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24 December 2013

Dear Jonathan

Balancing and Settlement Code Modification Proposal P272 – draft impact assessment

Mandatory Half Hourly Settlement for advanced meters currently in Profile Class 5-8

EDF Energy is one of the UK's largest energy companies with activities throughout the energy chain. Our interests include nuclear, coal and gas-fired electricity generation, renewables, and energy supply to end users. We have over five million electricity and gas customer accounts in the UK, including residential and business users.

Existing supply licence conditions require a supplier to use an advanced meter for supply to a site currently registered to one of the non half-hourly (NHH) metered profile classes 5-8, from 6 April 2014, except where the supplier cannot achieve this despite taking all reasonable steps. BSC Proposal P272 further proposes that for those meters that are required by licence to be advanced, the supplier should also be obliged to undertake half-hourly measurement and half-hourly settlement under the BSC, in a similar but not identical manner to existing above-100 kW sites.

Ofgem's draft impact assessment considers most of the key issues relevant to the proposal. Discussion of the issues is comprehensive, and quantitative modelling goes into some detail. We support the intention of achieving more accurate data in order to allocate energy, network and other costs more accurately, and ultimately to obtain economic benefit, for consumers as a whole, from resulting changes in consumer behaviour. However, we do not consider all the assumptions made or the inputs to modelling fully justified, and consequently cannot fully support the conclusions or the indicative "minded to" decision.

We think the practical difficulty and costs to implement the proposal have been under-estimated, and the benefits to consumers achievable from it, at least over the next few years, have been over-estimated. While we agree that benefits are achievable, especially in the longer term as cost and hence price variation with time of use increases, we think early implementation as proposed would incur disproportionate costs, shifting the cost-benefit to a negative value.

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We think increased HH settlement should be a longer term objective, linked to future provision of HH data from advanced and opted-in smart meters. By providing more time for transition from existing arrangements, the implementation costs could be reduced and combined with equivalent costs for smart metering, at the same time widening the range of consumers for which HH settlement could be available. Implementation from 2017 should allow this to be achieved.

Increasing the notice period for implementation to 18 to 24 months, with implementation late in 2015 or in 2016, might not allow synergies with future HH settlement for smart metering, but would reduce the risks and consequent costs associated with remaining practical uncertainties, such as advanced meter and communications rollout outcomes; gathering a years worth of historic HH data in advance; uncertain DUoS charging arrangements; and issues surrounding change of measurement class and meter agents.

If the proposal results in tariffs better reflecting individual time-of-use costs, so that economically efficient behaviours can be encouraged, there will be winners and losers among consumers.

We also note that obligating half-hourly settlement for meters at sites at which consumers are unlikely to respond to the change will simply re-distribute money between suppliers and, ultimately, consumers, for little benefit. Focussing on those consumers most likely to respond to time-of-use signals, those seeking to obtain benefit for themselves and consequently for consumers as a whole, would allow the cost-benefit to be maximised.

Our detailed comments are set out in the attachments to this letter. Should you wish to discuss any of the issues raised in our response or have any queries, please contact Martin Mate on 01452 654366, or me.

I confirm that this letter may be published on Ofgem's website.

Yours sincerely,

Mark Cox
Head of Transmission and Trading Arrangements

Annex A – Response to Ofgem P272 IA Questions
Annex B – Advanced Meter Licence Condition in the context of P272

Annex A – Response to Ofgem P272 IA Questions

Question 1: Do you agree with our approach to assessing the impacts of P272?

The general approach is rational and reasonably comprehensive, but we think some important supplier, agent and consumer costs have been neglected or under-estimated, and uncertainties in the achievable benefits for consumers have not been sufficiently emphasised in considering analysis results and drawing a conclusion.

Implementation later in conjunction with smart metering HH functionality expected from 2017 would avoid the significant and separate costs of this probably intermediate approach to expanding HH settlement, noting that the payback time for a cost-benefit from this proposal is likely to stretch into the next decade.

Question 2: Are there any additional, material impacts that we should consider?

