

ASSESSMENT CONSULTATION for Modification Proposal P223 'Profile Administrator Service'

Prepared by: P223 Modification Group

For attention of: BSC Parties, Party Agents and other interested parties
Responses due: 12 noon on Tuesday 15 July 2008
(to: modification.consultations@elexon.co.uk)

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Proposed Modification P223 seeks to improve the Profile Administrator Service by replacing the existing process of recruitment of new customers into the profiling sample and the resultant data collection process with a new process as detailed in this document. This new process seeks to place responsibility on Suppliers to annually recruit new customers into the sample, replace the customer's existing Non Half Hourly Settlement meter with a Half Hourly capable meter, and collect Half Hourly consumption data from this meter for profiling in addition to the normal Non Half Hourly data used in Settlement. Upon a Change of Supplier, the New Supplier is required to either retain the existing customer in the sample or to nominate a new customer.

Alternative Modification P223 is largely identical to the Proposed Modification, except that, where a Change of Supplier occurs, no action is taken and the customer is lost from the profiling sample. This event is then taken into account in the following year's sample recruitment.

PURPOSE OF CONSULTATION

This consultation seeks respondents' views regarding P223 and, in particular:

- Whether the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives¹ when compared to the existing profiling arrangements;
- Whether the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives when compared to the Proposed Modification;
- Whether there are any alternative solutions that the Modification Group has not identified and that should be considered; and
- Whether there are any substantive issues not considered by the Modification Group which should be brought to the Group's attention for inclusion in its assessment of P223.

You are invited to provide a response to the questions contained in the attached form.

Please send responses, entitled 'P223 Assessment Procedure Consultation', by **12 noon on Tuesday 15 July 2008** to the following e-mail address:

modification.consultations@elexon.co.uk.

Any queries can be addressed to Sherwin Cotta (sherwin.cotta@elexon.co.uk) on 020 7380 4361.

¹ A copy of the Applicable BSC Objectives is provided in Appendix 2.

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1 HIGH LEVEL SUMMARY OF THE CONSULTATION DOCUMENT

Background

P223 has been raised by the BSC Panel (on the recommendation of BSCCo²), following Issue 29 'Profile Administration (PrA) Model', as it is believed that there exist equipment replacement and recruitment issues with the current Profile Administration process. Issue 29 was raised by the Panel on 23 August 2007 following BSCCo's presentation of the issues at the Supplier Volume Allocation Group (SVG) meeting held on 31 July 2007. Further background can be found in Section 2.

High Level Analysis

Mission:

- To improve the Profile Administrator (PrA) process, so that more accurate profiling data can be used in Settlement.

Objective:

- To increase the accuracy and quality of the profiling data used in Settlement by ensuring that a random and representative sample of customers (needed to produce profiling data) has been created and maintained.

Strategy:

- To place responsibility on Suppliers to provide suitable customers so that a random and representative load research sample can be maintained and to collect the required consumption data from these customers.

Tactics:

- Use Modification Group meetings to develop solutions to the proposals in P223 and to identify and troubleshoot any critical areas and any potential problems in the solution;
- Issue a consultation to elicit views from the industry;
- Issue an impact assessment to identify the P223 implementation costs and lead times to the industry;
- Undertake modelling to quantify the potential benefits of improved P223 profiling accuracy to Suppliers, as well as any central efficiency savings to the PrA and ELEXON (the 'cost-benefit analysis');
- Provide a report to the Panel on the findings of the Modification Group as to whether P223 (Proposed and Alternate Modifications) better facilitates the achievement of Applicable BSC Objectives; and
- Put finalised obligations in the Balancing and Settlement Code (BSC) and Code Subsidiary Documents (CSDs) subject to P223 being recommended by the Modification Group and Panel, and approved by the Authority.

² The Balancing and Settlement Code Company (ELEXON).

Impacts

Industry:

- Suppliers;
- The PrA;
- Non Half Hourly Data Collectors (NHHDCs);
- Meter Asset Providers (MAPs);
- Meter Operator Agents (MOAs); and
- BSCCo.

**Non Half Hourly Data Aggregators are not directly impacted but may wish to read Sections 7.9 – 7.10 of this document.*

Documentation:

- Section S of the Balancing and Settlement Code ('the Code');
- BSC Procedures (BSCPs) 504, 510 and 514; and
- The Profile Administrator Service Description.

Further detail can be found in Appendix 4.

Costs (rounded figures – more precise estimates can be found in Section 3)

Central implementation costs:

- BSCCo: £20-30k (Proposed and Alternative Modifications)
- PrA: £5-10k (Proposed and Alternative Modifications)

Operational Costs (per year):

- BSCCo: £5k (Proposed and Alternative Modification)
- PrA: £20-100k (Proposed Modification) to £45-200k (Alternative Modification) – representing 'worst case scenario' costs of replacing customers lost on a Change of Supplier (CoS), increasing year on year as the proportion of the sample recruited under the P223 process becomes larger

Further detail can be found in Section 3.

Supplier/Supplier Agent implementation costs:

Costs provided in the impact assessment ranged from minimal costs for some Suppliers/agents, to £350k for one large Supplier. Further information can be found in Section 3.

Modification Group's identified Benefits and Drawbacks under Applicable BSC Objectives (c) and/or (d)

(Summary of the arguments in Section 4. The views contained below were not shared by all members)

Benefits:

- The current process is untenable in the long term and could lead to further deterioration in profiling accuracy. Short term measures will not address the current problems with the PrA process. No obvious alternatives to P223 approach identified in previous Standing Issue/SVG discussions;
- Suppliers able to recruit more representative sample than PrA, as Suppliers have a larger 'pool' of customers from which to target appropriate customers (therefore more efficient process);
- Not believed to be onerous on Supplier as only a small proportion of Suppliers' customers would be recruited.
- P223 process more efficient due to use of single meter (resolving most space issues) and use of Supplier Agents to provide consumption data to PrA;
- Recruitment/space benefits will be seen immediately;
- More representative sample will lead to improvement in profiling accuracy;
- Improved accuracy gives reduction in volatility in GSP Group Correction Factors;
- Resulting reduction in Suppliers' potential imbalance exposure/risk;
- Enables Suppliers to forecast their market imbalance positions more accurately;
- Reduced imbalance risk may have greatest benefit for small niche Suppliers who are less able to absorb volatility;
- Natural incentive on Suppliers to support P223 as impacted by inaccurate profiles;
- P223 costs are less than financial effects of inaccurate profiles;
- Compatible with future national smart metering roll-out, as utilises Half Hourly capable meters and profiles will still be needed as long as non-domestic customers' consumption continues to be settled on a Non Half Hourly basis;
- Facilitates other types of potential sampling in the future – e.g. for Export metering;
- Proposed Modification enables retention of customers on

Drawbacks:

- Effort and cost required by Suppliers/Supplier Agents to implement and operate P223 arrangements – P223 process more efficient for PrA but not necessarily for Suppliers/agents;
- Not proven that Suppliers will be more successful than PrA in recruiting customers/installing meters, and that benefits of improved profile accuracy (e.g. reduction in potential imbalance exposure) will therefore be obtained;
- Suppliers likely to still encounter resistance from customers to meter replacement – some Suppliers may choose to offer financial incentives to overcome access issues (though not a P223 requirement);
- Effort and cost implications for Suppliers in needing process to retain/replace customers under the Proposed Modification on CoS – overly complex and inefficient process?
- Potential increase in central costs under the Alternate Modification, due to higher numbers of customers being lost on a CoS and thereby higher numbers of replacement customers being recruited;
- Any benefits of improved profiling accuracy won't materialise until 2 years after implementation (as first need to recruit customers and collect a year's worth of data);
- Is putting obligations on Suppliers the best solution to the current inaccurate profiles, or is this moving issues elsewhere?

<p>CoS, minimising customer churn (more efficient);</p> <ul style="list-style-type: none"> Alternative Modification more pragmatic in that avoids costs/complexity to Suppliers of retaining/replacing customers on CoS. 	
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Quantifiable benefits (summary of full cost-benefit analysis in Section 5)

Total Potential Supplier Benefit (first year of implementation)

£2.3m – £12.1m

These benefits are for all Suppliers across all GSP Groups, and arise through an improvement in profiling accuracy leading to less volatility in GSP Group Correction Factors and thereby less potential exposure to imbalance costs. The benefit to individual Suppliers depends on their Market Share and forecasting capability of the Supplier.

Central Cost Savings to PrA/BSCCo (per year):

£20k

Please note that these represent short-term savings. In the longer term the savings may be greater as the proportion of 'old' customers in the sample reduces, and following the reprourement of the PrA service in 2009/2010. Please refer to Sections 3.3 and 3.4 for further details.

Implementation approach

The Modification Group is currently considering the following Implementation Dates:

- 1 December 2009** if P223 is approved by the end of November 2008. Draft redlined BSCP changes would be available in February 2009 and finalised in March 2009. The first P223 customer recruitment requests would be sent in January 2010.
- 1 April 2010** if P223 is approved between December 2008 and the end of March 2009. Draft redlined BSCP changes would be available 9 months before implementation, and the first P223 customer recruitment requests would be sent in January 2011.

Both dates would be provided to Ofgem, although the Group has a preference for the 1 December 2009 date as this allows earlier realisation of any benefits.

Further detail can be found in Section 3.

Modification Group's initial Recommendation

Within the Modification Group there is currently a:

- Split** as to whether the Proposed Modification is better than the current arrangements;
- Majority** view that the Alternative Modification is better than the current arrangements; and
- Majority** view that the Alternative is better than the Proposed Modification.

The Group's initial recommendation (by majority) is therefore that **P223 Alternate Modification SHOULD be made.**

2 BACKGROUND

Issues with the profiling service have been known about in the industry for a number of years. These issues have been the subject of discussions at several Supplier Volume Allocation Group (SVG) meetings and resulted in a number of SVG papers. Furthermore two Standing Issues have been debated by industry expert groups as described below.

