts** We anticipate that our forecasting system would require upgrading to be able to handle the additional volumes of data required. The benefits that could be realised from the additional data from PC 5-8 sites would be minimal as these only represent a small proportion of our total energy purchasing requirement. Pricing Impacts This change will require investment in the pricing engine. This will require: • New functionality to handle HH data for P5-8 meters • New functionality to choose whether to use HH data for P5-8 or not • New functionality to handle a mixture of NHH and HH settled meters in the same offer • Potentially new cost structures to sit in the standing data for industry costs such as DUoS / TNUoS and of course metering costs • Upgrading the servers to handle more throughput of both offer volume and HH data Historically, changes in functionality have been expensive, and lengthy to deliver. We would need to make a decision about whether they want to move all P5-8 meters to bespoke pricing. This is the best way to utilise the additional information provided by the move to HH settlement, but would come with an increased resource requirement for the bespoke pricing team. Arguably the resource requirement on the matrix pricing team would be reduced. Timing is also particularly important from a pricing perspective. We are already pricing tenders out past April 2014 so as a supplier would we prefer to wait to take advantage of the additional data? In practice, we need 12 month's worth of HH data to do this, so we'd arguably need to wait a year from April 2014 in order to assess the impact of additional data on BSUoS costs and Balance / Imbalance charges. **Duos and Tnous Impacts** From the perspective of validation of distribution and transmission costs it is assumed for this impact assessment that current charging arrangements for HH sites will be maintained. It is clearly possible that changes could be made to charging arrangements that will mitigate the impacts. If DUoS costs are received at a site-level for PC5-8 customers, as opposed to an aggregated level, this will be a massive increase in the number of invoices received and requiring processing and, in particular, the volume of data required to validate these invoices. This will require significant system investment to ensure our DUoS

Respondent	Response
	processing and validation systems are capable of handling this increased amount of data. This is likely to of the order of several hundred thousand pounds. Whilst there are not any issues in processing and validating TNUoS invoices, we are concerned that more customers being charged via the Triad mechanism will make our annual TNUoS liability less predictable. **Billing Impacts** We currently bill our PC 5-8 customers within a 5 day window at the end of each calendar month. To meet this requirement we poll each of our AMR sites within the 5 day window to obtain reading data. To ensure we meet any new standards for providing HH data to Elexon we may need to spread the polling out over the whole month to give our agents sufficient time to resolve polling and communication issues. This will impact on our current billing process. **Imbalance Impacts** If customers are billed using the actual HH data that is entered into settlement suppliers imbalance should costs will reduce. However this will have an impact on predominantly domestic customers as group correction is currently allocated to the NHH market. We are aware there are proposals to start to allocate group correction to the HH market but believe more analysis is required to ensure the correct amounts are being allocated to HH sites. **System Impacts** If these customers were to be moved to genuine half hourly billing then the following system impacts would be incurred: Core database – we have estimated that we would need to increase our core database to be able to store the additional consumption data by approximately 130 Gigs. This would be required on the production and 2 reporting servers. Flow processing – We estimate it will take a further 2 -3 hours to import the additional D0275s. This extra load will have a serious impact in the overnight batch and we expect we would need to re-engineer the HH read import process to accommodate this. Invoice calculation – This would have a massive impact on our overnight billing run to extent that we would probably need to re-platform our HH billing solution. The implications of the above impacts would mean that we would probably need to implement a new billing system for HH billed sites. **Customer Impacts** Access HH data for PC 5-8 will mean we will be able to more accurately assess whether customers are paying the correct amount for their energy bills. If suppliers change the contractual arrangements with their customers to reflect the more accurate data there will obviously be winners and losers across the customer portfolio. If suppliers move to HH at different times this will influence customer switching behaviour.

Respondent	Response
	We are assuming that the current debate on access to customers metering data will not apply to PC 5-8 customers and that suppliers will have free access to the non-domestic HH data. **Other Impacts** We often get requests from distribution business to re-instate customer records where they have disconnected an MPAN in error. This process will be made more complex if the site is traded HH.
Stark Software International Limited	Shift of volumes from NHHDC/DA for advanced metering to HHDC/DA. The potential is there also for growth in volume as HHDC/DA.
G4S Utility Services (UK) Ltd	As we do not operate in the HH market now; We would be presented with two choices either enter the HH market with all associated costs of systems and market entry, or pull out of the profile class 5-8 market with associated loss of business. As an existing NHHMOP/NHHDC we would have to deal with the change of measurement class during any migration period. If we enter the half hourly market we would have to deal with the change of measurement class internally to our systems, either choice would involve effort, system change, and associated costs.
E.ON Energy Solutions Ltd	The areas impacted are many and varied. We would need to look at the end to end journey of the customer and consider what impacts moving these customers would have on our business. The sales process – currently we gain HH customers on a different licence to our NHH customers. The first consideration would therefore be a change of licence, coupled with a change of measurement class. The second consideration would then be the sales activity. We would need to re-quote all of our customers and offer them a fixed term contract. Currently these customers change supply at will and this would be a cultural shift, which historically we've found isn't always welcomed by the customer. We would have to quote these customers based on the provision of a years worth of HH metered data. If we treated the customer as a fully HH customer, we would require them to appoint their own MOP and DC. The costs for this would be met by the customer and would be somewhere between £250-£400 per metering point as opposed to their current meter rental and agents costs which they current pay in their tariff price. We could undertake this for the customer, but it would have little bearing on the price. If we were to try and offer a hybrid arrangement for the customer whereby we retained some of the features of the NHH arrangements for the customer side of the activity but to the external world this would be HH, this would have a number of other complex issues in terms of our agent and billing systems with a mismatch which would require significant system development. Moving on to Data Collection & Aggregation. Our systems are not currently capable of managing the number of sites and the amount of data being processed. The system would need replacing.

Respondent	Response
	Data collection costs: currently not all of our customers wish to take advantage of the HH data that AMR meters can provide, and so our meters are not set up to poll the data. We would need to potential increase our polling activity by 85%. Staff Servicing – Although we don't expect to have to recruit additional resources to manage the customers, we expect to have to move staff to a different area in the business and there will be costs associated with training NHH operational staff to manage HH customers. DUOS – in terms of the additional DUOS we might face, using Elexon's calculations of average DUOS differences for the profile classes per GSP Group, we expect the DUOS for these customers to increase overall, but the variance by GSP Group to be as great as £600k per annum additional cost to a £2k reduction. Our e-duos costs will also increase, and resource costs to manage the increased workload will also increase and. Additionally a number of other areas were identified in our assessment of this modification. 1. How will we identify the need to move customers from Measure Class E to Measurement Class A when the consumption at the site exceeds the 100kws threshold that currently has higher demands placed on its metering capability? 2. Will there be a requirement for these customers to have site specific connection agreements or will standard connection agreement suffice, if new agreements are required how will this be monitored and by whom? What impact will this change have on LLF calculations – currently an element of the overhead DNO costs form part of the calculation? If those costs are now smeared over a larger group of customers what will the impact be on the existing HH LLFs and what changes will be required to calculate the remaining NHH LLFs?
GDF SUEZ Marketing Limited	As identified within the modification proposal there is a clear dependency on making the required changes to DUoS charging to ensure that there is no dis-benefit in HH charging compared to NHH charging. We are clear that these changes need to be progressed before any potential implementation of P272, hence the April 2014 planned implementation date is subject to an equitable DUoS charging framework. On an operational level we currently operate both HH and NHH processes and therefore a simple migration between the two could be very straightforward. This is however entirely dependent on the chosen solution for implementing the change. As a minimum, we would need to ensure that our systems are updated to correctly re-classify HH Mpans that are <100kW as Measurement Class E. If a more complex solution is chosen which involves creating new LLFs or time of use structures this would be more costly and complex to implement and would require a longer lead time. Irrespective of the complexity of the solution we would be required to change the contractual arrangements with our HH agents to ensure that we could include the arrangements for the migration of

Respondent	Response
	PC5-8 meters. Customers who contract directly for their own services with HH Meter Operators may also encounter the same issues.
EDF Energy	**Setup Costs** a) Work is in progress that will increase the capacity of our IT systems to handle Half-Hourly metered sites including the number of sites currently in Profile Classes 5-8. This is expected to be completed before 6 April 2014. Additional system setup costs over and above this existing project should be minimal, assuming a managed transfer of current PC5-8 sites to Half-Hourly settlement using existing processes with no large step change. Additional work would be required to manage a large step change. b) Supply Licence condition 12.22 makes an exception to the requirement for AMR metering at PC5-8 sites by April 2014 "where the licensee is unable to install or arrange for the installation of any advanced meter at the relevant premises in question despite taking all reasonable steps to do so". We assume that any BSC requirement for HH settlement would not extend to sites where AMR metering is not installed. A BSC requirement for half-hourly settlement that is more demanding than the licence requirement for AMR would have significant additional cost. c) To the extent that installation of AMR metering for PC5-8 is mandated by Supplier licence conditions, there should be no additional costs for metering equipment itself, except where communications upgrades might be required to better support HH data provision. d) There may be significant additional setup cost for some sites to better support HH settlement, for example where NHH data collection is not currently performed remotely and extra communications equipment might be needed, or where site visits are required to reconfigure meters. Site access issues can add to these costs. e) However, changes to agent service costs reflecting different service levels for NHH and HH will occur, and there may be termination costs for existing NHH agent contracts and setup costs for new HH agent contracts. Where suppliers have contracted for agent services, these costs are likely to be passed through to customers. Customers that have contracted directly with agents will be subject to these costs directly. It is not clear how the variety of existing contractual arrangements would be accommodated under this proposal, nor exactly what the costs might be. f) Some significant regulatory and contractual issues exist, for which a solution is not yet clear: a. As described above, customers may have direct contracts with NHH agents, for example fixed term contracts for combined MO/DC/DA service in which AMR installation and meter costs are recovered by the agent over a number of years. Customers may be reluctant to terminate such