Yes.

1. The additional costs associated with terminating existing NHH Agent contracts and entering new HH Agent contracts have not been included. This includes any explicit termination costs for existing NHH Agent contracts, and administrative costs for re-contracting.

    (a) Where customers have their own contract with a meter agent(s), there could be considerable customer resistance, noting there may be termination charges for existing term contracts, and costs are likely to be higher for HH metering services. We would be reluctant to de-appoint existing customer-nominated NHH agent(s) and appoint our own HH agent(s) against the wishes of a customer. Our standard supply contract terms do permit us to do this in circumstances where a meter or agent is not complying with industry procedures, but under the licence condition for advanced meters, and hence this proposal for HH settlement, the obligation is on suppliers, not on agents. It is not obvious that a NHH agent fulfilling all the obligations relating to the NHH services for which it is contracted can be considered non-compliant because the obligation on a Supplier changes. Suppliers could be required to compensate customers and/or NHH Agents.

    (b) Where we have contracted with the meter agent(s), it is more straightforward to change to HH services and seek to recover costs in supply contract prices going forward. However, in many cases site visits will be required to reconfigure the meter to provide HH data or to enable remote communication with meters to support the proposed BSC performance targets. There is cost associated with organising and conducting such visits, including potential access issues in some cases.

(c) Some agents may be willing to waive termination charges on the basis of the customer taking a new contract for HH services. But not all NHH agents also provide HH services, and it would not be unreasonable for these NHH agents to charge termination fees.

2. The reliability of HH metering and communications at customer sites that are smaller than most current half-hourly metered sites is unproven and uncertain.

   Many current HH metered sites use dedicated landlines, and landlines are required for remote reading at locations where wireless radio communication is not possible or practical. However, installation of landlines can be very expensive, and installation and rental may represent a disproportionate cost in many cases for PC5-8 sites without wireless access.

   Most advanced meters communicate wirelessly by radio methods such as GSM. Although this is widely used for NHH metering, typically with monthly reads, the performance expected for HH reading, possibly daily, over a large number of diverse sites, remains uncertain. Access to sites for communications maintenance and repair, and manual reading where there are communications problems, can be problematic. Under NHH processing, there is time to deal with problems, up to the RF settlement run, so allowing BSC performance targets to be met. With the proposed performance of 99% actual readings at R1, there will be much less time to obtain access to resolve communications issues or obtain manual reads, and consequently greater cost and uncertainty in achievement of the performance level. We think a more realistic performance target should be set, perhaps 80-95% depending on the issues described below (item 3) and in Annex B, at least until some experience of what is reasonably achievable is obtained. Otherwise, suppliers might incur inefficient costs pursuing full BSC compliance, or uncertainty in expected performance might result in suppliers applying a risk premium to prices for consumers in PC5-8. No evidence is provided that the existing supplier charge levels for BSC performance shortfalls are appropriate to the population of sites currently in PC5-8.

3. Supplier costs are sensitive to interpretation of the supply licence advanced meter obligation, to which the P272 proposal explicitly refers.

   Site access to meters, and costs to secure communication capability, are relatively straightforward in many cases. But for sites where access is difficult or additional communications infrastructure is required, the costs are disproportionately high. Additional costs of hundreds or even thousands of pounds per site, over and above costs for straightforward sites, are possible. Whether these costs are incurred depends on what is meant by "all reasonable steps" in the advanced meter licence conditions, which are referred to by the BSC legal text. Whether costs are borne by individual consumers or shared with other consumers depends on individual parties rollout approaches. It is not absolutely clear how the licence obligation exclusions would

apply to the P272 proposal, but costs are very sensitive to interpretation. More detail is provided in Annex B to this response.

Note that if it turns out that a small number of large users have the cheapest time-of-use profiles (compared with the relevant NHH profile), while a large number of small users have a more expensive actual profile, there could be opposition to further changes that are economically rational. It is difficult to determine whether this might be the case without having HH data.

Question 3: Do you agree that P272 would drive suppliers to encourage DSR among their customers?