P223 was raised by the BSC Panel ('the Panel') on 10 April 2008, on the recommendation of BSCCo. P223 has been raised following Issue 29 'Profile Administration (PrA) Model', as the Panel believes that there exist equipment replacement and recruitment issues with the current Profile Administration process. Issue 29 was raised by the Panel on 23 August 2007 following BSCCo's presentation of the issues at the SVG meeting held on 31 July 2007 (Reference 8). The Volume Allocation Standing Modification Group (VASMg), which considered Issue 29, recommended that a modification should be raised to implement the alternative profiling recruitment/data collection process developed by the Group (the Issue 29 'straw man').

The identified issues have historically led to dwindling sample sizes and, as a consequence, degradation in the data accuracy of load research samples as there is an insufficient number of participants to enable a sufficient amount of data for the Profile Administration sample.

Furthermore, short term measures to boost sample size have led to the sample being an increasingly less random representative sample of customers' different consumption patterns, leading to diminished confidence in the accuracy of the resulting profiles.

Further details of these issues can be found below, and in Section 1.2 of the P223 Initial Written Assessment (IWA, Reference 1), and within the Issue 29 Panel paper (Reference 2).

Prior to Issue 29, similar issues were previously discussed in Issue 21 'Scope of Profiling Administration Service' in late 2005/early 2006. Under Issue 21, the VASMg examined issues with the ability of the PrA to meet the service obligations set out in the Balancing and Settlement Code ('the Code'). The VASMg concluded at that time that a Modification Proposal was not required; since there were a number of measures which it believed could be taken to strengthen the processes in the short term without requiring a change to the scope of the PrA Service (Reference 9). However, under Issue 29 the VASMg concluded that the issues remained significant enough to warrant the raising of a Modification Proposal to put in place a robust long-term solution.

P223 seeks to implement the 'straw man' solution developed by the Issue 29 Group.

What is a profile? Why do we need profiling?

A 'Profile/ Load Profile' is a broad term that refers to the pattern of electricity usage of a segment of supply market customers. These profiles represent the Half Hourly pattern of usage across the day and the pattern across the year for the average customer in each of eight groups known as Profile Classes. Put simply, a Profile Class is a generic representation of large populations of similar customer usage patterns.

Since Privatisation of the electricity market in the late nineties, electricity is traded between Suppliers and generators on a Half Hourly basis. This would mean that meter readings would need to be taken every Half Hour. However, most small customers less than 100 kW Maximum Demand only have their meters read monthly or quarterly, on a 'Non Half Hourly' basis.

Since the cost of installing meters that can provide Half Hourly data is expensive it was decided at Privatisation that these 'Non Half Hourly' customers should have their consumption divided into Half-Hourly periods using profiling data. As long as this 'Non Half Hourly' side of the market exists, there will always be a need for profiles, even if there were to be a nationwide rollout of smart meters³. The load profiles allow meter advances calculated from monthly/quarterly meter readings to be allocated to the Half-Hourly periods over which the meter readings were taken.

Does it matter if these profiles are not accurate?

Put simply, yes it does. As outlined above, the Half Hourly consumption of domestic customers and the majority of non-domestic customers are estimated using load profiling. This sample is designed to be representative of the types of customer in each Profile Class and the required numbers in the sample are derived from a statistical calculation broken down by Profile Class, customer type and customer consumption. This technique is reliant on the analysis of historic consumption patterns of a representative sample of customers. As with any statistical technique, in order for it to provide an accurate estimate, the underlying sample data must be representative of its customer type and consumption level (represented under the BSC by its Profile Class).

Failure to maintain a representative sample will lead to deterioration in the quality of the load profiles, and this in turn will lead to the Non Half Hourly data used in Settlement becoming less and less reflective of actual average consumption patterns. If the number of customers in the sample decreases, and/or the sample of customers becomes less random and representative, this will impact confidence that the resultant profiles will accurately reflect an average customer's consumption in a Profile Class. Settlement addresses any errors through the use of the Grid Supply Point (GSP) Group Correction Factor⁴. Faced with deteriorating profile data, this factor will become more volatile and Suppliers will find it increasingly difficult to predict the physical position that they will be attributed in Settlement. Due to the dwindling sample sizes over the past few years this confidence has decreased, to such an extent that the SVG agreed that the profiles for use in Settlement for April 2008 to end of March 2009 should reuse the Settlement profiles from the previous year.⁵

Profiles which do not accurately reflect the average daily shape in a Profile Class could lead to large and potentially unpredictable variances in GSP Group Correction Factors. This could impact both large and small Suppliers by exposing them to imbalance if they are not able to predict this variance. Inaccurate profiles are likely to have the biggest impact on small niche Suppliers, since such Suppliers are more likely to only be active in one particular Profile Class.

Who is the PrA?

The PrA is the BSC Agent responsible for the production of load profiles that are used in the Settlement of Non Half Hourly (NHH) consumption. These profiles are based on Half Hourly (HH) data obtained for a sample of domestic and non-domestic NHH customers. The PrA is currently required to recruit customers to the sample and to collect the resulting data. An overview of the existing process is provided below.

What is the current PrA process like?

Section S4.2.1 of the Code requires the PrA to 'create and maintain a load research sample using customer data provided to it by Suppliers and to carry out a programme of load research in order to collect half-hourly demand data from customers'.

³ A smart meter is a type of advanced meter (usually an electrical meter) that identifies consumption in more detail than a conventional meter. In some instances such a meter can communicate information via a network to the Supplier/Supplier Agent for monitoring and/or customer billing.

⁴ GSP Group Correction Factor is a factor that adjusts correctable energy so that the total energy is equal to the GSP Group Take e.g. corrects errors such as Large Estimated Annual Consumption (EAC) / Annualised Advance (AA) values and errors with Profiling.

⁵ See Panel Paper [137/01b](#).

A summary of the current processes which support these obligations is provided below:

- a) BSCCo receives from each Supplier Meter Registration Agent (SMRA) reports relating to Settlement Days (15 January and 15 July each year) of all Metering System Identifiers (MSIDs) registered by a Supplier in each GSP Group covered by that SMRA.
- b) Consequently BSCCo provides to the PrA a report containing all NHH MSIDs registered by each Supplier. This enables the PrA to maintain an up-to-date list of customers and ensures that there are a sufficient number of customers to meet the sampling criteria.
- c) In order to aid this process, the PrA requests from the Supplier (via BSCCo) information relevant to sampling requirements such as address of the customer, confirmation of the Profile Class ID and Standard Settlement Class (SSC) ID as well as customer contact details. The PrA keeps the Supplier informed of all MSIDs belonging to the Supplier that are currently participating in the profiling sample.
- d) The Supplier provides the PrA (via BSCCo) with the required customer information upon request. The Supplier is also responsible for maintaining a record of all of their MSIDs participating in the profiling sample and for advising the PrA of any changes to the status of the respective MSIDs.
- e) The PrA is responsible for recruiting customers to the sample. The PrA identifies those customers who are appropriate candidates for participation in the profiling Sample, and contacts these customers directly to attempt to recruit them to the sample. Where a customer agrees to participate, that customer is required to enter into terms and conditions with the PrA.
- f) For all recruited customers, a 'secondary' Half Hourly (HH) capable meter is installed in the customer's premises in order to collect HH consumption data for profiling purposes. The PrA is currently responsible for arranging the installation of the secondary meter, and for the collection of the resulting profiling data. Normal NHH consumption data continues to be separately collected through the usual Settlement meter by the Supplier's own agents.
- g) Where a Change of Supplier occurs, the old Supplier informs the PrA that it is no longer the Supplier for the applicable MSID. The PrA then contacts the customer to obtain the New Supplier details, so that the new Supplier can be informed that the respective MSID is part of the profiling sample.

Under the existing process, the PrA therefore has responsibility for the direct recruitment of, and subsequent relationship with, each profiling sample participant. Further details on the current PrA process can be found in BSCP510 'The Provision of Sampling Data to the Profile Administrator' (Reference 5).

Due to the difficulties experienced by the PrA in directly recruiting customers, P223 proposes that Suppliers should instead be responsible for recruiting customers to the sample and for collecting the resulting data.

What are the current problems faced by the PrA?

The table below shows how the number of customers in the sample from whom profiling data is successfully collected has decreased over the last 4 complete data years, and how these number compare to the data collection target for 2007/08.

Profile Class	Actual 2003/04	Actual 2004/05	Actual 2005/06	Actual 2006/07	Target 2007/08
1	518	448	406	343	500
2	415	353	355	285	450
3	245	279	232	156	300
4	209	217	188	132	250
5	125	134	116	73	180
6	75	88	71	36	100
7	81	83	75	42	100
8	144	149	130	70	180
Total	1812	1751	1573	1137	2060

Note that the actual target sample size (2,500) is set higher than the data collection target (2,060) to take account of natural attrition in the sample (approx. 7.5% per year) and difficulties in collecting data (e.g. faulty secondary metering).

Short-term measures have been, and are continuing to be, taken to boost sample numbers (e.g. recruiting electricity industry staff). However, these are believed to be increasingly compromising the principle that the sample should be random and representative across different:

- Geographic regions (i.e. GSP Groups);
- Consumption patterns (i.e. Profile Classes);
- Levels of consumption (i.e. Strata); and
- Customer type (e.g. type of business/site for non-domestic customers).

This in turn leads to diminishing confidence in the resulting profiling data. The Panel believes that deterioration in profile data will lead to the NHH data used in Settlement becoming less reflective of actual consumption patterns.

The overriding aim of P223 is to put in place a process (based on the 'straw man' solution developed under Issue 29) which will enable the ongoing recruitment and maintenance of a random, representative sample regardless of the target sample size. To achieve this, under P223 Suppliers would be responsible for recruiting future sample customers and for collecting the necessary data.

Many of the issues that are detailed below are believed to result from the PrA's lack of existing relation with customers. As noted previously, the model developed by the Issue 29 Group (and put forward in P223) seeks to address these by using the Supplier's existing customer relationships to recruit sample participants. Other issues such as the lack of space for secondary metering will be resolved as the Issue 29/P223 model seeks to use one meter to obtain both Settlement and profiling data.