Respondent	Response
	contracts and set up new ones with HH agents, for example: i. where additional cost is involved and/or ii. the customer's existing agent does not provide an equivalent HH service and/or iii. to avoid changes in agent data reporting to the customer. b. If as a supplier we were to appoint HH agents to support HH settlement against the wishes of a customer, we could anticipate legal challenge and complaints to consumer and regulatory bodies. g) As a Supplier, we would expect a cost of £15-£20 per MPAN for initial change of measurement class and change of agent process, provided existing processes are used with no large step change. As a Supplier Agent, there are currently similar costs to administer change of measurement class, currently a relatively low volume activity. If this became a higher volume activity as a result of this proposal, it might be possible to reduce the per MPAN cost by modifying existing processes. The impacts of these possible changes have not yet been evaluated. h) The process for settling BSC Trading Charges should not require change. i) Changes to DUoS charging methodologies to create more equivalence between HH and NHH DUoS charges are expected, but the method of achieving this has not been specified. We may have to make system and process changes to accommodate this, the cost of which has not been identified. Any such changes are likely to affect many customer sites, not just those with AMR or settled half-hourly. Any such changes made during the lifetime of a supply contract will incur cost, either to revise the contract price to reflect the change and to manage and communicate the transition to the customer, or to re-balance the overall portfolio position. j) Our current systems and processes would transfer pricing and billing for affected customers from non-half-hourly to half-hourly: a. There would be costs in informing and preparing customers for changes to their billing processes. b. Energy costs associated with half-hourly settlement would be more dependent on a customer's individual half-hourly load profile, instead of the shared profile. Although the uncertainty associated with GSP Group Correction would reduce, customer prices would in time become more reflective of individual load profile. Not all customers would benefit from this, and some customers may be unco-operative. Again, we might anticipate legal challenge and complaints to consumer and regulatory bodies. Potential changes to existing systems to avoid these issues, by facilitating half-hourly settlement in association with non-hourly customer billing have not been considered in detail at this stage, but the impact could be significant. k) There will be an impact on transmission charges. The manner

Respondent	Response
	in which this is passed through to customers, particularly those on existing contracts, would need to be considered: a. Like energy, BSUoS charge liability would become dependent on actual loadshape rather than profile with GSP Group Correction. For in-contract customers, this could change the costs on which the contract was based. b. Customers currently contributing to non-half-hourly demand charges would instead contribute to more volatile half-hourly triad charges. The effect of these changes on us for customers on existing contracts would need to be considered. c. NHH demand charges incurred during the first part of a year combined with HH triad charges during the winter for the same site need to be considered. Is there a possibility of double charging? l) For current PC5-8 customers on long term contracts, for example fixed price contracts, there could be an impact on our wholesale contracting strategy if the aggregate half-hourly shape of relevant customers turns out to be significantly different from that expected when the contracts were made. Adjustments to wholesale trading strategy may be required. m) We note that amongst proposals for change to the Carbon Reduction Commitment (CRC) scheme, discussed in other fora, there are suggestions to base participation on whether a customer is settled half-hourly or not, instead of current criteria. We have not considered potential impacts in detail, but there is a possibility that some customers wishing to avoid inclusion in CRC for whatever reason could resist half-hourly settlement. n) It is not yet clear how AMR meter services will interact with the introduction of smart metering and the DCC, and whether similar agent and customer contractual issues as described above will be created for customers, suppliers or agents. In summary, although in principle the proposed change appears relatively straightforward to deliver, in practice we anticipate many administrative and process difficulties in implementing it for all current PC5-8 sites with half-hourly capable meters by April 2014. Considerable further work would be required to place costs on the likely outcomes, which to some extent depend on customer response to mandatory changes, rather than technical issues. **Ongoing Operational Costs** (a) Agent Costs As a supplier, we observe that the current cost of HH agent services is generally considerably more than that of NHH agent services. Although the service levels for measurement class E are lower than for measurement C, and we would expect the per-meter cost of HH agent services to fall if fixed costs were shared more widely with expansion of the HH market, we have no firm information on likely meter agent costs. It should be noted that existing HH customers normally contract directly with a MOP and there is rarely a contractual relationship

Respondent	Response
	between the customer's MOP and Supplier. A PC5-8 customer currently with a combined NHH MO/DC/DA service but considering or required to move to HH service may opt or be required by limitations of existing contracts to follow this practice and use separate agents, which could result in significantly higher service and administrative cost for the customer. As a Supplier Agent our experience of customer preference is generally to contract with a sole agent that can provide the full agent services of MO/DC/DA. Moving these from NHH to HH may require some customers to reconsider their agent selection or require agents to consider their service provision as not all will be able to provide the necessary full HH service. (b) Additional resource roughly proportional to the additional number of HH customers would be required for: a. pricing for individual or classes of customers, forecasting, billing and provision of reporting data. b. validating and correcting half-hourly meter data where necessary. Ongoing system and process improvements will offset some of these additional costs, but the net effect is currently uncertain. (c) There would be an increase in DUoS charges in most distribution areas and profile classes, unless DNOs change their charging methodologies. We would expect an equivalence of HH and NHH charges to be implemented before this proposal. (d) For DUoS, we would anticipate additional processing charges of approximately £20k a year, offset with a very slight reduction in NHH process costs. Additional points: • Additional data storage • Customer DUoS pass through/pricing • Interaction with CDCM/EDCM developments. (e) There would be a small change in BSCCo charges. **Potential Benefits to Processes** (a) HH is more accurate and straightforward in principle to administer from a supplier's operational perspective. There may be an increase in the quality of bills, arising from availability of more detailed meter data. (b) Real HH data for sites currently in Profile Classes 5-8 will assist more accurate demand forecasting (reducing risk premia associated with wholesale contract imbalance, pricing and credit). (c) HH data could also assist with more innovative value added benefits to customers such as load monitoring and and energy management. Although this does not necessarily require HH settlement, there is potential for more direct feedback of customer response into prices. However, more detailed data for individual sites means increased volume of data and potential for more complexity in dealing with customer pricing, queries, billing and data provision. Potentially, customers could receive more accurate contract prices (but this is not necessarily the same as cheaper prices). Some

Respondent	Response
	customers will represent a higher energy cost and/or uncertainty for suppliers than others, dependent on invidual half-hourly measured loadshape and its predictability. There are likely to be winners and losers among customers, as among suppliers, if actual half-hourly loadshape is used in settlement instead of shared profiles.

Question 2: What are the impacts on your organisation if Suppliers choose to transfer to HH early?

Responses

Respondent	Response
EnDCo	None
SmartestEnergy	It will be a good thing, although it may bring forward a review of any HH GSPGCF
IMServ	We do not envisage any additional impact of early transfer and could just as easily manage a phased approach should some suppliers move to the new arrangements early.
CE Electric UK	This is dependent on the volume of customers moving to half hourly however we would need to ensure we have implemented the necessary technical and non-technical processes to manage this early transfer. If transfer were early we would support a phased approach.
Good Energy	There may be some competitive advantage to be gained from switching at the last possible moment. There may also be issues in inheriting customers who are billed HH by early adopting suppliers and then not being able to get HH billing from new supplier who is not ready for HH.
Western Power Distribution	Although the overall impact would be the same as identified under question 1, the changes to our systems and hardware would need to take place earlier if Suppliers bring forward the dates of their transfers. The important thing for us is that the transfers are phased. It will be of benefit if we are aware of the large Suppliers' migration plans so that we can schedule development work, and allocate additional clerical resource, as needed, in conjunction with the transfers.
RWE npower	As a Supplier we would wish to transfer to HH earlier than 06 April 2014, providing it is commercially viable to do so. The timing of the removal of certain barriers to settling HH, such as the DUoS pricing differential, is crucial to allow a sufficient transition period. A sufficient transition period would be required in order to transfer the sites through a Change of Measurement Class (CoMC) and Change of Agent (CoA) in managed blocks to mitigate the risks associated with a mass transfer of sites over a short period of time. We also believe a phased approach over a sufficient period of time to carry less cost and risks to Supplier and Agent systems and processes.
Haven Power Limited	If Suppliers choose to transfer early then this would impact us in a number of areas:

Respondent	Response
	• We would need to bring forward any changes to systems and processes to be able to accept these new HH customers on Change of Supplier (CoS). This impacts us, our agents and those of other Suppliers (see later questions). • If a significant number of PC 5-8 NHH MPANs are moved by a small number of Suppliers to HH settlement early then this would disadvantage other Suppliers that are not ready early as they would see the competitive arena in which they are geared up to operate in reduce. A scenario could arise where only the largest Suppliers (who have significant resource and can implement the required changes) are able to service this sector. • Removing PC 5-8 MPANs from NHH settlement will have a knock on effect on the calculation of both GSPGCF and Distribution Line Loss Factors (LLFs). Increased variation in GSPGCF will cause additional difficulties in demand forecasting. Greater likelihood of LLF changes is likely to result in DNOs requesting ad-hoc alterations to their LC 14 Statement. These both provide additional uncertainty and risk to our business. Under the current DUoS and Settlement Charging regimes an early transfer to HH settlement places additional charges against the MPAN and unless these are absorbed by the Supplier, then the customer will face increased charges. Unless the customer specifically requests
Independent Power Networks Limited	See answer to Q1.
TMA Data Management Ltd	The impact will not be significant as it will happen as and when appropriate metering is installed for PC5 to 8 sites.
Electricity North West Limited	This is all dependent on when ENWL plan implement the system changes for P272. If there is a possibility that some Suppliers may transfer early it is all dependent on the number of sites to be transferred and whether this is just one Supplier or a few Supplier's and the process would need to be managed sensibly (Like CoA process). It will come to a point that if the system changes have not yet been fully implemented for P272, that our system will not be able to process the volume of data in realistic timescales. Whilst there is nothing stopping suppliers transferring these customers to Measurement Class E now, we believe there are still some obstacles for suppliers such as the DUoS tariff in some of the profiles benefitting from a NHH arrangement rather than HH hence preventing them in proactively doing so. We would welcome movement earlier than 6th Aril 2014. We should aim to start moving customers from the 1st April 2013 which aligns with the tariff work being implemented for this class of customer via the work undertaken by the DCMF. It would be our intention to also modify the system to accommodate the growth of customers in this area by this date.
UPL	Should be the customer's choice.
Lowri Beck Services Ltd	Confidential response.