In principle, yes. More cost-reflective charging of time varying energy and network costs between competing suppliers should ultimately be reflected in more cost-reflective charges to individual consumers, or groups of consumers with similar time-of-use profiles. More cost-reflective tariffs should in turn encourage demand response to price signals, both systematic reduction of demand at times of higher prices (and increase at times of lower prices) and willingness to reduce demand on request from suppliers, aggregators or network operators.

However, we think "take-up" by customers in PC5-8 could be limited compared with assumptions in modelling, at least until variations in time-of-use prices become more pronounced. Consumer demand for more complex time-of-use based tariffs and demand response products seems limited even among existing HH customers. Many customers value budget certainty and simplicity. Many seek a minimum price for their historic shape, a measure which is easy to compare between different suppliers. Elective HH metering is available but few request it. For many consumers in PC5-8, electricity is an essential ancillary part of their business and demand at peak times is unavoidable. Non-half hourly tariffs already allow some time-of-use profiling. The demand for more complex time-of-use tariffs and demand response is unclear at this stage.

In future, increasing proportions of intermittent generation will causes prices to vary with time in less predictable and more extreme patterns than current repeating peak-offpeak cycles. Increasing electrification will change consumers load patterns. However, we think it could be some time, towards the end of the decade, before consumers become more fully engaged with the interaction between their time-of-use behaviour and the price they pay.

Question 4: Do you agree with our approach for quantifying the value of load shifting and load reduction, including the assumptions we made? Is there any evidence we have not identified that could inform our analysis?

We note the net cost-benefit results are extremely sensitive to the assumed response. Relatively small reductions or increases in assumed response greatly reduce or increase the estimated cost-benefit.

There is great uncertainty in the assumed 22% take-up of DSR by 25% of demand in PC5-8, with 40% of the take-up shifting energy "when required" (2.5%). Only very small downward shifts in the assumed distributions give significant reduction in the modelled economic benefits, removing the net cost-benefit. The reference case 2.5% load reduction at peak gives a zero NPV, changing the assumed take-up to 20% of 20% of demand (1.9% reduction instead of 2.5%) gives NPV -17 £m.

We have no ready information on the willingness of consumers in PC5-8 to respond to prices reflecting more detailed time-of-use costs.

Our perception is that the benefit to PC5-8 business customers of providing various forms of demand response would have to be measured in at least many hundreds of pounds/year and probably more (in electricity costs totalling several thousand pounds/year), otherwise their resources would be better spent on other activities. Customers with many sites may have resource to develop response approaches, but many PC5-8 consumers have limited resource to manage their electricity demand more carefully.

We think there should be more research to confirm the level of expected consumer demand for, and response to, more cost-reflective tariffs, before proceeding with expensive changes to existing industry arrangements in advance of smart metering.

Advanced meters can provide consumers with HH data without that data being used for HH settlement. Those consumers whose profile indicates lower energy and network charges could seek a HH tariff. Other consumers would face higher costs as a result, through GSP Group Correction or profile changes. A closer link between consumers that benefit and the additional costs of HH metering and settlement could be a more efficient approach.

Question 5: For those impacts stemming from suppliers reducing the costs of supplying energy (for example, by promoting DSR) that we did not quantify, do you have any suggestions on how we might do so?

No.

Question 6: Do you agree with our approach to quantifying the value of improved forecasting, including the assumptions we made?

The impact assessment assumptions on existing and potential demand forecasting accuracy are very approximate, and external modelling of the impact on balancing costs of improved supplier forecasting is very complex and only explained in outline. The general theme is that better forecasting by suppliers should reduce residual balancing, which is assumed to be expensive, by the System Operator.

Historically, HH meters have not been subject to unpredictable GSP Group Correction, and faster collection of data allows forecasting on the basis of more recent actual data. However, the BSC PSRG, SVG and Panel have approved use of GSP Group Correction for HH meters from 1 April 2014, and this will reduce the advantages for forecasting HH demand. Nevertheless, the availability of data more quickly should improve individual forecasting accuracy.