The difficulties experienced by the PrA in recruiting customers to the profiling sample can be summarised as follows:

- **Data protection issues when approaching Suppliers for customer contact information** – Under current practices, the PrA approaches the Supplier with a list of MSIDs to obtain information about the customer's details (e.g. billing address, type of meter and consumption estimates). Some Suppliers have declined to provide such information based on concerns regarding data protection and the supply of information to 'third party' agents. This creates difficulties for the PrA in identifying suitable customers for the PrA sample. *P223 intends to overcome this as the Supplier has the option to enlist the services of its own agents, or to appoint the PrA's nominated agents. As a consequence there will be no provision of any information to third parties who are not the appointed Supplier Agents for the customer.*
- **Inability to 'cold call' customers who are registered with the Telephone Preference Service (TPS)** - The TPS is the central opt-out register on which a customer can record a preference not to receive unsolicited sales and marketing telephone calls. There is a legal requirement that all organisations do not make such calls to numbers registered on the TPS unless they have consent to do so. The PrA has no prior relationship with the customer and is largely reliant on cold calling in order to recruit customers to the sample. With the introduction of TPS, the PrA has been unable to contact an increasing proportion of potential Sample Participants. *P223 intends to overcome this by placing an obligation on Suppliers to provide customers to the PrA sample. Suppliers can take advantage of the existing Supplier-customer relationship, as opposed to the PrA creating a customer relationship from scratch. Customers will feel less threatened when dealing with their own Supplier, as opposed to the PrA which they may not know about.*
- **Unwillingness of customers to participate in the sample and/or sign up to the PrA's Terms and Conditions** - When installing the secondary metering, the Sample Participants are required to sign up to Terms and Conditions. Significant numbers are reluctant to sign these and do not always state their reasons. One issue highlighted by customers is the liability of £100k for any damage to the domestic Sample Participant's property. Some customers feel that the £100k offered is not reflective of current property prices. *P223 intends to overcome this, as the customer will not be required to sign up to any Terms and Conditions with the PrA, and they will have one meter rather than two.*
- **Lack of space at customer premises for secondary metering equipment** – Not all customer premises have space to install the secondary meter, with a result that a large number of potential Sample Participants cannot be used. *P223 intends to overcome this by providing a single metering solution as opposed to the current 2-part metering solution.*
- **Lack of Global System for Mobile communication (GSM) signal at customer premises** - some Sample Participants in the present sample do not have a sufficient GSM signal in order for data to be collected remotely, and as a result cannot be used in the sample. The PrA can fit high-gain aerials in some instances, but cannot undertake any work that significantly affects the Sample Participant's property. *Although P223 cannot offer any improvements in this area, the Supplier can provide a replacement customer from its portfolio who has adequate GSM signal, where applicable. Under the current process, the PrA would have to start the process of cold-calling again to replace such a customer.*

- Unwillingness of customers to power down their premises to allow the PrA's equipment to be fitted** - In order to fit the secondary meter there is a requirement to power down the Sample Participant's premises for a short period of time. The PrA is not able to undertake any work without approval from the Sample Participant. There are a number of customers who are unwilling to allow this to happen as it would affect their business. As a result, these customers cannot be used in the sample. *Although P223 cannot directly offer any improvements in this area, a customer may be more willing to oblige its Supplier based on an existing Supplier-customer relationship in comparison to obliging to a third party that a customer may not have knowledge of.*
- Access issues to customer premises** - There have been a large number of instances where the PrA has been unable to obtain access to existing sample customer premises in order to fit the secondary metering. *P223 intends to overcome this issue as it would be easier for a Supplier to arrange for a Meter Operator to gain access to the customer's premises than it would be for the PrA alone. Additionally, Half Hourly meter readings will be collected remotely. If the Supplier is aware of access issues to a premise, the Supplier can offer a replacement customer to the PrA sample. Under the current process, the PrA would have to start the process of cold-calling again to replace such a customer.*
- Lack of diversity in regional dispersion of domestic Sample Participants** - At present the randomness of the sample is also compromised by the shortfall in participant numbers as, instead of being in a position to recruit customers randomly from across the Supplier's entire population (portfolio) of customers, the PrA can only recruit parties who are willing to take part in the sample thus building in a bias. The PrA is required by the Code to maintain a 'stratified random sample'. The requirement should define a number of Sample Participants to be recruited in each region by size of customer. As the sampling variable is consumption, and this information is held by the Supplier, it is nearly impossible for the PrA to identify which customers in the population are suitable for recruitment since the PrA is not able to establish their consumption. The current recruitment methods such as using electricity industry staff and their friends and family has raised a number of issues, most notably that Sample Participants were too frequent in certain geographic regions and non-existent in others. For example, recruitment of the PrA's own staff has led to overrepresentation in the Milton Keynes area. *P223 intends to overcome this by sending sample requests to Suppliers based on shortfalls in the PrA sample, by enabling the Supplier to choose appropriate customers from its portfolio and by empowering the PrA to reject Sample Participants, where the PrA may feel that there is a lack of diversity.*
- Lack of diversity in non-domestic Sample Participants when targeting group customers** - Although potentially large numbers of Sample Participants can be gained through targeting group customers (e.g. branches of a supermarket chain), this has the potential to bias the sample in a number of ways. For example, the PrA has signed up Staffordshire County Council. They have a number of potential sites all in the Staffordshire region. If the PrA accepted all these sites into the sample the site would be over represented in both customer type and regional spread. There are similar issues with retail groups and the Ministry of Defence, all of whom have large numbers of potential sites. *P223 intends to overcome this by sending sample requests to Suppliers based on shortfalls in the PrA sample, by enabling the Supplier to choose from its customer pool and by empowering the PrA to reject Sample Participants, where the PrA may feel that there is a lack of diversity.*

The PrA is subject to financial penalties for any shortfall in the actual sample size and/or amount of data collected in comparison with its targets. These penalties are levied per customer by which the sample size/data collection is short, and increase on a sliding scale such that they become higher the greater the number of missing customers/sets of data. However, despite the efforts of the PrA to overcome the

above issues in the short term, the identified issues are believed to be increasingly compromising the representative nature of the sample in the longer term and thereby the resulting profiling accuracy.

How do we know that the existing profiles are inaccurate?

This can be demonstrated by the current increase in the sample precision errors. The precision error is the estimate of the potential error in the sample, which is calculated for each Profile Class taking account of the potential error in each Stratum.

The table below shows how the precision error has increased (got worse) in comparison to previous years. In particular, the 2006/07 precision for Profile Class 6 has got worse by 8% in comparison with the previous year. The 2002/03 figures can be used as a benchmark of the size of error we would expect in a representative, accurate sample.

Profile Class	Precision 06/07	Precision 05/06	Precision 02/03
1	7.64%	6.31%	5.98%
2	12.84%	10.16%	8.32%
3	14.8%	7.77%	6.98%
4	12.1%	8.85%	9.18%
5	12.34%	11.03%	12.18%
6	18.95%	10.69%	11.02%
7	13.44%	9.21%	7.34%
8	9.94%	6.16%	4.85%

Although work is ongoing to meet the overall recruitment target of 2,500 customers, this does not solve the underlying issue that there are particular Strata with little or no customers. This is because the PrA is reliant on accepting any customers who are willing to participate, rather than being able to identify and recruit the appropriate customers to achieve a random, representative sample.

Due to its diminishing confidence in profiling accuracy, the SVG therefore agreed that the profiles for use in Settlement from April 2008 to March 2009 should reuse the Settlement profiles from the previous year (see Panel paper 137/01b).

What are the Panel's initial views?

The Panel as the Proposer of P223 believes that the following Applicable BSC Objectives may be better facilitated by P223:

- **Applicable BSC Objective (d) 'Promoting efficiency in the implementation and administration of the balancing and settlement arrangements'.**

The Panel believes that this modification may initiate improvements in the way that the PrA acquires its profiling sample data, ensuring that the PrA receives the required amount of representative profiling data and that accurate consumption data is therefore entered into Settlement; and

- **Applicable BSC Objective (c) 'Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity'.**

The Panel believes that, by improving profiling accuracy, this modification may improve the Settlement of Non Half Hourly data (i.e. reduce the potential exposure to volatile GSP Group

Correction Factors) for Suppliers – and especially for niche/small Suppliers who have customers/demand focussed in particular areas.

3 DESCRIPTION OF MODIFICATION

This section outlines the solution for the Proposed and Alternative Modifications as developed by the Modification Group.

For a full description of the original Modification Proposal as submitted by the Panel ('the Proposer'), please refer to the P223 IWA.

P223 will require Suppliers to randomly select Metering System Identifiers (MSIDs) from their own customer records which are suitable to partake in the PrA sample. Such selections should not be biased towards any particular subset of a Supplier's portfolio, e.g. customer type or GSP Group.

3.1 Proposed Modification

The Proposed Modification seeks to replace the current PrA process of recruiting new customers/MSIDs with one that is based on the Issue 29 straw man. Under this process there would be:

- 1) An annual obligation on Suppliers to randomly select a proportion of their own customers to participate in the profiling sample, based on targets set by the PrA/BSCCo according to the sample shortfall/requirements and the Supplier's market share;
- 2) A one-off obligation on Suppliers (via their appointed Meter Asset Provider (MAP)/Meter Operator Agent (MOA)) to replace these customers' existing Settlement meters with meters which are capable of recording both NHH consumption data for normal Settlement purposes and HH consumption data for profiling purposes;
- 3) An ongoing obligation on Suppliers (via their appointed Non Half Hourly Data Collector (NHHDC)) to remotely collect the recorded HH data from these meters and provide this to the PrA on a monthly basis, in addition to collecting normal NHH data for the customers under the existing Settlement processes;
- 4) An ongoing obligation on the PrA to identify a Change of Supplier (Cos) for any customer within the profiling sample, and to contact the New Supplier for that customer;
- 5) An ad-hoc obligation on the New Supplier for a customer in the profiling sample after a CoS to either:
 - a) Retain that customer in the sample; or
 - b) Randomly select another of their customers to participate in the sample (in which case obligations 2)-3) above will apply); and
- 6) An annual obligation on Suppliers to confirm whether there has been a Change of Tenant for any of their customers within the profiling sample, and for the PrA to assess the continuing suitability of any such customer for the sample (to feed into the annual recruitment process outlined in 1) above).