Respondent	Response
Scottish and Southern Energy	We believe Suppliers will only choose to transfer to Measurement Class E early once the revised UoS charging structure has been implemented. Should this be the case there may be impact on settlements stability and interoperability. However, Suppliers transferring Customers early would help ensure the market is robust to handle the eventual volumes expected.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – Advanced implementation of above. Supplier – If other Suppliers choose to migrate sites to HH early this would have an impact on the GCF for the Distribution areas that they operate heavily in. As a result, any error that occurs through the increased HH settlement market would have to be picked up through GCF and managed by the Suppliers still operating in the NHH PC5-8 market. As more sites are moved on HH this potential error, however small, will increase and pose a risk to the accuracy accounted for within the NHH market. There will also be implications for the Change of Supply process where the old Supplier has migrated a site to HH but the new Supplier may want to move the site back to NHH based on their existing migration policy. The proposed restrictions on sites moving back to NHH will be a significant issue in this scenario.
Siemens Metering Services	This would depend on whether all Suppliers choose to move to HH early, or just a few. If only some Suppliers want to make the early transition, then depending on the volume of sites impacted, it may be possible to manage this work via existing processes. If this transition was dealt with in a more staggered approach (with some Suppliers transferring early and others later), then it may negate the requirement to Re-Qualify, as this could be viewed as gradual business growth (again, depending on volumes). This approach would also be preferable from an application perspective, by gradually increasing volumes.
UK Power Networks	We would like to see customers with advanced meters traded HH by their Suppliers from the earliest opportunity so that they can obtain the benefits of HH settlement. We would propose that HH settlement should be mandated from an earlier date than April 2014 for all customers that have advanced meters. We propose April 2013 as such a date.
British Gas	The requirement to use HH settlement should be driven by Time of Use tariffs. If the supplier has agreed with the customer to bill on a Time of use tariff then the site should be transferred to HH settlement. This is no different to the use of HH elective today where if a customer has agreed to be billed HH then they would only change to a supplier who can support HH billing. We believe the industry needs to agree a set of rules that give suppliers the flexibility to use HH elective but ensure that suppliers are not able to "game" the settlement system.
Stark Software International Limited	None.

Respondent	Response
G4S Utility Services (UK) Ltd	As per question 1, however the impact of lost revenue would hit earlier, and the costs and associated risks of an early change would be increased. There is also a risk of customers changing supplier and therefore moving between half hourly and none half hourly measurement with each supplier change.
E.ON Energy Solutions Ltd	Confidential response
GDF SUEZ Marketing Limited	N/A. We understand this question to be applicable only to customers.
EDF Energy	A significant increase in the number of sites settled Half-Hourly before the internal work described at Q1(a) above is completed would increase storage requirements and have a detrimental effect on system performance of a number of existing systems, including pricing, forecasting, DUoS settlement, customer billing and data provision. Workarounds to deal with this could incur significant additional costs, distracting from our project to improve overall capability. Nevertheless we would expect systems to be ready for HH PC5-8 settlement well in advance of April 2014 (though actual usage would be subject to resolution of contractual and customer issues described previously). We would definitely consider a phased introduction for our own AMR customers in advance of a drop-dead implementation date in order to manage the transition in an orderly manner, rather than a step change that could carry high risk if implementation issues were to be encountered. If other suppliers transferred voluntarily in advance, an issue for us would be acquisition of their customers already on AMR metering and HH settled. There would probably be advantage in keeping such customers HH settled, and we anticipate being able to facilitate this.

Question 3: What are the impacts on your organisation if there was a bulk change?

Responses

Respondent	Response
EnDCo	None apart from the secondary effects of more accurate data being in the settlement process
SmartestEnergy	It would be clearer that all sites had moved and there would be no stragglers.
IMServ	We have no preference for either a phased or 'bulk' approach; both would be manageable and the impacts described in Q1 are the same in either scenario.
CE Electric UK	– Development of billing system to a handle the increase in customers – Updating the customer meter records with registration information

Respondent	Response
	– Increase in requests for capacity information – Billing system performance to handle a possible threefold increase of customers (i.e. D0275 processing, creation and dispatch of invoices)
Good Energy	This would require a certain level of co-ordination, and the changes to tariffs are likely to cause strains on customer facing services. As a minimum we would need to implement new HH systems for billing and change customer contracts. We would also need to appoint new agents.
Western Power Distribution	It would cause severe difficulties for us. The set up of new billing accounts would need to be done in a shorter timeframe. Given the specialist nature of the work and the fact that it is done by a small team, a bulk change is not a practical solution for us. Phasing of the transfers will be required so that no more than about 20 - 25% of the current PC5-8 portfolio transfers in any one month.
RWE npower	We interpret this to mean, what would be the impact if Suppliers did a CoMC and CoA on thousands of sites in a very short space of time in the final days leading up to 6 April 2014. As a Supplier we would not be able to transfer our portfolio of PC 5 – 8 sites over to HH in such a short space of time. Agents would also not be able to handle the processing and creation of data flows for such a large volume of sites, or deal with the sudden increase in the volume of sites requiring a site visit due to faulty or missing communications. We do not believe there is a robust end to end industry process in place for such a 'bulk' CoMC and CoA which provides the necessary assurances to mitigate the risk to settlements. It may be prudent to consider introducing a ceiling to the number of sites that can be batched together and processed through a CoMC and CoA at any one time. Suppliers wishing to transfer a number of sites greater than the ceiling would be expected to provide certain assurances to PAB in respect of the Supplier's and their Agents systems/ processes, and their ability to handle a 'bulk' CoMC and CoA.
Haven Power Limited	• Significant Additional Cost – by their nature, "bulk changes" are costly. It would not be possible to complete it through a "business as usual" Change of Measurement Class process. We would need to put in place out-of-hours resource (both people IT systems) to effect the change. • It is likely that any such change would need additional resource during the planning period to co-ordinate the bulk change activities both within Haven and with external parties. Over the industry considerable expense and time consuming testing would be required to make all the changes to all the systems at the same time. • Failure in relation to any aspect of the change on either our part, or that of one of our agents could lead to our inability to efficiently manage our customer. This would damage our reputation with the customer and within the industry and may result in financial loss if we are unable to correctly bill and collect cash from our customer(s) and enter the correct consumption

Respondent	Response
	volumes into settlement. • Failure of another party to correctly enact the changes. We have already an example where an agent submitted incorrect data into settlement for two Settlement Days in 2011 (Trading Dispute DA391). Failure of one or more large suppliers to correctly enact a bulk change could lead to widespread issues which would affect a number of parties including other suppliers and could adversely affect their short-term cash flow; this impact could be significant for small suppliers. Together these points lead to additional, and in our view unnecessary, risks to our business; therefore we are not supportive of a bulk change.
Independent Power Networks Limited	See answer to Q1.
TMA Data Management Ltd	The impact of a bulk change is an increase in all the normal HHDC and HHDA activities. If all Suppliers wait for 06th of April to carry out bulk changes from NHH to HH, it will have a significant impact on workload. Also from experience, exception management and clearance is more problematic during a bulk change, as the details get lost in the sheer volume of transactions.
Electricity North West Limited	Providing ENWL have implemented the system changes for P272 there should be no issue with a bulk change. This will probably be a cleaner approach but again it would have to be managed and maybe need to be done one Supplier at a time, potentially not all Suppliers transferred by 6th April 2014. This may cause a concern for the suppliers. It may also be a problem for the industry in that it impacts a number of parties. We do not recommend this approach.
UPL	If the current HH MOP agreement structure endures then establishing a significant number of direct MOP contracts for thousands of customers each with single or few sites is likely to prove challenging. (Larger site portfolios will be straightforward.) Customers' willingness to enter into such agreements (or change at all for that matter) will be dependent upon the benefit they perceive in doing so. We anticipate more problems associated with moving the supply contractual arrangements where suppliers will have to move from one risk profile/purchasing arrangement to another.
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	We do not support this option as we think it would have significant risk for the settlement process.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – The methodology of any bulk change would need to be clearly specified to offset the potential for increased administration support to monitor such a change. We would be required to consider: • Measurement Class change only? • Profile Class change only (Profile Class changing from 5-8 to "0" or does 5-8 become valid for Measurement Class HH?) • Full switch of LLFs (400 range changes to 500 range or becomes valid in HH?)

Respondent	Response
	• Impact on Current LLFs – need for new ones? • Impact on Tariffs/Prices (structure, rates, new versus adoption of HH equivalents? We question whether suppliers would be able to create the necessary changes to facilitate such a bulk change. Supplier – A bulk change would no doubt require significant time and resource to manage all the changes through internal processes and more importantly manage any fallout from the migration. The Change of Measurement Class process as it stands is not without its flaws so all Suppliers would need to adopt an internal project structure to ensure the migration was completed successfully. The current Performance Assurance Techniques for monitoring CoMCs (SP04, etc.) operate on the assumption that there are only a small number of sites within this process at any one time, so a migration of this size would require Elexon to develop how they monitor the CoMC process and what support they offer Suppliers undertaking this process. It would be good to understand what kind of costs Elexon would envisage from this exercise as these will no doubt be passed back to the BSC parties.
Siemens Metering Services	The existing Change of Measurement Class process is notoriously difficult to co-ordinate, with the current very low volumes. As a Supplier Agent, we frequently find that the data flows associated with this process are often sent to us out of sequence, or with incorrect appointment/ de-appointment dates. Considering the problems with this existing process, if this were to be carried out on a large scale, then these problems would increase exponentially. It is likely that BSC audit issues would arise from this activity. As previously mentioned, if there is a high volume of mpans suddenly moving to HH, then this is likely to trigger the Re-Qualification process.
UK Power Networks	Based on the current number of PC 5-8 MPANs, SMRS would be able to support a steady migration or a bulk change in 2014. However, a bulk change would have an adverse impact, on our other systems, due to the volumes of data flows being sent across the network and the manual set up requirements.
British Gas	A bulk change of agent will require additional resource to manage and process. We would want to avoid a bulk change by ensuring suppliers are given appropriate timescales to migrate customers at their own time of choosing.
Stark Software International Limited	Possible impacts on MOP if meter config to be changed in bulk. F & I reads will be needed if Cos is coincident.
G4S Utility Services (UK) Ltd	Assuming our exit from the profile class 5-8 market this would require only additional resource and cost to manage a bulk migration. There is also a potential issue around management of the transfer of meter configuration and password/comms details to the new agent. Assuming we entered the half hourly market, there would be resource cost implications around the activity to process the change from none half hourly to half hourly. As the change of measurement

Respondent	Response
	class is usually a rare process the majority of systems are not setup to complete this process automatically.
E.ON Energy Solutions Ltd	Our major area of concern for a bulk change would be the Change of Measurement Class process and the associated activities relating to the metering configuration. E.ON separate the HH customers on a different supply licence from their NHH customers, so not only would there be change of measurement class, change of agents, change of tariff, there would be the additional migration related to changes from our NHH licence to HH licences for our business separation. Our IT department suggested that in view of the Change of Measurement Class process issues, it might be helpful to migrate each PC separately over a planned period of time rather than a "big bang" approach.
GDF SUEZ Marketing Limited	Whilst we do not have a fundamental objection to a bulk change which had been subject to rigorous testing, it is perhaps more prudent for the workgroup to consider a phased approach. We consider that phasing could be effected in a number of ways including; regional, by individual profile class, or according to commercial terms. Many commercial contract terms and offers between suppliers and customers differentiate between HH and NHH and therefore it may be worth considering a phased implementation solution based on this arrangement. In such a model, to minimise commercial disruption, customers could migrate to HH post the implementation date upon contract renewal.
EDF Energy	We have not completed internal assessment for this question, but it would be significant not least because of the customer engagement issues creating a peak activity. As a Supplier Agent, in our view generally the PARMs criteria are more stringent for HH sites than for NHH, even if sites are classified as Measurement Class E. A bulk change would likely generate operational challenge and possible temporary performance non-compliances.