Improvements in forecasting accuracy and forward contracting by suppliers might reduce the cost of residual balancing by the System Operator as suggested, particularly at certain times. If suppliers contract early for residual volumes as a result of more accurate forecasting, the energy remaining for the System Operator to use could be the expensive actions, but the volume it requires could be less. However, in general the System Operator forecasts demand at an aggregate level using aggregate and prompt GSP level data, and the statistical benefit of consolidation over all suppliers demand may mean that improvements in suppliers' individual forecasts are diluted in average system level balancing. The optimal balance between individual participant balancing and system operator collective balancing will only be found through appropriate cashout mechanisms that incentivise participants to balance if they can do so more cheaply than the system operator.

Question 7: Could the costs of investing in forecasting capability for HH demand impact disproportionately on smaller suppliers or on new entrants?

Forecasting accuracy for individual half-hours will only improve with HH metering where a supplier has a portfolio of customers. The errors for smaller portfolios are statistically likely to be higher, and errors for the remaining reduced NHH portfolio could increase.

Use of a single imbalance price would reduce the risk to suppliers associated with random forecasting errors.

Question 8: Do you agree that we have correctly identified the cost savings that suppliers could realise in managing the settlement process?

The number of sites in PC5-8 is relatively small and represents a small part of data quality effort. The rollout of advanced metering supports increased remote reading for many

sites. The incremental improvement in data reliability achievable by requiring actual HH data by R1, in terms of timely and accurate reading, is small. Daily meter reading would allow faults and anomalies to be detected earlier, but would not necessarily reduce the effort required to rectify the issue. Therefore we are doubtful that the suggested incremental savings in data quality with NPV 18 £m would occur.

The analysis assumes ongoing reductions in current costs to support HH settled metering. Cost reductions driven by economies of scale for existing HH agents and/or competition in the larger HH market are uncertain. If such reductions exist, it may take time for them to pass through to suppliers and consumers with existing service contracts. For example, input to Ofgem's model of £10 saving per meter-year instead of £20 reduces the net cost-benefit NPV from zero in the reference case to -9 £m.

The analysis assumes increases in ongoing supplier costs for meter and data services for the PC5-8 sites transferred to Half-Hourly settlement of about 45 £/meter/year. We assume this is already reduced relative to current NHH costs by the assumed reduction of 20 £/meter/year due to HH agent economies of scale. This low level of additional cost for HH might be achievable for sites where radio communication is easily established. However, there are likely to be many other sites where the costs are higher, for example were landlines or manual reads are required, with costs higher by 100 £/meter/year or more. Inputting a value of 50 £/meter/year to Ofgem's model reduces the net cost benefit NPV from zero to -11 £m.

Question 9: Do you agree with our assumption regarding the typical size of data quality teams employed by suppliers?

Meter "data quality" originates from several different sources within our organisation. There might be reductions in meter reading errors as a result of remote reading of advanced meters. But we don't think there would be significant savings in the size of NHH data quality teams as a result of moving to HH settlement, and any saving would be likely to have a corresponding increase in HH data quality resource.

Question 10: Do you agree that meters of consumers in Profile Classes 5-8 are mostly read at the end of each month?

Yes.

Current BSC Performance targets for missed and erroneous readings and estimates for NHH metering increase with time until RF. The performance level at R1 is 30% actual readings, rising to 60, 80, 97% at R2, R3, RF.

If a monthly meter reading is missed, there is time to rectify it. This may include scheduling a site visit, obtaining access, establishing the cause of the problem, and correcting the problem. Where there are no remote communications, a missed reading

requiring a site visit can for some sites require some weeks or months to obtain access to read.

Achievement of the proposed target of 99% actual reads by the R1 settlement run will be difficult for sites where meters or communications give difficulty.

Question 11: Do you agree with our approach to quantifying the costs of P272 for suppliers and DNOs? If not, we encourage respondents to suggest alternative approaches.