In order to fulfil obligations 2 and 3, the Supplier can choose to:

- i) Appoint the PrA's own nominated agents (MAP, MOA, NHHDC and Non Half Hourly Data Aggregator (NHHDA)) to install the metering and collect both NHH and HH data. Under this

option the PrA will bear the entire cost of these agent services, and there will be no direct charge to the Supplier; or

- ii) Appoint its own preferred Supplier Agents (MAP, MOA, NHHDC and NHHDA) to install the metering and collect both NHH and HH data. Under this option the PrA will reimburse the Supplier for the cost of the meter, and will provide an annual rebate to the Supplier (based on an amount determined by the PrA) to cover the cost of installing the meter, the associated MOA costs, and the airtime and dial cost of the NHHDC in obtaining the HH data. The rebate will exclude normal NHH data collection and NHHDA costs, since no changes are proposed to these processes.

Regardless of which option is chosen, all of these agents (MAP, MOA, NHHDC and NHHDA) must be either the PrA's or the Supplier's. There is no option to mix the agents (i.e. choose the PrA's NHHDC and MOA but retain the services of the Supplier's NHHDC).

3.2 Alternative Modification

The Alternative Modification is identical to the Proposed Modification other than where a CoS is concerned.

Under the Alternative Modification where a CoS occurs, the customer will automatically be lost from the PrA sample.

There will be no obligation on the Old Supplier, New Supplier or PrA to retain the customer. The meter will therefore be classed by the Old Supplier/PrA as a lost asset and the New Supplier will take ongoing responsibility for the maintenance of that meter under existing industry processes. There will be no responsibility on the Old or New Supplier to provide a replacement customer following a CoS.

This shortfall will be taken into account at the following year's sample recruitment process, where the number of required customers will again be pro-rated across all Suppliers by market share.

3.3 Implementation Costs

The tables below show the estimated 'one-off' central implementation and ongoing operational costs for the PrA and BSCCo under P223.

The costs are identical regardless of the proposed Implementation Date. However, a range of costs is provided as the BSCCo costs will be lower if other changes are being implemented in the same period and the project overheads can therefore be shared. The actual cost to BSCCo is therefore likely to be somewhere between the 'implemented alone' and 'shared overhead' costs.

The one-off implementation costs are the same for both the Proposed Modification and Alternative Modification. However, the ongoing operational costs of the Alternative Modification will be higher since more customers will be 'lost' from the sample on a CoS, and the PrA will therefore need to fund the installation of additional meters for the replacement customers (see cost-benefit analysis in Section 5 for further details).

PROPOSED/ALTERNATIVE MODIFICATION IMPLEMENTATION COSTS⁶

		December 2009 or April 2010 (implemented alone)	December 2009 or April 2010 (shared overheads)	Tolerance
PrA Cost	Development, testing & deployment	£5,000 - £10,000	£5,000 - £10,000	+/-30%
Total Demand Led Implementation Cost		£5,000 - £10,000	£5,000 - £10,000	+/-30%

ELEXON Implementation Resource Cost		131 Man days £28,820	81 man days £17,820	+/- 30%
Total Implementation Cost		£38,820	£27,820	+/- 30%

PROPOSED MODIFICATION OPERATIONAL COSTS

	Cost	Tolerance
PrA Operation Cost	£20,000 – £100,000	+/-30%
ELEXON Operational Cost	£ 3,300	+/-30%

ALTERNATIVE MODIFICATION OPERATIONAL COSTS

	Cost	Tolerance
Service Provider Operation Cost	£45,000 - £200,000	+/-30%
ELEXON Operational Cost	£3,300	+/-30%

⁶ An explanation of the cost terms used in this section can be found on the BSC Website at the following link:
http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf

a) PrA Impact

The PrA would be required to amend its processes to support P223. Many of the processes are variants on those already undertaken by the PrA, and have minimal impact. In addition, until such time as 100% of the sample has been replaced under the P223 process, the PrA will need to continue to act as data retriever for existing customers' secondary metering. The implementation costs are driven by the need to establish processes to support the new P223 communications with Suppliers and Supplier Agents. The operational costs reflect the need to support the annual recruitment round and to calculate the annual rebate amounts to Suppliers for the costs of meters/agent services. They also reflect the possible 'churn rate' of customers lost from the sample on a CoS, since replacement customers will need to be recruited and additional meters installed and funded by the PrA. Further detail in this area can be found in Section 5.

b) BSC Party and Party Agent Impact

With the exception of one respondent, Party/Party Agent impact assessment respondents stated that they would be impacted by P223 in varying degrees. Generally the smaller Suppliers indicated that they would be able to support P223 through manual processes at low cost, whilst larger Suppliers (given the greater number of customers involved) would need to implement system changes in order to support the different treatment of sample customers compared with the rest of their portfolio. Costs quoted ranged from £600 to £350k, and generally varied significantly by Supplier. Confidential cost information was also provided by two large Suppliers. Copies of the responses received can be found in Appendix 5.

The Group noted the responses received from the P223 impact assessment, and that Suppliers had found it difficult to provide accurate cost information (in particular operational costs) due to the wide-ranging effects of P223 on their organisations. However, it believed that the costs provided were 'best estimates' at this stage. It noted that it was difficult to identify an overall cost to Suppliers due to the range of information provided.

The Group also noted that, separate to the implementation/operational costs to Suppliers, P223 would result in changes to profiles whose effects on GSP Group Correction Factor would need to be factored into Suppliers' forecasting of their imbalance positions. However, the Group did not view this as a negative effect, since the changes would result from an improvement in profile accuracy and thereby reduce Suppliers' exposure to imbalance risk. Further details of the effect of P223 on imbalance exposure can be found in Section 5.

c) Transmission Company Impact

P223 has no impact on the Transmission Company.

d) BSCCo Impact

BSCCo would be required to:

- Make changes to the impacted Code Subsidiary Documents (CSDs);
- Update Local Working Instructions to reflect the new processes; and
- Manage the implementation project, including amending the PrA contract and overseeing the PrA's implementation activities.

3.4 Implementation Approach

The table below shows the range of implementation lead times requested by respondents to the Party/Party Agent impact assessment. The requested timescales are the same for impacted Parties regardless of whether the Proposed or Alternate Modification is implemented.

Participant	Requested lead time
Profile Administrator	3 months from Ofgem decision to approve (to run in parallel with participant lead times)
AccuRead	9 months from receiving final redlined CSDs
BizzEnergy	No lead time provided
British Energy	12-18 months
Centrica	12 months from received final redlined CSD changes
E.ON UK Energy Services	Approximately 6 months
EDF	2 years from now (i.e. June 2010)
Npower	12 months
Scottish Power	Approx. 6 months
SSE	9-12 months from Ofgem decision
Total Gas & Power	1 day
Western Power Distribution	Minimum 6 months from receiving final redlined CSDs

Please note that some participants have indicated lead times from an Ofgem decision, while others have indicated lead times from the point where final redlined CSD changes are made available. The Implementation Dates suggested by the Group are based on a total 12-month lead time from an Ofgem decision to the point at which the new P223 requirements become effective. Within this overall timetable, the final redlined CSD changes would be made available 8-9 months prior to the Implementation Date (with draft redlined CSD changes being available 9-10 months prior to implementation). The Group has noted the request from one Supplier for a two-year lead time, and that the Supplier wishes to keep the reasons for this lead time confidential from the Group. On balance, the Group considers that a 12-month lead time is sufficient, since the time taken to implement needs to be balanced against the desire for earliest possible realisation of benefits. The benefits of improved profile accuracy to Suppliers will take two years to be achieved, as it is necessary to recruit customers and obtain a year's worth of data before the data can be used.

Please note also that the day on which the P223 requirements become effective is not necessarily the day on which the first recruitment requests will be sent, since these are sent in January each year.

Two Implementation Dates have been suggested by the Group, which are: 1 December 2009 and 1 April 2010.

In order to achieve a **1 December 2009** implementation, an Authority decision would be required by the end of November 2008 (2.5 months from the submission of the final P223 Modification Report in mid-September 2008). Draft redlined BSCP changes would be provided for review in February 2009 and finalised during March 2009. The first customer recruitment requests would be sent out to Suppliers on 1 January 2010.

In order to achieve a **1 April 2010** implementation, an Authority decision would be required by the end of March 2009. Final redlined BSCP changes would be made available by the end of June 2009. The first P223 customer recruitment requests would not be sent out to Suppliers until 1 January 2011.

BSCCo's normal releases for approved changes occur in February, June and November each year. However, non-release dates have been proposed for P223 for the following reasons:

- a) As there are no changes to the main BSC Agent central systems and a non-standard release date has no bearing on BSCCo or PrA implementation cost, it is believed to be unnecessary to tie the deployment to a regular release date;
- b) Implementation of P223 will interact with BSCCo's re-procurement of the PrA service, due to begin in August 2009 with the new contract effective from 1 April 2010. Although the re-procurement is not part of P223, it will affect the implementation of P223 by requiring:
 - o An Authority decision to approve/reject P223 before the procurement process begins so that BSCCo and potential service providers have certainty as to the service being procured (i.e. service providers' proposals should be based on the P223 requirements); and
 - o Given the possibility that the procurement could result in a new PrA service provider, there will be a point in time at which it will become more efficient to wait for the new contract to be awarded before implementing P223. This avoids the risk of the existing service provider implementing the arrangements, running them for a few months and then transitioning the service to the new service provider. For this reason, implementation in the February 2010 Release is believed to be inefficient. Additionally the P223 Implementation Date needs to be before the commencement date of the new contract, to ensure that any new service provider would not spend time implementing the old arrangements only to then change to those required by P223. With this in mind, the suggested 'fall-back' Implementation Date is 1 April 2010.