Question 4: What is the impact of allowing elective HH customers to switch back to NHH prior to the implementation date?

Responses

Respondent	Response
EnDCo	None – We do not supply NHH nor can we revert a HH supply to NHH. However, should P272 be passed, we will have to advise all our elective HH customers that they will not be allowed to revert after the implementation date.
SmartestEnergy	None
IMServ	Historically, CoMC has proved problematic within the industry however as noted in Q1, we have experience of several significant CoMC and more specifically HH to NHH therefore we do not have any concerns regarding this option., We do not think that this should be

Respondent	Response
	regarded as a barrier to this change.
CE Electric UK	The level of actual data would be settled later under NHH compared to HH settlement.
Good Energy	This will lead to business customers switching back to NHH where offered as they will get a better price. It provides customer choice.
Western Power Distribution	We do not believe the volumes of such transfers will be sufficient to cause any undue impact.
RWE npower	If the current cost differential between NHH and HH settlement remains, then we believe that customers should be allowed to be moved back to be NHH settled. Suppliers will only wish to move sites over to HH providing certain barriers to HH settlement of those sites have been removed. If Suppliers start moving sites back to NHH prior to the implementation date it would be a clear signal that those barriers are still in place. We also believe that customers who opt to be 'elective' HH should have the option to move back to NHH prior to the implementation date. We recognise that there would be a duplication of costs as Suppliers would then have to move such sites back to HH prior to the implementation date. However, providing the right commercial signals are in place to move sites over to HH then we expect the number of sites switching back to NHH before the implementation date to be relatively low.
Haven Power Limited	Allowing elective HH customers to revert to NHH settlement prior to the implementation date would lead to additional cost and unnecessary risks as each MPAN would need to go through a further change process to return it to HH settlement at any implementation date.
Independent Power Networks Limited	Our investigations would suggest that our billing systems would not be able to support this.
TMA Data Management Ltd	This would cause unnecessary work but it is understood that P0272 cannot be implemented before April 2014. However if Suppliers ensure that the customers are aware of the benefits associated with settling HH, it might reduce the number of elective HH sites willing to change back to NHH prior to P272's implementation.
Electricity North West Limited	ENWL would prefer that Suppliers are unable to switch back to NHH prior to 6th April 2014 although the systems and processes are in place to cater for it. The more Suppliers that move pc 5-8 sites to HH and maintain them at HH there is less of an impact nearer 6th April 2014.
UPL	Again we believe this should be the customer's choice as long as within the terms of any contractual agreements entered into.
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	We do not support this.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – We do not consider this to be a material issue. Supplier – No issues with this being an option. Suppliers should have the freedom to change the Measurement Class while the BSC allows

Respondent	Response
	it. The implementation date in its current form does not limit Suppliers in this activity and this should remain the case.
Siemens Metering Services	This would cause additional work and increase the complexity the project, without any clear benefit.
UK Power Networks	We do not believe that all of the benefits from the advanced metering program would be achieved if customers had the ability to switch back to NHH prior to the implementation date. We consider that the transition from NHH settlement to HH settlement for an individual MPAN once undertaken by a Supplier should be a 'one way' door and that MPAN should not revert to being NHH traded with any Supplier.
British Gas	When customers transfer from NHH to HH settlement there will be winners and losers depending on how their current consumption compares with the profile they are currently being settled under. For some customers, reverting to NHH settlement will result in a cheaper tariff being available. This creates a difficult situation since as the incumbent supplier you can't win. You either price as NHH, knowing that your costs are incorrect, or you offer a tariff based on HH settlement and most likely lose the customer to another supplier. Ideally once a site has switched to HH settlement it would not be permitted to revert. However the requirement to use HH settlement should be linked to implementation Time of Use tariffs.
Stark Software International Limited	Consider this an immaterial scenario. If any demand exists at all, it will be small volume.
G4S Utility Services (UK) Ltd	The change to and from half hourly measurement would result in a high level of processing at each point of change, this would bring with it associated costs and the associated risk of introducing data quality issues into industry data.
E.ON Energy Solutions Ltd	Whilst we don't believe that it is desirable that customers who have made the decision to move to elective HH settlement are able to move back into the NHH arrangements, we can foresee circumstances where the customer may be more appropriately categorised as NHH - for example in circumstances such as a change of premise use, and we wouldn't want to preclude that in those circumstances. Given our estimates of the additional costs these customers are likely to face in the elective world, if customers wish to chose to avoid these costs, unless the option to revert back was removed entirely from the BSC, we would have to facilitate this.
GDF SUEZ Marketing Limited	We consider this to be a one-off associated procedure which would need to be addressed in the operational processes around the period of implementation; this is an area which may benefit from a degree of central co-ordination. We consider this process would be manageable in so far as it would not require a change to existing systems or processes but merely introduce a temporary increase in workload.
EDF Energy	Changing measurement class back to NHH could be inconvenient if the customer would fall in Profile Class 5 to 8 and would later be

Respondent	Response
	returned to HH settlement under this modification proposal. If the customer's Profile Class is 1-4, or changes to 1-4 from a higher class, a switch to NHH would be considered according to existing processes and should not have significant impact unless unexpectedly high numbers occur. We would expect HH meter and data processing costs per meter to fall rather than rise, and with an expectation of more equivalence in HH and NHH DUoS tariffs, some possible reasons to revert to NHH should reduce. Depending upon volumes, we believe such transfers from HH to NHH could have significant impacts upon meter operators, as their management of HH and NHH meters is often separated.

Question 5: What is the impact on your organisation of having to achieve 99% of energy settled on actual data by R1?

Responses

Respondent	Response
EnDCo	None – we already process to this constraint
SmartestEnergy	It would introduce consistency with normal HH arrangements.
IMServ	Our HH portfolio has always contained a considerable number of elective HH sites and we have processed and managed these in the same manner as a mandatory HH site. This approach has never degraded or impacted our ability to achieve 99% at SF for all sites, including elective HH therefore we do not envisage this target being unachievable.
CE Electric UK	We do not see any specific impacts to our organisation however, this should help reduce volatility within settlements.
Good Energy	Achievable if HH, but likely to impact the ability to achieve 97% for NHH and this should be reviewed if monthly read customers are removed from the mix.
Western Power Distribution	No impact
RWE npower	Moving the performance measure to R1 would increase our exposure to Supplier Charges. Whilst we would generally expect to meet 99% of actual reads by RF, it would be reasonable to assume that we could fall short of this target at R1. Through the principle of liquidated damages we may also expect to receive compensation from other Suppliers under performance against this target. Service Level Agreements with Agents would need to account for the revised standard and Agents may have to invest in additional resource to address meter communication issues by R1, which would increase costs. However, we do recognise that setting the performance serial at R1 would help facilitate more accurate data entering into settlement at an earlier stage.
Haven Power Limited	The proposal assumes that half-hourly (HH) interval data will be readily available from AMR (or smart) meters – this is not always the case and if the actual data is not readily available, this would lead to

Respondent	Response
	a significant increase in the proportion of estimated HH data in settlement. For example, AMR meters generally use mobile phone communication technologies and unlike traditional HH metering systems which tend to use landlines this can lead to an increased frequency of data retrieval failures. Interoperability for AMR / Smart meters between agents is in our experience poor. Efficient and effective change of data retrieval agent on change of supplier needs to be in place before any performance targets can be properly debated considered – this has a knock-on effect on the ability of the new supplier to correctly bill a customer. It also means that suppliers will often have to deal with more DCs than they would prefer to in order to cope with the interoperability issues. Furthermore, the increase in the number of HH MPANs in our portfolio would be significant (between 1 and 2 orders of magnitude). This would give rise to a disproportionate number of meter / data related issues (because of the reasons given above) in the initial period following their transition from NHH. [It is likely that we would require an additional 5 full time employees once an equilibrium state is reached (some time after the implementation date), with additional resource being required immediately before and after that date.]
Independent Power Networks Limited	IPNL would support this requirement as it will help smooth the process for billing monthly billed customers.
TMA Data Management Ltd	This is already the standard we work to; therefore there is no impact.
Electricity North West Limited	N/A
UPL	No impact
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	It is difficult to achieve this threshold with current technology. However, it is achievable on a longer and more gradual time scale.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – Not Applicable Supplier – No impact. HH performance is currently achieving our targets at R1 based on the existing portfolio. However, in the scenario of an increased HH portfolio these targets may need to be reviewed and assessed based on new market share post migration.
Siemens Metering Services	Although this process is automated within our applications, there is an element of manual activity required in order to check through reports and follow up any issues. It is likely that we would need to recruit additional staff in line with the greater volume of data being managed.
UK Power Networks	This will benefit UKPN by providing more accurate units distributed at R1 which improves the accuracy of billing and reduces potential unbilled accounting variances.
British Gas	We believe this target is extremely challenging compared to the current NHH settlement targets. We would question the benefit of having such a stringent target when comparing the cost of data

Respondent	Response
	retrieval with the perceived benefits of more accurate data settlement. Currently PC 5-8 meters have their data retrieved once a month. To meet the new standard we would need to ensure all sites correctly communicated with and data accurately retrieved. The additional costs of meeting the new standard are included in our Agent Impact section. We do not see any value in imposing such a stringent target from day 1. We would propose that the target is set at 99% by R2 until experience of polling AMR meters for settlement purposes has been gained.
Stark Software International Limited	None providing the HHU site visits are funded and MOP repair standards are maintained.
G4S Utility Services (UK) Ltd	This is currently an unknown as we are not providing half hourly agent services and therefore do not have the ability to assess the impact.
E.ON Energy Solutions Ltd	While moving the performance on metered dated from SF to R1 does help the performance standards and having slightly longer to ensure that we receive and validate the data will all help in meeting this target, we do foresee some additional requirements on Data Collection and validation issues that perhaps have not been considered. Currently a number of our HH customers have technical problems with remote reading and we have to send our DC to site to manually collect the data from the meter. Whilst every effort is made to ensure that we can remotely read the meters, we would expect there to be an equivalent number of customers in the current 5-8 category that will encounter similar difficulties and this will place additional demands on our HH DCs in terms of the number of appropriately qualified DC operatives who can attend the site and collect the data, as well as the geographical footprint these agents may have to cover.
GDF SUEZ Marketing Limited	In light of our experience in the HH market and the robustness of the current performance levels we do not expect this to cause a problem.
EDF Energy	We have not completed internal impact assessment for this question. A full answer requires more experience of AMR metering data performance as the rollout to PC5-8 sites continues, and more experience of reading and processing half-hourly data rather than simple advances as performed for most such sites at present. Experience from existing half-hourly sites suggests that 99% actual half-hourly data at R1 should be achievable, however there is some uncertainty about how well meter agents would be able to deal with more than double the number of meters. We suggest that a more relaxed performance target be set initially (either more time or lower %) with an expectation of tighter targets as any new arrangements bed-in.