If this proposal is approved, we will initiate an internal project to implement it. The proposal covers several different areas of the business, and some of the costs will depend on our portfolio of customers in the lead up to implementation. Determining detailed process changes and associated costs will itself be resource intensive.

The estimated industry up-front cost to suppliers of £25m suggests a cost for large suppliers about £3-4m each, which seems the right order of magnitude given the numerous process changes that would be required. For example, we have estimated administration costs up to £0.5m for our supply and agent businesses to handle the change of measurement class/agent process, ignoring difficulties associated with terminating existing agent contracts and perhaps £0.5m to handle changes to annual pricing for existing customers. Demand forecasting would require more data storage and expanded processing capability. Site specific DUoS billing would require additional capacity, and more fundamental changes such as aggregated billing would incur more significant IT development costs.

Existing contracts for supply and for metering services are likely to be the most difficult and costly to deal with, as indicated in response to question 2.

If the proposal is approved, then supply and agent contracts struck from that time can be made conditional upon HH metering with remote communications, with extra costs for difficult sites paid for by the customer if deemed appropriate.

We note that in earlier BSC consultation the costs quoted by some participants for changes to DUoS billing would give considerably higher total costs than £25m. We suspect these might have also incorporated changes to accommodate potential half-hourly settlement for meters in Profile Classes 3-4. Like others, our costs for half-hourly settlement from significant numbers of sites in Profile Class 3-4 would have a much higher order of magnitude.

Question 12: We welcome evidence from smaller suppliers of larger non-domestic consumers on the costs they could incur if P272 is implemented.

Not applicable.

Question 13: We welcome information from suppliers on (1) how many consumers would need to move electively for them to incur upfront costs and (2) the costs that would be incurred, broken down by the cost categories listed in this chapter.

There is administrative and agent cost in moving from NHH to HH Elective. The costs are essentially the same as provided for a mandatory move to HH. Each move to HH elective would incur costs to administer the change of measurement class/agent changes, handle site-specific DUoS billing, and associated tariff and billing changes among other things. There might be economies of scale with potential new processes for larger numbers of transfers, but we have no firm view on potential approaches. The fallback approach would be transfer rationed over time with existing or minimum additional resources. High volumes in a relatively short space of time using existing processes would require additional resource which would be more expensive.

Elective transfer for willing customers has an advantage that there is less likely to be customer resistance. Willing customers are likely to accept the higher meter service costs in expectation of a lower tariff or opportunity to benefit from some kind of demand response. Elective transfer of unwilling customers could face some of the same difficulties as mandatory HH settlement, in particular in relation to meter agent service contracts.

We are unsure of customer demand for HH settlement/more complex time-of-use tariffs.

Question 14: Would consumers incur costs from termination of contracts with Supplier Agents? If so, we welcome information that could help us to assess these costs.

Yes, depending on the practice the relevant agents adopt. Some agents have more onerous termination clauses than others. If agents decide to waive termination charges, the cost would be limited to administration of the change of agent process, either by the consumer or the supplier. See comments on question 2.

Question 15: Do you have any comments on the results of our quantitative analysis?

More information on sensitivities of results to demand response would have been useful, but release of the model itself allows this to be investigated.

We think that demand response and demand forecasting improvements are highly uncertain. The results are highly sensitive to these, and should be treated with caution.

The volume in PC5-8 is small compared with PC1-8 and existing HH, and demand forecasting performance may be different to that for existing HH. Demand response itself

creates challenges for demand forecasting. The consumer behaviour that is sought may make demand forecasting more difficult. In future, DNOs may have a stronger influence on demand time of use, which could also make forecasting more difficult. The rate of growth of embedded generation, recent economic volatility and climatic volatility are all acting to make forecasting more difficult, and it is not clear that historic views of HH forecasting performance relative to NHH will apply in future.

We think the savings in NHH data quality costs have been over-estimated, and the costs for implementation have been under-estimated.

Question 16: If P272 is approved, would it be possible to implement the modification in less than fourteen months?

Yes, it should be possible, although there are a number of practical risks which could cause costs that would be avoided with longer notice.