It should be noted that the annual P223 recruitment process begins in December each year as detailed in Section 7, when the PrA sends its recruitment targets to BSCCo. This allows time for the necessary meters to be installed prior to the start of each data collection year on 1 April. The 1 December 2009 Implementation Date is designed to fit this timetable and gives earlier realisation of any potential benefits. The 1 April 2010 date fits less well with the enduring annual timetable with the first recruitment requests going out in January 2011. However it is believed to be most appropriate 'fall-back' date for the PrA procurement reasons set out above.

The Group agreed that both dates should be put forward to Ofgem (in case the Authority is unable to make a decision within 2.5 months for a December 2009 implementation). However, it expressed its preference for the earlier of the two dates, in order to deliver the potential benefits as early as possible.

4 ASSESSMENT OF MODIFICATION AGAINST APPLICABLE BSC OBJECTIVES

This section outlines the initial views of the Modification Group regarding the merits of P223 against the Applicable BSC Objectives.

4.1 Summary of Group's initial views

The Group by majority believe that the Alternate Modification better facilitates the Applicable BSC Objectives when compared with both the Proposed Modification and the current baseline, and should therefore be approved. Minority views put forward were that the Proposed Modification provided the best solution, or that neither of the P223 solutions offered improvements over the current baseline.

There was broad agreement with the findings of the cost benefit scenario modelling and that there would be potential benefit to Suppliers. All members agreed to the principle that there were issues with the existing process and that the current profiles are inaccurate. All members also agreed that it was desirable to achieve more accurate profiling through the recruitment of a random, representative sample. However, there was disagreement as to how improvements to the current existing process would be achieved and whether P223 would achieve any improvements.

The table on the following page shows the views expressed for and against P223 as a whole when compared with the current arrangements. The Group agreed that the relevant Applicable BSC Objectives for P223 were Objectives (c) and (d), and that P223 would have no impact on Objectives (a) and (b).

Note that not all of the arguments shown were necessarily shared by all members.

Objective	For	Against
<p><i>Applicable BSC Objective (c)</i></p>	<ul style="list-style-type: none"> • Current process is untenable and if P223 is rejected could lead to further deterioration in profiling accuracy; • Current inaccurate profiles are anti-competitive as they expose Suppliers to volatility in Group Correction Factors, and thereby the risk of being exposed to imbalance for volumes unrelated to their actual position if they cannot predict this effect; • Inaccurate profiles are also anti-competitive as small Suppliers are less able to absorb this imbalance risk – more accurate profiles help give 'level playing field'; • P223 would enable the recruitment of a more representative sample, leading to improved profiling accuracy and reduction in Supplier imbalance risk by less Group Correction Factor volatility (benefit greatest for small niche Suppliers); • Enables more 'correct' allocation of energy in Settlement, helping Suppliers to forecast their positions more accurately; • P223 Supplier/agent implementation costs are less than financial effects of inaccurate profiles; • Should be a natural incentive on Suppliers to support P223 as they are most impacted by inaccurate profiles. 	<ul style="list-style-type: none"> • Effort and cost required by Suppliers/Supplier Agents to implement and operate P223 arrangements; • Not proven that Suppliers will be more successful than PrA in recruiting customers/installing meters, and that benefits of improved profile accuracy (e.g. reduction in imbalance exposure) will therefore be obtained; • Any benefits of improved profiling accuracy won't materialise until 2 years after implementation (as first need to recruit customers and collect a year's worth of data).

Objective	For	Against
<p><i>Applicable BSC Objective (d)</i></p>	<ul style="list-style-type: none"> • P223 costs are less than the financial effects of inaccurate profiles on Suppliers; • Suppliers able to recruit more representative sample than PrA, as have larger 'pool', the consumption info needed to target appropriate customers and an existing relationship with those customers – therefore P223 is more efficient process; • Suppliers do not need customer's permission to put them in sample and install the HH capable meter – can be undertaken as a normal meter replacement and covered through Suppliers' Terms and Conditions with their customers; • The existence of current smart metering trials demonstrates that it is possible for Suppliers to install and retrieve data from HH meters • Only a small proportion of a Supplier's customers would need to be recruited – not onerous; • Efficient method of data collection and providing this data to the PrA as opposed to the current arrangements where the PrA has to collect data additionally to the Supplier's NHHDC; • P223 process more efficient due to use of single meter (resolving current space issues with secondary meters); • Recruitment/space benefits will be seen immediately; • Customers are suspicious about intrusion; it will appear less threatening to a customer when dealing with a known Supplier than when dealing with the PrA; • The existing Supplier-customer relationship can mean that a customer is more willing to allow a meter exchange in the knowledge that there will be a short loss of supply to the customer's premises; • No obvious alternatives to P223 approach were identified in previous SVG discussions or Standing Issues 21 and 29; • P223 is compatible with a future national smart metering roll-out, as the solution utilises HH capable meters; • Even if all domestic customers had smart meters, profiles would still be needed in the longer-term while these customers' consumption continues to be settled on a NHH basis; • P223 process facilitates other types of potential sampling in the future – e.g. for Export metering/microgeneration. 	<ul style="list-style-type: none"> • Effort and cost required by Suppliers/Supplier Agents to implement and operate P223 arrangements – P223 process more efficient for PrA but not necessarily for Suppliers/agents; • Not proven that Suppliers will be more successful than PrA in recruiting customers/installing meters, and that the benefits of improved profile accuracy will therefore be obtained; • Uncomfortable with not telling customers that they are in the sample, as could affect Supplier's reputation – some Suppliers may therefore ask for customer consent (although not a P223 requirement), and be dependent on this in the same way PrA is now; • Suppliers likely to still encounter resistance from customers to meter replacement – some Suppliers may choose to offer financial incentives to overcome access issues (though this is not a P223 requirement); • Effort and cost implications for Suppliers in needing process to retain/replace customers under the Proposed Modification on CoS – overly complex and inefficient process; • Is putting obligations on Suppliers the best solution to the current inaccurate profiles, or is this moving issues elsewhere?
Overall	Majority FOR Alternative Modification; SPLIT on Proposed Modification	

The table below shows the Group's views as the relative merits of the Proposed Modification and Alternative Modification **compared with each other**, rather than with the current arrangements.

Objective	For Alternative Modification	For Proposed Modification
Applicable Objective (c)	<ul style="list-style-type: none"> Less effort/cost implications for Suppliers as removes the need to retain/replace customers throughout a year following a CoS. 	<ul style="list-style-type: none"> Proposed Modification gives ability to retain customer on CoS, mitigating impact of sample 'churn' on amount/quality of data received in a given year and therefore maximising benefits of more accurate profiles.
Applicable Objective (d)	<ul style="list-style-type: none"> Alternative is more efficient/workable, as removes the CoS implications for Suppliers during a year. <p>Although Alternative requires recruitment of additional customers at end of year (to replace those lost on CoS), and results in the meters of the 'lost' customers becoming stranded assets, this may become less of an issue over time as smart meters become more common amongst customers and can act as the 'HH capable' meter for profiling purposes.</p>	<ul style="list-style-type: none"> More efficient to give the ability to retain the customer on a CoS under the Proposed Modification. Alternative will have higher central costs (due to need install additional meters to replace those lost on CoS), which will ultimately be recouped from Parties.
	MAJORITY for Alternative	MINORITY for Proposed

Overall, within the Group there was therefore:

- A **SPLIT** as to whether the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives when compared with the existing arrangements (some members believed that both (c) and (d) were better facilitated, whilst others believed that benefits under (c) would be outweighed by disadvantages under (d) due to the perceived inefficiencies for Suppliers of the CoS process);
- A **MAJORITY** view that the Alternative Modification would better facilitate Applicable BSC Objectives (c) and/or (d) when compared with the existing arrangements (members gave different weight to the two Objectives, with some believing that improvements would be marginal while others identified more significant benefits); and
- A strong **MAJORITY** view that the Alternative Modification would better facilitate Applicable BSC Objectives (c) and/or (d) when compared with the Proposed Modification, due to the different treatment of customers under a CoS (again, members gave different weight to the two Objectives).

Therefore in conclusion:

The initial **MAJORITY** view of the Modification Group is that the **Alternate Modification SHOULD** be made and the Proposed Modification **SHOULD NOT** be made.

5 COST BENEFIT ANALYSIS

In accordance with its Terms of Reference, the Group agreed that it was important to try to quantify the potential benefits of improved profiling accuracy to Suppliers, as well as any savings to the PrA/BSCCo which would result from P223.

On behalf of the Group, ELEXON undertook a modelling exercise to establish the potential benefits and presented the results to the Group. This section summarises the results of the cost-benefit analysis undertaken by ELEXON, as well as the Group's discussions of the results. The full cost-benefit analysis is provided as Appendix 6.

The main tenet of the benefits to Suppliers is through the following logic:

A more representative sample → brings about lower sampling error → which results in lower regression error → and in turn less volatility in GSP Group Correction → this will help improve forecasting of a Supplier's position → and as a consequence decrease Supplier's exposure to Imbalance costs.

The main cost benefits can be summarised in the table below. These benefits are based on the assumption that P223 will improve profiling accuracy by between 0-2%.

Total Supplier Benefit (application year)	Total Supplier Cost (one-off)	Central Benefits	Central Costs
£2.3m -£12.1m*	<i>Supplier costs provided in impact assessment responses range from minimal cost to £350k</i>	£20k per year savings to PrA	ELEXON implementation costs = £20-30k ELEXON operational costs = £5k per year PrA implementation costs = £5-10k Total PrA Operational costs =£20-100k (Proposed Modification) or £45-200k (Alternative Modification) per year

**These figures are for all Suppliers across all GSP Groups. The benefit to individual Suppliers depends on their Market Share and forecasting capability of the Supplier (range goes from good to poor forecasting) and is based on a reduction in exposure to imbalance costs. It should also be noted that it will take two years before the benefits start to be seen by Suppliers as it takes 1 year to collect the data and a year to analyse and produce the profiles. A sampling rebalancing exercise in terms of addressing shortfalls in the sample by size and regional distribution of the sample customers would ensure that the benefits start to be realised at the earliest opportunity.*

A further explanation of the model used to derive these results, the assumptions used, and the results themselves can be found in Appendix 6. A copy of the model itself can also be made available to interested parties on request.