Question 6: Does the benefit of the extra time to resolve Meter data issues outweigh the inconvenience of a more onerous requirement?

Responses

Respondent	Response
EnDCo	No
SmartestEnergy	I'm not sure about the extra time but the "more onerous requirement" is consistent with HH.
IMServ	As noted in Q5, we work to exactly the same timescales in all of our agent roles for both mandatory and elective HH sites and this does not degrade performance in any way however we recognise that dependant on the volume increase, the additional time to fix faults could prove beneficial.
CE Electric UK	Yes. This ensures the data within the R1 is more stable due to resolution of meter data issues which may have been present within the SF.
Good Energy	Yes
Western Power Distribution	No impact
RWE npower	We believe at this stage it would not be appropriate to consider a more onerous requirement. This requirement may place too great a burden on Agents to resolve data issues under a much tighter time constraint, which would increase costs. It may be more appropriate to consider introducing a more onerous requirement once Suppliers and their Agents have familiarised themselves with the Meter data issues presented. We suggest that the performance measure is reviewed 12 months after the implementation date.
Haven Power Limited	The inconvenience is not outweighed by the extra time provided as we believe a significant number of issues will arise and these will require additional resource to resolve them. There is nothing to stop individual suppliers making the changes now on an MPAN by MPAN basis and realising any benefits that they can now. The whole industry does not have to convert especially at a time when there is already a significant amount of change planned within the Smart Meter Programme.
Independent Power Networks Limited	IPNL is not in a position to answer this.
TMA Data Management Ltd	It does. It is also important to note that the more onerous requirement is accompanied by a change in technology allowing all parties to meet this onerous requirement.
Electricity North West Limited	N/A
UPL	Yes
Lowri Beck Services Ltd	Confidential response.
Scottish and	Yes

Respondent	Response
Southern Energy	
IBM Ltd (for and on behalf of ScottishPower)	Distributor – We don't believe this affects DNOs but would request further clarity as the question is unclear. Supplier – Given the current performance within the reduced timescales there is evidence to suggest a tighter timeline for achieving 99% would be successful. However, as with Question 7 in the scenario of an increased portfolio, many of which will have recently undergone a migration, there will be an increased risk to data availability and quality, which will affect performance. A phased approach to the implementation of target setting may be more beneficial, especially during the migration phase.
Siemens Metering Services	-
UK Power Networks	Yes
British Gas	Our experience is that there is a great benefit in giving suppliers and their agents adequate time to resolve issues. Most issues are incurred at meter installation or change of supply but can be complex to resolve and suppliers therefore need sufficient time to resolve these issues. We would suggest that the target is increased to 99% by R2. This could be reviewed once experience of the PC 5-8 transition to HH has been gained.
Stark Software International Limited	We expect contractual pressures to require 99% actual by SF for this set of meters.
G4S Utility Services (UK) Ltd	This is currently an unknown as we are not providing half hourly agent services and therefore do not have the ability to assess the impact.
E.ON Energy Solutions Ltd	Effectively we are gaining some additional days in terms of settlement performance, but whether there is a benefit in the additional time will depend on whether the HH DC has the capability to attend the additional sites that may be required, we anticipate an increase in the number of sites that will require manual intervention and it may require resourcing up to this new level of DC.
GDF SUEZ Marketing Limited	Please see above answer to question 5.
EDF Energy	We have not completed internal impact assessment for this question. As for question 5, more experience is required of collecting and processing half-hourly data from more than double the number of meters used currently

Question 7: What would be the impact of amending these data items/flows to your organisation?

Responses

Respondent	Response
EnDCo	Changes will be required to the data types that import the Flows into our systems.
SmartestEnergy	The impact of changing from 1 to 3 decimal places would be that a thorough code review would be required which is likely to result in a sizeable (although not complicated) development effort.
IMServ	This change would impact all systems used in the HH Settlement process from data retrieval through to settlement reporting however such a change would be possible throughout. It is envisaged that the largest pieces of work would be the analysis and testing phases (including full regression) and the development would be of a "lower level type". This work would require some involvement from a Third Party provider for one of the systems therefore sufficient lead time would need to be factored in for this work.
CE Electric UK	We will need to make changes to our billing systems in order to manage the revised format of J0177 for billing purposes.
Good Energy	Significant cost likely to be involved in moving to HH billing of P5-8 sites as systems will need to be amended to cope with different data and new processes.
Western Power Distribution	System changes will be required. However, we consider these changes necessary to facilitate more accurate billing.
RWE npower	Minor costs will be incurred to amend systems and processes to cope with the increased resolution on the data flows.
Haven Power Limited	Both our externally provided and internally developed key business systems are designed to meet the current data item specifications as set out in the DTC. Altering the resolution of a number of these from 0.1kWh to 0.001kWh would require significant changes to a number of systems, including billing and management information. Both the internally developed and externally provided systems would be affected.
Independent Power Networks Limited	Our DUoS billing system would need substantial upgrading to allow for any changes to the DTC for increased resolution of HH flows. Our DUoS billing system service provider has indicated that a period of at least 12 months from acceptance is required to implement the systems changes required at a cost of £10k.
TMA Data Management Ltd	It is estimated that it will have a medium impact on both our HHDC and HHDA systems.
Electricity North West Limited	There would be a change to systems to accommodate such a change. This is probably a small change.
UPL	All the meters we currently utilise in PC5-8 have suitable energy consumption resolution. Our data processing systems are easily amended to increase the resolution appropriately.
Lowri Beck Services Ltd	Confidential response
Scottish and	It would have significant impacts on our processes and systems.

Respondent	Response
Southern Energy	
IBM Ltd (for and on behalf of ScottishPower)	Distributor – We would be required to develop new IT processes to accommodate the change in field sizes. We question the materiality of this requirement and consider further work should be done to justify the change and the increased costs to the industry to facilitate it. We are unclear why this issue is being raised as part of P272. Supplier – This looks likes a substantial change and would require significant internal IT system cost for these flows changes to be supported. We support the SP Distribution view here that further work should be done to justify this change.
Siemens Metering Services	This would require software changes to multiple applications, with associated costs for development, testing and implementation.
UK Power Networks	Fundamental changes would be required to our DUoS Billing and related systems which utilise the D0036 to accommodate the change of format to HH meter readings from 1 to 3 decimal places.
British Gas	The impact on increasing the filed size to pick up additional decimal points would be relatively small but we would need to test all systems that use these flows to be able to provide a full cost of these changes.
Stark Software International Limited	Minor system changes required. Increase in data volumes?
G4S Utility Services (UK) Ltd	The impact in this instance would be limited to system changes and the associated costs to change.
E.ON Energy Solutions Ltd	*To be completed*
GDF SUEZ Marketing Limited	We are unable to feedback fully on this issue as we have not, at this stage conducted an internal impact assessment. It is clear however that there will be an impact on a number of billing and data validation systems and tools. Normally we would only conduct a systems impact assessment once the industry parameters are more fully defined.
EDF Energy	Some system changes would be required, but we (as a Supplier, not a HH Agent) do not envisage difficulty with an increase in the resolution for relevant DTC flows for HH half-hour meter data from 0.1 kWh to 0.001 kWh. We assume that all affected Profile Class 5-8 meters would become Profile Class 00 and be subject to and conform with existing HH data flows, data items and industry processes including D268 and D275 etc, and not be made subject of the existing D149/D150 and the proposed but yet to be introduced D313. The latter approach would have significant impact.

Question 8: Do you agree in our approach of creating 'frozen' profiles for the remaining customers who are unable to have an advanced meter or are settled as NHH?

Responses

Respondent	Response
EnDCo	Yes – and encourage the supplier to overcome whatever obstacles are preventing the smart meter installation thus moving to HH settlement.
SmartestEnergy	Yes
IMServ	As this group will be very much the minority, we agree that a pragmatic, cost-effective solution is to create "frozen" profiles for these customers
CE Electric UK	Yes
Good Energy	Yes
Western Power Distribution	This will depend on the volume of such customers. If the level of consumption remaining in profiles 5 to 8 is less than about 5% of the current levels then this seems a pragmatic approach.
RWE npower	This seems an appropriate solution for those few remaining PC 5 – 8 customers who are unable to have an Advanced Meter installed or are settled as NHH. Whilst we expect the number of such customers to be low, sufficient monitoring and reporting should be in place to identify possible 'gaming' of the 'frozen' profiles.
Haven Power Limited	In principle, we would not object to the creation of a set of „frozen" profiles. However, we believe that in order for these to accurately reflect the true consumption profile of any legacy customers then the current profiles would need to be reviewed and re-calculated at least annually up to any implementation date as PC 5-8 customers move to HH settlement and the number of customers in each PC and the associated volume drops.
Independent Power Networks Limited	Yes. This is a practical solution.
TMA Data Management Ltd	Yes. It would be cost reducing without compromising on the accuracy of the profiles. It would also affect only a small amount of sites.
Electricity North West Limited	Yes we agree. We also need to accept the consequences of continued billing of such profiles for a period post 6th April 2014. We need to consider the impact on NHH UMS at some stage since there are profiles 1 and 8.
UPL	Notwithstanding our previous answers we would agree that freezing the profiles would be the most cost-effective way of dealing with outstanding PC5-8 NHH meter points. Savings would be made against the cost of trying to update profiles which would become increasingly volatile as populations fell but it must be recognised that the potential levels of inaccuracy per meter point may also increase at the same time. Given the lower amount of energy involved this should not present any significant risk to settlements.
Lowri Beck	Confidential response