Longer notice would:

- Reduce implementation/transition costs by allowing efficient internal resource planning.
- Allow more time to accumulate historic half-hourly data, for use in providing accurate consumer tariffs.
- Allow more time to develop processes for routine tariff revision on existing contracts.
- allow suppliers to better manage BSC supplier charges, given there will, depending on interpretation of the scope of P272, inevitably be performance shortfalls initially.
- Allow Distribution Network Operators (DNOs), suppliers and consumers time to develop new DUoS tariffs that are better aligned between NHH and HH settlement (eg. DCP179 and other proposals). Some consumers receive DUoS bills directly from DNOs, it is not clear whether this functionality would be supported for HH settled smaller consumers currently in PC5-8.
- Allow DNOs and suppliers time to develop potential new methods of communicating aggregate HH volumes with suppliers for aggregate HH DUoS bills to suppliers (we understand proposals are being developed, but they would need time to be worked up and implemented).
- Allow efficient change of supplier/agent processes to be developed, for example revisions arising from in-progress BSC "Issue 49 - Change of Measurement Class (CoMC) process for Advanced Meters."

We think we can accommodate site-specific DUoS billing if necessary, as for existing HH meters.

If DNOs require new aggregated billing approaches, revisions to existing processes would be required, for which at least a year's lead time would be preferred.

There are a number of complications associated with the use by our existing HH systems of historic half-hourly data to estimate DUoS, TNUoS and energy costs, for pricing existing rolling and new HH supply contracts. In theory, there could be non-settlement HH data available from the end of Advanced Meter rollout. But advanced Meters are not currently systematically providing half-hourly data, and non-trivial work would be needed to capture and store half-hourly data from all Advanced Meters. Ideally, this would be in operation by April 2014 to allow a year's worth of data to be collected before P272 implementation. However, the time between a firm decision and April 2014 is unlikely to be sufficient. Therefore customer pricing for the first year from 2015 would probably use a lot of estimated data. Increased uncertainty for all suppliers might increase prices offered to consumers. For those suppliers for whom the costs actually turn out lower than estimated, the margin might pass to new or other customers rather than the customers who effectively provided it.

We have previously suggested implementation from 2017, giving time for:

- Advanced Meter rollout to complete and difficulties to have been ironed out,
- at least a years worth of historic HH data to be available for all sites,
- more existing long term contracts to expire,
- Potential use of smart DCC to provide meter data services such as data collection and aggregation.

Annex B – Advanced Meter Licence Condition in the context of P272

The draft legal text for the BSC proposal indicates:

- the BSC requirement for half-hourly settlement would apply "where a Supplier is under an obligation in its Supply Licence to install an Advanced Meter at a premises and/or supply electricity to a premises through an Advanced Meter" (L2.2.2).

- obligations in relation to procurement of data "In respect of each SVA Metering System which is an Advanced Meter in relation to which it is registered with a Supplier Meter Registration Agent" (S2.6.1A)

- In relation to timing of data provision: "Where any Half Hourly Metering Systems … are Advanced Meters" (S2.2.8A).

- An Advanced Meter is defined as "Metering Equipment installed in accordance with the obligation set out in condition 12.18 of the Standard Conditions of each Supply Licence".

The Supply licence requirement itself defines an advanced meter in terms of being "able to" provide half-hourly data, and being "able to" provide the licensee with remote access to data, either on its own or with an ancillary device, and in compliance with any relevant industry code. It requires supply to sites in Profile Classes 5-8 to be "through" an advanced meter, except where the licensee is unable to install one despite having taken all reasonable steps.

We assume the application to sites in Profile Classes 5-8 was intended to mean sites that are, or would be in a Profile Class 5-8, if settled non-half-hourly. We also assume that reference to supply "through" an advanced meter was intended to mean supply measured by an advanced meter, given that not all sites in these classes use whole current metering.