The Group noted that it had been necessary to make assumptions for the purposes of the modelling, but considered that the modelling process followed was appropriate. It also broadly agreed that an improvement in profiling accuracy could deliver benefits in the region of the amounts quoted. One member suggested that the benefits might actually be higher in practice, since prices had recently become 'spikier' than the historic imbalance prices used in the modelling.

It was noted that, for every customer which was lost from the sample on a CoS under P223, a replacement customer would need to be recruited and an additional meter installed for that replacement customer. BSCCo advised that a recent Ipsos MORI poll had shown that 19% of electricity customers changed Supplier during 2007. For each set of customers recruited each year under P223 (likely to be 10% of the overall sample or 250 out of 2,500 customers), 19% of these (48) could therefore be lost from the sample under the Alternative Modification. Under the Proposed Modification, the Supplier has the choice to retain or replace the customer – but assuming half of Suppliers choose to replace the customer, this equates to around 10% (24) of that year's customers being lost and requiring a new recruitment and meter installation. As the proportion of the sample recruited under P223 increases, and the proportion of existing customers with secondary metering (who are unaffected by a CoS) decreases, more customers would be lost. By the time that 100% of the sample has been replaced under P223, a 19% churn rate would equate to 678 customers. The operational costs shown for the PrA therefore include the costs of installing additional meters to replace those lost on a CoS (roughly £400 per meter). The costs of these additional meters would be paid by BSCCo (as part of the PrA service cost) and ultimately recouped from BSC Parties as part of BSCCo Costs. Further information can be found in Appendix 7.

A majority of the Group believed that the potential increased central cost implications of the CoS 'churn' under the Alternative were preferable to the complexity to Suppliers of having to retain or replace customers throughout a year (see Section 4). One member also commented that the cost of additional meters quoted was a 'worst case scenario', since in the future as more smart meters were installed these might be able to be used for newly recruited customers without needing to put in a different meter.

Some members of the Group commented that they had expected higher cost savings for the PrA. BSCCo clarified that many of the immediate savings to the PrA (e.g. in recruitment costs, unsuccessful site visits) would be offset by other activities which it would need to undertake under P223 (e.g. administering the rebate process) whilst other changes were relatively cost-neutral as they were variants on existing processes (e.g. obtaining and storing HH data). In addition, in the short term, the PrA would need to continue acting as data retriever for those existing customers in the sample with secondary metering. The Group noted that, as the proportion of 'old' customers in the sample reduced, there was the potential for greater savings to be achieved. It also noted that the PrA contract itself was due to be repurchased in 2009/10.

6 SMART METERING AND PROFILING

The Group discussed the possible interaction of P223 with any future national smart metering roll-out and, based on current information available from BERR regarding the possible scale/timescales of such a roll-out, did not identify any conflict or negative interaction with P223. The Group noted that the earliest possible implementation of P223 was December 2009, and that any benefits of improved profiling accuracy could take a further two years to be seen. The Group therefore considered whether P223 was likely to deliver long-term benefits, or whether the need for its solution might be negated if a national smart meter roll-out occurred.

The Group agreed that a scenario where smart meters had been installed for all domestic customers was some way off. It also noted that, even if this scenario occurred, profiles would still be needed as long as these customers continued to have their consumption settled on a NHH basis. The Group agreed that profiling accuracy would therefore continue to be an important long-term issue, and noted that P223 is intended to provide a robust long-term solution for achieving such accuracy.

Some members (who had experience in carrying out existing smart metering trials) also considered that any future smart meter rollout could support the P223 PrA process as smart meters would be the standard meter used across the industry and could be used to obtain profiling data, thereby removing the current problems of fitting in HH capable meters, e.g. power down issues to swap meters. The Group noted that a process would still be required to target the appropriate customers to use in the sample, even if all customers had smart meters.

Finally, the Group also noted that the Proposed / Alternative solutions could facilitate the setting up of other samples in the future, such as an Export profiles sample for microgeneration. It is anticipated that occurrences of microgeneration will increase in the next few years and that data gathered could help remove any barriers to the uptake of microgeneration.

7 DETAILED PROPOSED MODIFICATION SOLUTION REQUIREMENTS

As required by the P223 Terms of Reference, the Group has discussed and developed the detailed requirements to underpin the solution proposed by the Modification Proposal.

As the proposed P223 solution is based on the Issue 29 straw man, BSCCo (on behalf of the Panel as Proposer) has walked the Group through the straw man. The Group has either noted/agreed the straw man solution requirements, or has identified changes or further detail which it believes are required. The following sections set out the Group's agreed requirements and its rationale for these, along with any details of any alternative approaches which were considered but not progressed by the Group. Flowcharts of the solution can be found on the [P223 webpage](#), under '[P223 impact assessment documents](#)'.

7.1 PrA sends recruitment requirement to BSCCo

BSCCo explained that the PrA will establish the shortfall in Sample Participants by specifying the sample size required for each GSP Group, Profile Class, Stratum, consumption level and type of customer, and send this information to BSCCo.

The Group noted the intention of the Issue 29 straw man that this should be an annual process, and agreed that such information would be sent on a yearly basis by the first Working Day in December. This timescale was set in order that all recruitment requests could be processed and all necessary meters installed in time for the start of the data collection year on 1st April.

The Group also noted that P223 will only apply to new or replacement Sample Participants that are required for the load research (i.e. it will not apply to customers who are already in the sample), so as to avoid any wholesale changes to the profiles.

The Group noted that the recruitment requirement would be broken down as follows:

Profile Class	Recruitment target broken down by
1 and 2	<ul style="list-style-type: none"> GSP Group Strata
3	<ul style="list-style-type: none"> GSP Group Strata Industrial and commercial
4	<ul style="list-style-type: none"> GSP Group Strata

Profile Class	Recruitment target broken down by
5-8	<ul style="list-style-type: none"> GSP Group Strata / consumption level Industrial and commercial

The PrA will need to provide BSCCo (as a one-off implementation exercise) with details of all customers currently in the sample, as part of identifying the shortfall to be recruited under P223.

7.2 Requirement 2: BSCCo processes the PrA sample requirement

As in the current process, BSCCo will assess the PrA's requirement and pro-rata the number of required customers across Supplier by each Supplier's market share (i.e. Suppliers with a larger market share will be requested to provide more Sample Participants than Suppliers with a smaller market share), so that the number of customers that Suppliers are asked to recruit is in proportion to their size. Additionally it will also mean that the effort Suppliers have to spend supporting the process should be proportionate to their resources.

BSCCo will calculate each Supplier's market share by Market Participant ID (MPID), using a snapshot of Supplier Purchase Matrix (SPM) data as at 1 December each year. This data is received regularly by BSCCo from the Supplier Volume Allocation Agent (SVAA), and can be used to count how many Annualised Advances (AA) and Estimated Annual Consumptions (EAC) each MPID has in each SSC/Profile Class within SPM. BSCCo will then aggregate these figures at an organisational level (i.e. across all of the Supplier's MPIDs) to establish:

- The MPID's total market share for Great Britain; and
- The MPID's share per GSP Group and Profile Class.

Each Supplier will therefore receive a target recruitment figure for each category shown in the table in Section 7.1, reflecting its market share in that category.

In calculating each Supplier's target, BSCCo will also take account of how many customers the Supplier already has in the sample, such that the request reflects the Supplier's true market share in that GSP Group/Stratum etc. For example, if the Supplier has a 60% market share, 250 customers are being recruited in total that year, and the Supplier already has 100 customers in the sample, a simplistic overview of the Supplier's recruitment target is:

$$(0.6 * 250) - 100 = 50 \text{ customers}$$

In reality, the calculation will be more complex and take into account Supplier market share at the GSP Group/Profile Class level. Further detail can be found in Appendix 7.

Each Supplier will be required to annually confirm to the PrA (using its single point of contact – see below) the list of all its associated MPIDs (Supplier IDs) for use in calculating its market share.

BSCCo will consequently provide the pro-rated numbers back to the PrA within 10 Working Days. The Group queried the number of customers a Supplier would be required to provide under the P223 process. BSCCo explained that that the sample requirement for a large Supplier (based on the existing target sample size of 2,500 customers) would be unlikely to exceed 200 customers based on existing market shares, and for a small Supplier would be a much smaller number (e.g. 2 or 3 or perhaps none at all). Appendix 7 provides further detail regarding the number of customers which Suppliers would be required to provide.

7.3 PrA requests Sample Participants from Suppliers

For simplicity, this requirement has been divided into separate coloured sub headings as below.

Appropriate line of communication

The Group noted that once the number of required customers has been pro-rated across Suppliers by BSCCo as detailed in Section 7.2, each year the PrA will request each Supplier for new Sample Participants via email using a single dedicated point of contact for each Supplier at the aggregate company level.

The Group agreed that this point of contact should cover all the Supplier's different IDs/MSIDs (i.e. where a Supplier has multiple Supplier IDs) and therefore the single point of contact would provide all the required information for all its MSIDs partaking in the sample.

It was noted that there were several possible lines of communication between the PrA and Suppliers, but it was felt that email communication was the best solution. The Group agreed that a standard template be used when requesting Sample Participants from Suppliers. Such requests will be based on GSP Group, Profile Class, and Stratum and customer type and sent to Suppliers by the first Working Day in January each year.

A 'guidance note' will be provided to Suppliers with the request, detailing:

- The list of excluded customer types which cannot be used in the sample (see below);
- An explanation of what is meant by 'random selection' of customers (see below);
- Details of the minimum metering requirements for the HH capable meter (see Section 7.8); and
- Details of the options for agent services/rebates (see Section 7.6).

Principle of random sampling

It was noted that under the current process there is difficulty in obtaining sample participants, and thus a 'take any available participant' approach has had to be adopted. It was suggested that this has introduced bias in the current sample for reasons mentioned in Section 2.