Respondent	Response
Services Ltd	
Scottish and Southern Energy	Yes
IBM Ltd (for and on behalf of ScottishPower)	Distributor – We disagree on the principle that: • In a reducing portfolio the accuracy of frozen or standard profiles would reduce leading to increased errors in settlement volumes for suppliers and a detrimental impact on DNOs' use of system prices (and loss of cost reflectivity). Supplier – No, the use of 'frozen' profiles will present a number of issues and other options should be explored. This option would cause inconsistencies between existing 'fluid' data and the 'frozen' profiles that would have to be used for energy forecasting. This data needs to be as accurate as possible and as such should be based on the existing data that still operates within the NHH market. The working group should explore this option further and discuss at what point would they deem profiling to no longer be required in terms of the energy volume and number of sites still settling NHH for PC5-8.
Siemens Metering Services	This seems like a logical approach, with reduced central costs for the PrA.
UK Power Networks	Yes
British Gas	We agree that their may be some savings for Elexon by discontinuing load research on PC 5-8. However until all profile classes move across to HH settlement the overall profiling regime will need to be maintained. We would want to understand from Elexon the actual savings that could be achieved by abandoning maintenance of PC 5-8 and comparing these with the "cost" of less accurate profiles before agreeing to this proposal.
Stark Software International Limited	Yes
G4S Utility Services (UK) Ltd	We can see the benefits however there is a perceived impact on settlement being less accurate for the sites concerned. The benefit would be to reduce the cost to the industry in providing the sampling activity and calculation of profile class based on those sample sites.
E.ON Energy Solutions Ltd	Yes – it is important to have something to be able to use in the event of catastrophic loss of data or the inability to fit an AMR meter at all, however, we need to understand how we will be able to apply the profile to the site once all the customers move to Profile class 0, how will we know which profile to use, and we should also consider how the profile shape might need to change in the future with changing energy usage trends and improvements in losses at the GSP level by DNOs.
GDF SUEZ Marketing Limited	Yes we agree with this approach, there will inevitably be a small number of residual meters and there needs to be an efficient default solution for these.
EDF Energy	There would be a large sample of customers measured half-hourly

Respondent	Response
	from whom regression profiles could be determined. However, it is not clear that the relatively few PC5-8 customers that would eventually remain settled on profiles would be representative of the wider PC5-8 population: there might be correlation between difficulty in installing AMR meters and atypical load shapes. It seems unlikely that a sample of HH data would be obtainable from those sites for which AMR metering is impractical. GSP Group Correction will need careful consideration, as the profiling error of the remaining PC5-8 NHH sites could be large, and difficult to distinguish from that of PC1-4 sites remaining NHH. Although it appears pragmatic to freeze the PC5-8 profile analysis, and will save some money, profiling would still be required for PC1-4 for some time. We suggest keeping open the possibility of continuing profile analysis for sites in PC5-8 using HH data from the AMR HH settled population.

Question 9: What is the impact, cost and benefit on your organisation of an implementation approach of 6 April 2014?

Responses

Respondent	Response
EnDCo	No benefit
SmartestEnergy	The benefit is for competition as a whole as it will make the CoS process simpler.
IMServ	The impact is those areas outlined in Q1. The costs per MPAN are expected to be less than our HH costs now due to the less onerous Settlement requirements and potential economies of scale. These are yet to be quantified depending on the actual size of portfolio won in the new arrangements and the timeframe over which this occurs.
CE Electric UK	We will need to ensure that our existing internal processes and billing systems can manage either early transfer or bulk change of customers. However in doing so, will ensure we have more actual data available for both our DUoS forecasting and network performance activities. Costs will be medium.
Good Energy	Impact on Customers will be significant hike in their standing charges until HH agent charges are reduced.
Western Power Distribution	For the impact, cost and benefit, please see response to questions 1, 2 and 3. From our perspective the date of implementation "BY" is not critical but the implementation approach is. We need to avoid a bulk change in a short timescale and need to phase the transfers over, ideally, a period of at least 4 months. If implementing on 6th April means Suppliers will carry out all the changes to measurement classes within a short period then it will be extremely difficult, if not impossible, for us to deal with.
RWE npower	We believe this question has already been covered in our detailed response to the PSRG Cost Benefit Analysis and for consistency recommend Elexon refer to this analysis.

Respondent	Response
	Costs include: • Development of settlement systems and new hardware requirements to maintain system performance levels. • Operational and project management costs to process sites through a CoA/CoMC • Operational costs to renegotiate Supply Contract terms. • Increase Agent costs, though we believe costs can be managed downwards through market competition as services are negotiated between a Supplier and its Agent. • Potential costs associated with the risk of mass CoA/CoMC activity and whether current systems in the industry could handle and update the flow of information on this scale. • HHDC costs incurred in order to meet requirements under BSCP601 Metering Protocol Approval and Compliance Testing. • Increase in the number of site visits in order to resolve meter data issues. Benefits include: • Greater accuracy in settlements. • More accurate volume forecasting and reduced imbalance exposure. • Product and tariff innovation as HH settlement arrangements enable a greater variety of offerings to customers than NHH. • More accurate and timely bills for the customer as the costs can be based on actual consumption. • Potential for lower costs for consumers as they are enabled to reduce or change their energy consumption away from peak periods. • Better settlement cashfllow planning. The timing of the removal of the DUoS pricing differential is a major barrier to implementing P272 by 06 April 2014. As a Supplier, we would wish to start to move these sites over to HH settlement prior to 06 April 2014 providing it is commercially viable to do so. We would need a sufficient timescale to complete the transfer of these sites by 06 April 2014 and develop systems and processes at least cost. Any narrowing of this timescale would significantly increase system and process costs. A later implementation date of 06 October 2014 would allow for a more cost efficient gradual transition.
Haven Power Limited	Implementing P272 on 6 April 2014 would require an early investment in additional resources to develop existing IT systems and the associated business processes.
Independent Power Networks Limited	We have very few PC5-8 customers and so the costs are high in relation to any deemed benefit. The cost for the change does is not affected by the implementation date. Any date chosen should ensure sufficient development time and that the DCUSA CDCM changes can be implemented.
TMA Data Management Ltd	The cost and benefit on our organisation are similar whether the implementation date is 06th of April or 06th of October 2014, however a later implementation date will delay the benefits that P0272 brings to the Industry.
Electricity North	Impact and cost are reflected in question 1 and 7.

Respondent	Response
West Limited	The benefits are: • More Accurate data; we use settlements data for losses reporting and we have significant concerns with the accuracy of NHH data. The mis-reporting of 1GWh of distributed units has a £60k impact on an LDSO • More Accurate DUos Bills; • Better system planning and reinforcement; • Better cost reflective DUoS tariffs can be introduced; and • Reduction in Carbon Footprint (Data Collectors no longer required to visit).
UPL	We believe that the transition should be driven by customer choice and the competitive market until such time as (and if) numbers within the existing profile class make it economically inoperable.
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	We have no significant changes to our original response to the Cost Benefit Analysis, other than, further to discussions with a number of Agents, we now believe there will only be a minimal increase in agency costs in transferring Customers to Half Hourly traded.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – Same as question 1. Supplier – Same as question 1. Based on its current form the impact and cost of this proposed implementation far outweigh the benefits. The level of change that is being proposed here is not reflective of the proposed solution. The movement of PC5-8 sites to HH is a monumental change to the market and as such all existing market arrangements should be reviewed to assess impact, cost and further benefits. The impact on the BSC is only one area so the working group should look to engage with wider Industry bodies and ensure all pricing and charging methodologies that are involved in the HH market undergo the same level of review as the BSC arrangements.
Siemens Metering Services	Although this would be achievable, it does introduce the risk of large scale changes at the same time as a major change of the DCC going live (if this is also still targeted at April 2014). In order to avoid potential conflict of such large scale changes happening at the same time, it may be a safer approach to allow a further 6 months (at least), in line with the Alternative Solution 1. It is difficult to assess the costs at this stage, as we cannot be certain of the volumes involved. Assuming that this would be a Supplier led activity, as an Agent, we cannot be certain how many sites we would retain in the move from NHH to HH, or potentially how many additional sites we may gain. However the costs involved would be associated with: 1) Software and hardware changes to accommodate increased volumes of data. 2) Internal project costs associated with managing the successful CoMC transfers. 3) Internal project costs associated with Re-Qualification/ Qualification activity. 4) Increased DTN Gateway costs as a result of the higher volumes of

Respondent	Response
	data flows associated with the CoMC activity. 5) Recruitment of additional staff to ensure 99% energy settled on actual data.
UK Power Networks	We estimate that our DUoS Billing and related systems which utilise the D0036 will require a changes with a one–off implementation cost of approximately £100k. In addition to this there would be additional costs of c£50k per annum to handle the doubling of HH billed customers.
British Gas	We do not see a viable cost/benefit that would justify mandating suppliers to implement HH settlement for PC 5-8 by 2014. The benefits alluded to in the work carried out by PSRG last year refer to potential benefits to the industry of £85m over 5 years. These benefits are claimed on the basis that settling HH energy is more accurately allocated to the correct supplier to the correct HH period. The £85m is the value of that energy more accurately allocated, this is not an direct financial benefit in itself. The benefit would be realised by suppliers being to be able to more accurately forecast their energy purchasing requirements and by reducing risk which can be passed on in savings to customers. The real benefit of HH settlement is the ability to offer genuine Time of Use tariffs to customers. Currently we are able to use the existing settlement arrangements to offer basic Time of Use tariffs. At the point suppliers want to offer dynamic Time of Use tariffs full HH settlement will be required. If P272 were to be implemented we assess the additional cost to British Gas would be in the region of £4-7m not including additional costs if we need to implement a new billing platform to support the additional volumes.
Stark Software International Limited	We perceive no problems with a 6 April start date. If the requirement is for daily data collection, then the DC costs will be higher than that for a once a month read. However, there are benefits of having daily data for both suppliers and consumers e.g. energy management, early diagnosis of metering faults, full set of data for monthly billing.
G4S Utility Services (UK) Ltd	There is little benefit for us in implementing the change earlier and we feel that the lower lead in time would introduce risk in analysis and development of any solutions and processes required for us to enter the half hourly market. The impact and cost would only be truly known after a full impact assessment.
E.ON Energy Solutions Ltd	The costs are outlined in our previous answers; the benefits would accrue from this being a whole market solution for this classification of customer. We would be settling on more accurate data and hopefully overall settlement risk would be reduced. The future could see Settlement timescales reduced overall which would improve our cost base for this activity. However, we have concerns that the timescales for implementation of this modification shouldn't be earlier than 1 year after the close out period for the installation of HH capable AMR meters, and there is a risk that an earlier implementation date might inhibit our ability to offer suitable contracts to those who are at the end of the roll-out period because of a lack of historical consumption data for projection forecasts.

Respondent	Response
GDF SUEZ Marketing Limited	Whilst we cannot fully identify costs at this stage we envisage there will be a net benefit based on two main aspects; firstly the potential for reduced imbalance/reconciliation and secondly from the improved access to the NHH market as a result of adopting HH processes.
EDF Energy	Although an April 2014 implementation should be technically achievable, corresponding with intended completion of PC5-8 AMR rollout, it requires the contractual and regulatory issues described in our response to question 1 to be resolved. A later date for mandatory half-hourly settlement would allow more time to resolve these issues efficiently. The industry must allow for proper customer engagement, taking into consideration the various issues described in response to question 1 directly affecting and involving customers. These are not directly related to the BSC, but could cause difficulties in achieving efficient implementation. A later full implementation would also allow suppliers (and customers) to obtain a more complete picture of their individual customer portfolio shape, to inform more efficient forward purchasing, balancing, and pricing under half-hourly settlement. A complete picture will not be available until a year or so after the end of the AMR rollout, when a year's HH data from every site has been obtained. A later date also provides some resilience against potential delays in AMR rollout.