However, being "able to" provide half-hourly data and remote access to it is not the same as actually providing it. A meter can be able to record half-hourly data, but not configured to do so. It may be able to provide remote access but not actually do so because a working communications path has not been established. A communications link such as a telephone line is not part of an Electricity Meter.

Uncertainty remains whether P272 would apply to:

(a) A site where an Advanced Meter could not be installed despite taking all reasonable steps to do so.

Our interpretation of the Licence Conditions and proposed BSC text is that P272 would not apply to such a site, because the prohibition on non-Advanced Meters (SLC 12.21) does not apply (SLC12.22).

Assuming the P272 requirement for HH settlement would not apply to such a site, there would be no additional supplier cost under P272 because it would not be required to comply with half-hourly settlement requirements. We anticipate that a small proportion of meters in Profile Class 5-8 will fall in this category.

If the P272 requirement for HH settlement were to apply from the outset to all sites with meters classified in PC5-8, including those where an advanced meter could not be installed despite taking all reasonable steps, the costs of compliance with the BSC for such sites could be very high.

(b) A site where a capable meter has been installed, but communications allowing remote access to data have not been achieved despite taking all reasonable steps.

If this is considered to not meet the SLC12.19 description of an Advanced Meter, and therefore to be a non-Advanced Meter, the exception under 12.22 to the prohibition on non-Advanced Meters could apply.

If the P272 requirement for HH settlement does not apply to such a site, significant costs of compliance with proposed BSC half-hourly settlement requirements would be avoided. We anticipate that a further small proportion of meters in Profile Class 5-8 will fall in this category. It is unclear whether P272 would apply to these meters.

If such a meter is considered to meet the SLC12.19 description of an Advanced Meter despite not having communications capability to support remote meter reading, and P272 would apply to it, the Supplier would incur costs either in expensive communications, or additional site visit manual read costs, to be confident of obtaining readings to meet the more stringent P272 performance targets. Otherwise it would face BSC Supplier Charges for performance shortfalls, if readings cannot be obtained in the much tighter proposed timescales (99% by R1).

The table below illustrates a variety of situations that could arise in reality.

At sites which are, or would be if settled half-hourly, in Profile Class 5-8:

Meter capable of being an Advanced Meter installed?	Yes					No	
Configured to record HH data? (SLC12.19(a))	Yes			No		-	
Communications active for remote reading? (SLC12.19(b))	Yes	No		-		-	
Advanced Meter present? (SLC12.19(a)&(b))	Yes	No?				No	
All reasonable steps taken?	-	Yes	No	Yes	No	Yes	No
"Advanced Meter" required according to Licence definition, not excluded per SLC 12.22?	Yes	No?	Yes?	No?	Yes?	No	Yes
Captured by P272 requirements?	Yes	No?	Yes?	No?	Yes?	No	Yes

The BSC "SP04" Supplier Charge for failing to register a Half-Hourly meter where one is required, which proposed Annex S-1 2.4.1A would extend to each "Advanced Meter" for which a supplier is responsible, is currently £3.95/day, which would add to £1442 over a year (subject to annual indexation, before consideration of charge caps and re-distribution of charge revenues). If this charge is intended to reflect the reduction in accuracy for using NHH metering for a typical above-100kW site, it is unlikely to reflect the materiality of using NHH metering for a meter in Profile Class 5-8.

The BSC "SP08c" Supplier charge that is proposed (by changes to Annex S-1 2.2.8 for providing estimated data for the R1 settlement run from an HH meter that is an Advanced Meter as required by and defined in the Supply Licence) would currently be 2.11 £/MWh (subject to annual indexation, before consideration of charge caps and re-distribution of charge revenues). This represents a surcharge on typical energy supply of about 200-400 £/year for a typical PC5-8 site having industry average energy cost of order 5,000-15,000 £/year.

If applied to high targets from the outset, these charges could incentivise Suppliers to incur higher costs than are justified. We assume all major suppliers would incur such costs, so they are ultimately likely to be passed to consumers. The Supplier Charges collected are re-distributed 90% to NHH suppliers, so another possible outcome is that consumers remaining as NHH obtain a benefit.