There was debate surrounding the effect of using existing smart meter data as opposed to randomly selected data and whether existing smart meter data had an adverse effect on the shape of the profile classes. It was noted that many Suppliers are currently carrying out their own smart metering installation trials amongst their own customers. One view suggested that customers involved in a Supplier's smart meter trial should be used in the PrA sample. The suggested advantages were that such customers would have existing smart meters, saving Suppliers the effort of installing Half Hourly capable meters for those customers. It was suggested that if a Supplier selected its required number of customers for the profiling sample from an existing smart metering trial, there might be no adverse impact on profiling data.

The counterinterviews made to this suggestion were that different Suppliers would use different subsets of customers in smart metering trials (e.g. a particular GSP Group, customer type or property size), and that this had the potential to skew the representativeness of the sample. Another counterinterview was that, since under P223 Suppliers would be offered a rebate for the cost of the meter, installing the meter and/or collecting data, there was no direct cost to the Supplier from installing Half Hourly capable metering (and therefore no direct saving to the Supplier from using existing smart metering customers). However, it was noted that the costs of the meter installations would ultimately be recouped from BSC Parties as part of the costs of the PrA service. For details of the P223 rebate arrangements, please refer to Sections 7.9 – 7.10.

A request was made for BSCCo to undertake analysis on the impact of using existing smart metering customers on the accuracy of profiling, but this was not undertaken because it was the majority view of the Group that:

- Such analysis, using customers from a particular Supplier would show the effect of one Supplier's customers and not the effect of customers from a different Supplier;
- Different Suppliers would have different requirements for customers participating in the trials and this would contribute to skewing the shape of the profile further;
- The choosing of such customers is not random or representative of customer consumption patterns across a Supplier's entire portfolio, and is therefore likely to compromise the accuracy of profiles by skewing the sample;
- There is a possibility that smart metering customers would alter their usage patterns, again affecting the representativeness of the sample;
- The results obtained from any analysis would have no accurate baseline for comparison as the current profiles are already known to be skewed and inaccurate (in other words, it would not be possible to see if using smart metering customers would make profiles more or less accurate); and
- Whilst it might be financially advantageous or more efficient for one Supplier to use customers from its smart metering trial, it might be equally advantageous to another Supplier to use a different subset of its portfolio – making it difficult to only justify one 'exception' to the rule without moving further away from the principle of a random, representative sample.

With this in mind, the majority of the Group agreed that the current Code obligation of random sampling should remain and that no further analysis should be undertaken. It was felt that any data analysis could only be compared to the current inaccurate profiles, and it would be difficult to draw any conclusions in the absence of a baseline of 'accurate' comparison profile.

As a consequence, the Group by majority agreed that the MSIDs selected by Suppliers under P223 must be a random representation of their entire portfolio and are not biased in favour of a particular customer type, region or other subset of the Supplier's customers. These members agreed that this requirement would allow the most accurate/representative data to be used in profiling, reflecting consumption patterns across the whole of the GB customer base.

The Group noted that this did not mean that smart metering customers could never be used in the sample; just that such customers should not deliberately be targeted. It was noted that the intention was that the customers selected by the Supplier should be representative of its portfolio. If 80% of the Supplier's portfolio was smart metering customers, then it would be entirely appropriate for 80% of the customers it recruited to have existing smart meters as this would continue to be representative of GB consumption patterns. However, if only 5% of a Supplier's portfolio was existing smart metering customers, then it would be expected that smart metering customers would only form a small proportion of those recruited by that Supplier.

Exclusions from the profiling sample

A list of customer types to be excluded from the profiling Sample was created by the Group, and this includes:

- **Customers using or requesting the use of their own agents**

It is not possible to put an obligation on the customer and there would be difficulty in relying on the customer to provide HH data, as the customer is not a signatory to the Code.

- **Customers that use a prepayment meter**

Currently it is not possible to provide for prepayment metering and HH data collection at the same time, using the same meter. This requirement may be reconsidered in the future.

- **Customers that already have a 'smart' meter which is not HH capable**

Such meters will not be able to provide HH data for the PrA to create profiles. Additionally having just replaced the customer's original meter with this smart meter, it would not be in the interests of efficiency or a good customer relationship to swap it out for a second time.

- **Customers that own their own meter**

In most cases, customer owned meters are not HH capable.

- **Customers whose meters are controlled by the Radio Teleswitch Service (RTS)**

The Teleswitch equipment is incompatible with the minimum metering requirements required for P223 (i.e. it is not possible to have a HH capable meter with GSM access and Teleswitch equipment in a single meter).

- **Customers in Profile Classes 2 and 4 who are not on a continuous tariff which is one hour either side of 00.30 to 07.30 hours.** *For the avoidance of doubt, the PrA would require customers with two rate metering and where the low rate is overnight in one continuous time period (i.e. economy 7 where the high rate is 07:00 – 23.59 and the low rate 00:00 – 06:59). Low rate time periods such as 02:00 – 09:00 would mean that the customer is excluded from the sample. Customers that have their low rate split into 2 or more time periods would also be excluded. Please note that the switch load should be synchronised with the register.*

Where a randomly-selected customer falls into one of the above groups, the Supplier shall randomly select a replacement customer before sending the list of selected MSIDs to the PrA. Such customers should not be provided to the PrA.

The Group agreed that Suppliers may also reject a randomly-selected customer where there may be known access issues to that customer's premises. The Supplier will have to randomly select a replacement customer to send to the PrA.

Appropriate sample size

Subsequently the Group explored the issue on what the appropriate sample size would be ideal. One view looked at the possibility of significantly increasing the sample size, to buffer the loss of customers throughout the year. It was suggested that Suppliers could be requested for more customers than required.

The Group noted that currently the same is chosen in an unbiased manner and that there is no ideal way to deal with the attrition to the PrA sample. However the majority of the Group felt that before the issue of sample size was looked at, a robust PrA process (for recruiting in an unbiased way) was required. In doing so Sample Participants would contribute to the creation of more accurate profiles.

It was concluded that this was outside the scope of the Modification as the modification sought to replace the current PrA process with a new PrA process for recruiting customers, and not the issue of what the ideal sample size should be. It was therefore not pursued further. Any changes to Sample sizes would have to be undertaken by the Profiling Experts Group (an expert group set up by SVG to consider profiling issues) and the SVG.

7.4 Supplier sends a list of suitable Sample Participants to the PrA

The Group agreed that the line of communication for the Supplier to send details of the selected customers to the PrA should be via email, using a standard template/format.

Having randomly selected the appropriate MSIDs, the information sent would contain the following:

- MSID;
- Name of customer and, if appropriate, a contact name;
- Address of customer, including billing address if different from the site address;
- Confirmation of Profile Class and SSC ID;
- Confirmation of GSP Group;
- Total annual energy consumption based on the latest 12-month period;
- Where applicable, day/night split of annual energy consumption based on the latest 12-month period;
- Where applicable, details of switching times for registers and/or load;
- The applicable annual Maximum Demand in kW based on the latest 12-month period;
- Whether the customer already has a HH capable meter that meets the minimum requirements for P223 (for rebate purposes and to know whether the PrA's DC can dial the meter if they are appointed as the agent);
- Whether the Supplier will use its own or PrA's agents for that customer (see Section 7.6 for further detail);
- Where applicable (e.g. for Profile Classes 5 to 8), the type of customer concerned (e.g. commercial); and
- Stratum.

It should be noted that the intention of P223, as supported by the majority of the Group, is that the concept of random sampling should be used by Suppliers. By this we mean that the sample chosen should be a random and representative sample of the Supplier's customer base.

The reasons for the PrA requiring this information from the Supplier are noted below:

- In order that the PrA knows how many meters have been installed (for rebate calculation);
- In order that the PrA can identify a CoS (i.e. to recognise if data has not been received data, and to know where the shortfall is if the customer leaves the sample);
- If using PrA's agents, the PrA's MOA can assess whether it is practical to install the meter;
- In order that the PrA can identify any potential non-compliance with the requirement for random selection (see below);
- To allow PrA to track how representative the sample is (i.e. if needed to report to ELEXON/SVG etc.); and
- So that the PrA knows which customers its agents will be appointed to (so that it can begin the meter installation process for these customers, and also so it knows the amount it needs to rebate Suppliers who have kept their own agents).

The Group debated the possibility of gaming since there was no obvious efficient method by which the PrA could monitor the Supplier choosing the Sample Participants. This would mean that Suppliers could attempt to bias the sample for financial gains if it was cheaper to use existing smart meter customers than randomly chosen customers. However it was noted that in doing so the Supplier would be in breach of its P223 Code obligations. It was understood that if a customer with a smart meter was randomly chosen, then such a customer can partake in the PrA sample as long as such types of customers are not over-represented in the sample by deliberately choosing customers of this type.

It was suggested that the means by which a Supplier chooses the customer could be audited, but this was not pursued further as the Group could not identify an efficient method by which the PrA could monitor/observe the Supplier's selection.

It was noted that any obvious non-compliance with the principle of random sampling could be picked up by the PrA from the customer details provided. In conclusion it was agreed that the PrA/BSCCo will have the ability to either challenge the Supplier's selection by requesting replacement customers or inform the Performance Assurance Board (PAB) via BSCCo if it has reason to believe (from the customer details provided) that any Supplier has not selected customers in a random manner. Should any such circumstances occur, the PAB will deal with the suspected non-compliance under its existing assurance processes.

7.5 PrA assesses the customer's details sent by the Supplier

The Group agreed that the PrA will assess the customers provided by each Supplier using ECOES (Electricity Central Online Enquiry Service) to understand the suitability of the customer for the sample. The PrA will reject customers where information suggests that there would be significant difficulty in fitting HH metering equipment and collecting data, if the customers do not appear to represent a sufficiently random sample (the PrA can challenge the Supplier's selection and inform the PAB where relevant) or if the customer falls into one of the groups listed under Section 7.3.

BSCCo explained that the PrA will confirm with Suppliers which customers have been chosen for the sample and request alternatives for any customers that have been rejected. The Supplier will note the customers that have been accepted by the PrA as part of the sample. The Group agreed that the best form of correspondence between the PrA and the Supplier would be via email.