Question 10: What is the impact, cost and benefit on your organisation of an implementation approach of 06 October 2014?

Responses

Respondent	Response
EnDCo - confidential	No benefit
SmartestEnergy	We would have to keep our NHH systems going for longer. Cost, however, would be minimal.
IMServ	As Q9 however it would be 6 months before the benefits to begin to be realised.
CE Electric UK	Same impacts as question 9.
Good Energy	Same as Q9.
Western Power Distribution	Please see response to questions 9. If a 6th October implementation means that Suppliers are more likely to phase the transfer from NHH to HH then we would support it. If it just means all the transfers will take place in October rather than in April then there is little point in delaying it until October.
RWE npower	The timing of the removal of certain barriers to HH is crucial to the date at which we will start to move sites over to HH settlement. Any narrowing of the timescale would significantly increase system and process costs. An implementation approach of 06 October 2014 would go some way to alleviating the risk of a more restrictive

Respondent	Response
	implementation date of 06 April 2014, and would have less impact on systems and processes. The Supply Licence condition is that from 06 April 2014 all Meters for PC 5 – 8 sites must be an 'advanced' Meter. It's possible that we may be installing AMRs at sites right up to that date. Extending the implementation date by which such sites must also be HH settled to 6 months after the Supply Licence condition date would allow a reasonable period of time to address a number of potential issues and provide the following benefits: • Avoids the need to do a meter exchange and CoMC at the same time. • Allows a reasonable period of time to resolve issues at problem sites. • Ability to gain some additional usage history to aid forecasting and hedged position. • Allows additional time for commercial arrangements to have been put in place with the customer. Provides for a slippage in the timing of the removal of the DUoS pricing differential which would impact the transition period.
Haven Power Limited	These remain the same as in Question 9.
Independent Power Networks Limited	See response to Q9
TMA Data Management Ltd	Please see answer to question 9.
Electricity North West Limited	This allows more time to introduce the change but it does delay the benefits. We are more of the opinion to introduce a phased approach pre 6th April 2014 with a deadline of the 6th April 2014 (notwithstanding the concerns of transferring all customers by this date)
UPL	We believe that the transition should be driven by customer choice and the competitive market until such time as (and if) numbers within the existing profile class make it economically inoperable.
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	We believe there are no significant differences have been identified at this stage.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – No material difference. We consider the issues remain the same regardless of date chosen. Supplier – The issues presented remain the same regardless of implementation date.
Siemens Metering Services	This appears to be a less risky option, as it would avoid clashes with any (potential) issues from the DCC going live. Whichever date is decided, it will need to be constantly reviewed in line with the smart roll out, and any changing timescales associated with that. There would be no difference in costs from the April implementation option.
UK Power	We would like to see customers with advanced meters traded HH by

Respondent	Response
Networks	their Suppliers from the earliest opportunity from this perspective we fail to see what benefits an implementation date of the 6 October would deliver. Further we believe that it imperative that the PC5-8 migration is complete before the go live of the DCC and the ramping up of the wider smart metering implementation. This view is not driven from a system interaction perspective (which may be limited) but a industry party focus perspective – we need to have resolved a many issues as possible of PC5-8 migration before the wider DCC market changes come in. We don't want another 1994!
British Gas	We do not see any great benefit in delaying implementation to October 2014.
Stark Software International Limited	See above.
G4S Utility Services (UK) Ltd	The benefit in a delayed implementation would reduce the risk in analysis and development of any solutions and processes required for us to enter the half hourly market. The impact and cost would only be truly known after a full impact assessment.
E.ON Energy Solutions Ltd	See Above – this date isn't really helpful at all.
GDF SUEZ Marketing Limited	We consider the case for implementation between either April 2014 or October 2014 to be finely balanced. Implementing earlier i.e. April 2014 would realise the benefits sooner, however implementation in October would allow suppliers more time to gather more HH data on those meters which were installed towards the final stages of the licence compliance period.
EDF Energy	For the reasons given in questions 1 and 9, we see potential benefits in a 6 month period between completion of AMR rollout and mandating half-hourly settlement for PC5-8 sites. This would allow more time for the issues identified in our response to question 1 to be resolved; a period of phased introduction with some historic data available for all sites; avoid a resource clash with the beginning of smart meter DCC operations, and allow scope for any delay in completion of AMR rollout.

Question 11: Do you believe that another period of transition would be more appropriate?

Responses

Respondent	Response
EnDCo	No
SmartestEnergy	No
IMServ	Our view would be that this change should be implemented as soon as possible. The benefits that this change will bring are significant and outweigh the associated efforts and costs. It is logical and sensible that the industry is much more accurately settled on the HH data that is

Respondent	Response
	already largely available in DC systems, tariffs can become more cost reflective and can begin to influence and shape behaviour reducing inefficiencies and leading to more optimal and efficient patterns of consumption. The impact would be the same whenever the transition takes place but the benefit could begin to be realised earlier. As a company already providing HHDC/HH DA services for a significant proportion of the HH market we could be in a position to implement this on 06 April 2013 if the appropriate metering arrangements could be in place by then.
CE Electric UK	No, as a transition in 2014 will ensure any issues can be addressed prior to the transition of PC 1-4.
Good Energy	We believe that it should remain a voluntary switching process, with a caveat that once switched to HH the site cannot return to NHH as is currently the case in the 100kW market. Costs need to fall to encourage this.
Western Power Distribution	We consider a 4 to 6 month transition period is appropriate. We are not too concerned over which 6 months this is, provided we are given 12 months notice to plan and implement the system changes that would be needed.
RWE npower	Suppliers will only wish to move sites to HH if it is commercially viable to do so and to realise the benefits from HH settlement. Therefore, it may be more appropriate for the period of transition to be driven by market forces.
Haven Power Limited	A staggered approach in which PCs 5-8 are moved one at a time over a 12 month period to HH settlement starting in October 2014 provides a number of benefits. It would allow: • a high proven (i.e. installation issues resolved) smart meter population to be in place; • additional time for agents to put in place the requirements to allow easy transfer and operation of meters on CoS; • the impacts on the remaining profile coefficients to be seen; and • smaller players more time to put in the place the required systems and processes thereby reducing the burden on them.
Independent Power Networks Limited	No.
TMA Data Management Ltd	No.
Electricity North West Limited	Yes, there should be no restriction on any transfers earlier than the 6th April 2014 should the supplier wish to do so. We do however believe that the transition window should align with the work on the DUoS tariffs that have an implementation date of the 1st April 2013.
UPL	We believe that the transition should be driven by customer choice and the competitive market until such time as (and if) numbers within the existing profile class make it economically inoperable.
Lowri Beck Services Ltd	Confidential response
Scottish and	No

Respondent	Response
Southern Energy	
IBM Ltd (for and on behalf of ScottishPower)	Distributor – As above we do not consider the issues change. Supplier – No.
Siemens Metering Services	-
UK Power Networks	No, as per our answers to the above questions.
British Gas	British Gas has assessed the costs and benefits of the proposal and do not believe that there is a case for mandatory HH settlement at this time. We strongly believe that the key driver for HH settlement is the ability to offer Time of Use tariffs to customers and the ability to reflect changes in consumption behaviour through the settlements system. Suppliers should therefore have the option to elect to use the HH settlement regime for those customers where a Time of Use tariff is appropriate and cost effective for them and Elexon should continue to work on removing any barriers to elective HH settlement.
Stark Software International Limited	See above.
G4S Utility Services (UK) Ltd	Given the scale we feel that any delay in making the change could only benefit all market participants and allow further time to fully asses and implement changes in individual businesses.
E.ON Energy Solutions Ltd	The release following the 1 year anniversary of the closeout of the obligation – Oct/Nov 2015
GDF SUEZ Marketing Limited	No further views at this stage.
EDF Energy	This depends on how some of the issues identified in our response to question 1 are addressed. Requiring completion of transition within 3 years commencing in 2014 would allow most of the customer engagement and customer-agent and customer-supplier contractual issues to be resolved without difficulty. Most AMR meter contracts are for 5 years or less, so completion of transition by 2017 would allow most existing contracts to be completed. A gradual implementation would allow affected customers to become better acclimatised and prepared for the consequences of half-hourly settlement (particularly those likely to face higher energy costs), and would allow for delays in AMR rollout. Finally, it might provide opportunity for customers to move directly to use of the Smart metering infrastructure that DECC intends to direct, under which metering costs shared among all customers might be lower than current half-hourly costs.

Question 12: Would the inclusion of Profile Classes 3-4 have a significant impact on the cost or benefit of P272? Please give examples for your response.

Responses

Respondent	Response
EnDCo	As a HH only supplier, inclusion of further profile classes has no direct effect upon our cost or benefits. We only gain from industry benefits provided by more accurate and timely data retrieval. We agree with the assessment document commentary associated with Q12 that a phased approach should be taken.
SmartestEnergy	There would not be a significant cost to SmartestEnergy as the changes to our systems and processes would occur at the same time as those for PCs 5-8. There would also not be a significant impact on transition arrangements as we do not have/anticipate having many MPANs to transfer. The benefits would be that we could offer a consistent product to group customers who have sites of both types (i.e. 3-4 and 5-8)
IMServ	Whilst we support the principle of extending the modification to include Profile Classes 3 and 4 We would like to suggest non inclusion at this stage as this would delay the implementation of P272.
CE Electric UK	Yes. It is more efficient and sensible to phase in the transfer customer groups in order to address any issues after each transfer.
Good Energy	Cost to customers is of even greater significant here as some PC 3 & 4 sites are very low users. However, any systems developed to facilitate P5-8 HH settlement should be made compatible with P1-8 settlement, so systems costs should not increase for adding these profiles.
Western Power Distribution	We would not be able to cope with this due to the significantly increased number of HH MPANs that, under our current approach, would require individual monthly DUoS billing. There will need to be a separate, new "supercustomer" type approach to billing if and when profiles 3&4 (and/or 1&2) are settled Half Hourly. We agree with the modification group that this alternative approach should not be taken forward.
RWE npower	We do not believe PC 3 – 4 sites should be included as part of P272. The inclusion of PC 3 - 4 sites would significantly increase the number of sites we would have to transfer over a potentially short period of time, increasing risks and costs. In our opinion this is a step too far too soon.
Haven Power Limited	The issues we have highlighted in previous answers apply to Profile Classes 3-4 and extending P272 to include these is likely to significantly increase the costs to all parties including consumers. We believe that P272 should not be extended to include Profile Classes 3-4; any move to settle these half-hourly should only be considered once the full cost-benefit analysis has been completed and a significant smart meter population is installed and fully functional.
Independent Power Networks	Further significant changes will be required to our billing systems in addition to those for accommodating the proposed changes to PC5-8.

Respondent	Response
Limited	Our service provider believes the cost will be much larger (but not quantifiable at this stage) and implementation will take approximately 18 months. We are expecting data file processing to increase significantly which will require major hardware upgrades.
TMA Data Management Ltd	We do not believe it would have a significant impact on the cost of P272. However as the Workgroup stated, it would be more efficient to have a staggered approach to moving PC3 and 4 and PC1 and 2 to HH.
Electricity North West Limited	We feel that the solution for Profile classes 3-4 would not be the same as P272. We would not propose to produce an individual site specific bill for every profile 3-4 site. We would propose the solution for these sites would continue to be based on aggregated data via SCDUoS and the use of the SPX data in the D0030. We should differentiate between those aggregated customers using smart meters and those yet to have such a meter installed by having different measurement classes. The impact would be quite significant in terms of billing functionality to handle the increased volumes.
UPL	The quantum change in volume including PC3 & 4 would require significant changes against the systems and procedures current employed in the HH market which are geared toward smaller numbers with higher individual risk to settlements. Again our view would be that customers would need to see tangible benefits in order to encourage them to change.
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	Yes, we believe the significant increase in numbers would increase risk substantially. In particular, it would increase risk in settlement accuracy. In addition, currently, there is no obligation to include profiles 3 and 4 by 2014.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – The inclusion of Profile Classes 3-4 would have a significant additional financial, IT and administrative impact, over and above what has been highlighted in Question 1. We estimate that the volume of affected customers would increase (from current levels) by greater than 20-fold. Before any such change can be considered a full impact assessment would need to be carried out on all impacted parties, including customers. Supplier – PC 3-4 sites have not yet underwent a Cost Benefit Analysis so there is not sufficient detail to accurately inform this question at the moment. Although, we envisage a significant increase in the cost to implement this type of change for PC 3-4 given the additional number of sites currently settling on these arrangements. The volume of energy associated with these sites would also increase the impact of the issues raised above
Siemens Metering Services	We see no benefit to including these profile classes at this stage.

Respondent	Response
UK Power Networks	Including PC3-4 MPANs within the scope of P272 would have a very material impact. Whilst UKPN's current systems and processes can accommodate the additional c45,000 PC5-8 MPANs it could not accommodate the c725,000 PC 3-4 MPANs that exist within UKPN DNO Regions. It would require (as a minimum): • IT network enhancements to handle the additional volumes of HH data (over 20 times the present level) • A new HH billing system or multiple instances of the present billing system (running on a more capable server and with significantly greater storage capacity) capable of handling the additional volumes of data, billing calculations, invoicing and the automation of presently manual processes. • Mandatory e-billing of suppliers (which at present is a DCUSA issue not a BSC one) • Consideration of the development of aggregated billing arrangements between DNOs and suppliers (our awareness is that at present the majority of suppliers do not want site specific DUoS billing for this volume of MPANS). This again is presently a DCUSA issue rather than a BSC one. • Significant changes to UKPN's bespoke contract, capacity and management system (or it replacement with a new system) to accommodate the 20 fold increase in HH data. We estimate this cost at several million pounds and, given our current IT separation programme, 24 months to implement.
British Gas	The inclusion of PC 3-4 would have a significant impact on the costs of P272. We do not see this as a feasible option until as a minimum DCC is implemented. Again we see the driver for this as Time of Use tariffs and suppliers should have the ability to elect these on a HH basis.
Stark Software International Limited	We see no technical barriers to scaling-up our systems to meet the significant expansion in the market that would result from inclusion of Profile Class 3-4 meters. Competitive pressure is likely to result in lower HHDC/DA charges for all customers. This will further improve the cost benefit to Settlement of the proposal.
G4S Utility Services (UK) Ltd	This would cause a significantly increased impact on implementation time, risk, cost, and the potential for lost revenue. Profile class 5-8 makes up just under 1% of the available market whereas profile class 3-4 is around 7%, not surprisingly our appointed accounts are at not too dissimilar to the market percentage and therefore the impact on us would be very close to the overall Markey impact.
E.ON Energy Solutions Ltd	The inclusion of profile classes 3 & 4 would be a major impact on our business and not something we would want to see implemented earlier that the changes that are delivered as part of the roll out of smart metering. These sites are treated in many ways the same as our domestic customer in terms of contractual approaches, metering agents, DC and DA, settlement costs. There would be many other concerns around the metering capabilities, the costs and the data

Respondent	Response
	flows. Demand forecasting would be a challenge, DUOS issues would need to be reviewed, such as site specific or aggregated. We would prefer to see this work kept within the PSRG review of PC 1-4.
GDF SUEZ Marketing Limited	To be completed
EDF Energy	We have not completed internal impact assessment for this question. We hope to have a better idea in time for response to the PC1-4 impact consultation currently in train. The inclusion of some 2 million meters in Profile Classes 3-4 would have a much more significant impact due to the order of magnitude increase in the number of meters for which HH data would be required to be collected and processed. For PC3-4 sites, the meters currently used, and data collection and aggregation, are significantly cheaper than for PC5-8. The equivalent cost increases to current prices for HH metering services compared with NHH for these sites would therefore be higher than for PC5-8, and relatively much higher given the relatively small volumes. For most PC1-4 customers, we suspect considerable reduction in current HH metering service costs would be required to achieve a net benefit.

Question 13: What is the impact of including Micro-generation in the scope of the P272 solution?

Responses

Respondent	Response
EnDCo	As a HH only supplier again this does not affect us directly. However our opinion is that eventually all metering should be processed on a HH basis. Again, we agree with the assessment document commentary associated with Q13 that micro-generation should be dealt with by the roll out of Smart Meters.
SmartestEnergy	There would not be a significant cost to SmartestEnergy as the changes to our systems and processes would occur at the same time as those for PCs 5-8. There would also not be a significant impact on transition arrangements as we do not have/anticipate having many MPANs to transfer.
IMServ	We would support this. The contribution to the market demand by Micro Generation would be rewarded at the most appropriate price based on accurate information and as a consequence develop and stimulate this important market segment.
CE Electric UK	The inclusion of this could further complicate P272 and should be scoped at a later date.
Good Energy	This should remain a voluntary option. Costs need to be bought down significantly to make it worthwhile to generators or suppliers to have HH settlement. Microgeneration settlement should remain under NHH settlement for current generators under 30kW. *In addition we are concerned that the IA has not considered the*

Respondent	Response
	impact on customers, just the impact on trading parties. We believe this is a fundamental flaw in the analysis.
Western Power Distribution	Given the current volumes of NHH export MPANs that would switch to HH settlement the impact is not large. However we can see no benefit in including Micro-generation in this modification and agree with the modification group that it should be excluded.
RWE npower	At this stage we feel that the Micro-generation should remain out of scope of the P272 solution. It would be better placed to be dealt with by the roll out of Smart Meters by 2020 and covered under a separate Modification.
Haven Power Limited	Extending P272 to include Micro-generation will further increase cost and complexity for suppliers and their agents. Until the installed Micro-generation capacity reaches a level where changes in output are significant and exceed the inherent uncertainty in demand / generation forecasting then the benefit of half-hourly settlement is unlikely to outweigh the costs.
Independent Power Networks Limited	Our software provider is currently unable to comment on this at this stage. Further detail will be required for them to carry out additional analysis.
TMA Data Management Ltd	It would have no adverse impact on our organisation.
Electricity North West Limited	Micorgeneration should be discussed along with PC 1-4 solution.
UPL	The Feed-in-Tariff scheme has been designed to encourage renewable generation by being as accessible and straightforward as possible. Our experience is that the vast majority of schemes are going into sites with PC1-4 and so the impact of excluding or including microgen in P272 would be negligible.
Lowri Beck Services Ltd	Confidential response
Scottish and Southern Energy	We do not support the inclusion of Micro-generation at this stage.
IBM Ltd (for and on behalf of ScottishPower)	Distributor – We would not support the inclusion of micro-generation in the scope of the P272 solution without first having a full understanding of a comprehensive cost benefit analysis. Should the expected volumes of micro-generation materialise we consider the impact to be comparable to the addition of Profile Classes 3-4. Supplier – In cases such as this the import and export should be on the same measurement class so if we include Micro-gen we would need to impose switching import and export metering to HH. While this is already the case for the majority of Micro-gen sites it still poses an issue around what happens to a site if the export metering is removed, should the site revert back to NHH for instance. However, the number of Micro-generation sites currently settling on PC 5-8 should be very low so this would be better explored under the options for PC 1-4 migration.
Siemens Metering Services	-

Respondent	Response
UK Power Networks	Given the limited number of Micro-generators that are traded by suppliers at present in NHH then there would be a very limited impact of including Micro-gen within P272.
British Gas	We do not believe it is necessary at this stage to include micro-generation within the scope of P272. Our experience of export is that the volumes of energy spilled onto the network do not warrant HH settlement. The additional metering and settlement costs would outweigh any benefit. Once Smart meters with export capability begin to be installed this should be revisited.
Stark Software International Limited	No comment
G4S Utility Services (UK) Ltd	There are small numbers of micro-generation sites and the processes are for the most part the same, therefore there is very little impact or difference if they were included in the P272 solution.
E.ON Energy Solutions Ltd	Moving customers import to HH may have an impact on their export if the meter is combined and this should be considered.
GDF SUEZ Marketing Limited	*To be completed*
EDF Energy	Our understanding of this part of the proposal is that: • Distribution connected exemptable generation for which export is currently required to be metered half-hourly (>30kW) would continue to be metered (and settled) half-hourly, • small scale generation export at a site which also has half-hourly import metering (including PC5-8 under the proposal) would be required to be metered (and settled) half-hourly (<30kW including micro-generation?) • small scale micro-generation (<30kW) at a site which does not have half-hourly import metering would not be required to be metered and settled half-hourly, at least not until this might be required under smart metering arrangements. Although we see benefits in metering all exports half-hourly sooner rather than later, the modification group proposals above seem pragmatic for the time being. Measurement of the underlying time-dependent behaviour of micro-generation sources will become more important in future for the operation of smart grids, as micro-generation and demand-response become more significant factors in systems operation.