Under this arrangement the Supplier will not be required by the Code to inform the customer that they are part of the profiling sample. The Group has sought legal advice from BSCCo on whether there are any issues in not informing a customer that they are part of the PrA sample, due to concerns that there might be reputation issues for Suppliers if a customer inadvertently discovered that they were part of the sample without previously having been informed by their Supplier. A copy of the legal advice is reproduced in Appendix 1 for information. In summary, the legal advice is that there would be no requirement under the Code to inform the customer; however, Suppliers may wish to do so for their own customer relationship-management reasons.

The Group decided that the PrA will need to confirm/reject Sample Participants by the first Working Day in February each year in order that the necessary meters could be installed in time for the start of the data collection year on 1st April. The Supplier will be obliged to provide randomly-selected replacement customers for any which are rejected by the PrA.

The Group noted that the reasons why the PrA might reject a customer include:

- The customer has not been selected randomly (the PrA has the ability to inform ELEXON/PAB);
- Location issue – e.g. sites that cannot be reasonably accessed; and/or
- Safety issues – this may be a physical safety risk or a personal safety risk to the installation staff.

It was noted that rejection for any of these reasons would be a rare event.

7.6 Choice of agent services

The Group considered the suggestion of the Issue 29 straw man that, under P223, MOAs for the sample customers could be retrospectively appointed (i.e. the MOA is retrospectively appointed following the installation of a meter). The logic behind this is that it is inefficient to appoint a MOA who might subsequently establish when at the customer's premises that they are unable to install the metering solution, and consequently has to be de-appointed again.

While the Group agreed with the logic the following concerns were highlighted:

- The introduction of a non standard process could lead to confusion amongst Supplier Agents and the Supplier deeming the whole process inefficient; and
- The retrospectively-appointed MOA will not be able to use flows until appointed.

The Group also felt that the number of occasions when the MOA would have trouble installing the meter would be small, since the Supplier should have filtered out any customers with known access issues earlier in the process. However, the Group agreed to seek views via the impact assessment as to whether Suppliers/MOAs believed that they would have problems installing meters for sample customers.

The Group agreed not to progress the idea of retrospective appointment under P223, and that MOAs for sample customers should continue to be appointed prospectively as under existing industry processes. The Group noted that this change to the detail of the solution did not require an Alternative Modification, since the Modification Proposal itself was silent on the process for appointing MOAs.

As per the Issue 29 straw man, it was noted that the Supplier have the choice to procure, install and maintain the necessary metering for a customer using either its own Supplier Agents or the PrA's nominated agents.

The Group agreed that regardless of which option is chosen, the agents must either be the Supplier's or PrA's NHHDC, NHHDA, MAP and MOA. There is no option to mix the agents i.e. choose the PrA's NHHDC and MOA but retain the services of the Supplier's NHHDC. If the Supplier elects to use the PrA's nominated agents, then those agents will therefore undertake all of the following requirements for that customer. The requirements are:

- Obtaining and installing the HH-capable meter (MAP/MOA – new process). It should be noted that customers with an existing HH capable meter will not be required to have their meter replaced as the existing meter can be used to collect HH data⁷;
- Collecting normal NHH data from that meter for Settlement (NHHDC – no change to existing industry processes);
- Aggregating the normal NHH data for Settlement (NHHDA – no change to existing industry processes); and
- Collecting HH data from the meter for profiling (NHHDC – new process).

The Group agreed that if a Supplier chooses to use its own nominated agents, then the Supplier's own agents will be responsible for fulfilling all of the above roles. The appointment and de-appointment of Party Agents in both cases follows the standard existing appointment/de-appointment processes and timescales under the BSC, e.g. D0155 'Notification of New Meter Operator or Data Collector Appointment and Terms' and D0209 'Instruction(s) to Non Half Hourly or Half Hourly Data Aggregator'.

The Supplier has a choice to choose the agent option at a MSID level, i.e. if a Supplier has two MSIDs in the sample, the Supplier can choose the PrA's nominated agents for one MSID, and its own Supplier Agents for the other MSID.

⁷ In instances where the PrA's nominated agents have been appointed and the customer has a HH capable meter that the PrA's DC cannot dial, the PrA would discuss with the Supplier the best approach.

The Group highlighted that there might be a preference among the larger Suppliers to use their own Supplier Agents, as such agents would be familiar with the respective Supplier's systems and the PrA's nominated agents may not. Another reason for a Supplier using its own agents could be explained if there are existing commercial arrangements in place with their agents (e.g. a contractual right to represent all their customers in a particular area). It was suggested that if larger Suppliers used the PrA's nominated agents, then there may be the need for system changes in order for there to be compatibility between the PrA's nominated agents and the respective Supplier. However, where Suppliers use their own agents, they and their agents would need to familiarise themselves with the changes brought about by P223. In such instances the Supplier will require a mechanism to inform its agents that a particular customer is part of the PrA sample and the appropriate lines of communication between the PrA, Supplier and Supplier agents be set up.

As a consequence, the Group agreed that a question should be asked in the P223 impact assessment in order to elicit details on whether Suppliers would prefer to use their own agents or the PrA's.

Responses received from the P223 impact assessment indicated that there was an even split between Suppliers wishing to choose the PrA's nominated agents and those that preferred to use their own Supplier Agents. In conjunction with the views of the Modification Group, this had the effect of changing the original choice of agent services solution. Originally a Supplier would have had to choose between the agent services for all its MSIDs at a Supplier level, but based on the views received from respondents and the Modification Group, this was changed to giving a Supplier the ability to choose the choice of agent at an MSID level.

The Group noted that whilst some Suppliers may choose to use their own agents, there were potential advantages in choosing the PrA's agents, as these agents would be familiar with the P223 processes and there would be less effort involved for the Supplier in the PrA process. It was suggested that this would be a particular advantage for smaller Suppliers, since by using the PrA's agents they could reduce the effort they might need to spend supporting the process. The Group noted that this was originally a view expressed by some members of the Issue 29 Group, which had led them to develop the option for a Supplier to choose the PrA's nominated agents.

7.7 Supplier's responsibility for the agents and Terms & Conditions

The Group agreed that the Supplier will remain responsible for the performance of all its agents (e.g. compliance with BSC Audit and PARMS standards), including where the PrA's agents have been appointed.

In instances where the Supplier chooses to use the PrA's nominated agents, the Supplier will need to enter into a contractual arrangement with the PrA. The PrA's Terms and Conditions will only cover the provision of agent services for the purposes of normal Settlement and profiling purposes (MAP, MOA, NHHDC, NHHDA), since these will be offered at zero direct cost to the Supplier. Any further services which the Supplier might wish to obtain from the PrA's agents can be arranged as a separate matter of commercial negotiation and payment.

7.8 Minimum requirement specifications for the metering solution

The Group discussed and agreed that the meter used in the P223 solution must be HH capable, in order to obtain the required HH data for profiling purposes. As previously stated (Section 7.6), customers that already have a HH capable meter which meets the minimum requirements will not require to have their meter swapped, providing that it meets the meter requirements set out below and the appointed DC is able to dial the meter. It should be noted that the Group wished to specify the minimum meter requirements and that, if a Supplier wishes, it may install a meter which has additional functionality beyond the minimum requirements (e.g. if there are benefits to the Supplier in doing so). However, obtaining and installing this additional functionality will be at the Supplier's own cost – see funding arrangements in Section 7.11.

The minimum requirements as agreed by the Group, for the HH capable meter are that it must:

- a) Comply with Schedule 7 of the Electricity Act, which details the legislative requirement for the meter to be used for Supplier billing;
- b) Be Ofgem-approved;
- c) Have the capability for the communications link to be replaced without needing to replace the meter or invalidating its certification;
- d) Have protocols that are compatible with the practices of the appointed NHHDC;
- e) Physically display NHH consumption information (the NHHDC will obtain the HH data by remote access e.g. GSM);
- f) Comply with [Code of Practice A](#) (CoP A) (Reference 6); and
- g) Meet the selected provisions as shown in the table below of CoP Five (Reference 3) and CoP Eight (Reference 4).

Area of requirements	Document	Sections
Accuracy	CoP8 Issue 1 v4.0	4.2 and 5.2
Measurement criteria	CoP8 Issue 1 v4.0	4.1, 5.1 and 6.3.1
Displays	CoP8 Issue 1 v4.0	6.3
Sealing arrangements	CoP8 Issue 1 v4.0	5.2.6, 5.2.8 and 7.3
Communications	CoP5 Issue 6 v5.0	5.6
Security requirements	CoP5 Issue 6 v5.0	5.6
Data Storage	CoP5 Issue 6 v5.0	5.5.1
Time keeping	CoP5 Issue 6 v5.0	5.5.2
Monitoring facilities	CoP5 Issue 6 v5.0	5.5.3

Please note that the above requirements are the minimum requirements. There may currently be no metering systems which match these minimum requirements. However, there are existing metering systems that exceed these requirements and can be used.

The solution does not require changes to D flows and the MOA/DC will need to use a manual workaround for any data which cannot be sent in the existing D flows.

The appointed MOA will be responsible for ensuring that the installed HH-capable meter meets these requirements.

7.9 Installation of metering equipment process

P223 proposes that the HH consumption data necessary for profiling be obtained by installing a meter with HH capability at each sample customer's premises.

The Group has sought legal advice from BSCCo on whether the installation of HH capable metering at a NHH site is allowable under existing primary legislation. BSCCo has not established any existing legislation which would prevent such an installation. A copy of the legal advice is provided in Appendix 1 for information.

As discussed in Section 7.6, the Supplier will have two options available i.e. choose the PrA's nominated agents or its own agent and this will affect the installation of a meter as noted below:

- a) ***If the Supplier utilises the option to use the PrA's nominated Agents***

The PrA will inform its nominated agents which MSIDs have been identified by the Supplier and the MOA will contact the customer (using contact information obtained from the Supplier) and swap out the customer's existing meter for a suitable Half Hourly capable meter (please refer to Section 7.8 for details of the minimum metering requirements).

If the PrA's nominated MOA declares that the customer is not suitable to have the new metering equipment fitted, the PrA will re-contact the Supplier and the customer is rejected. This would mean that the process of randomly recruiting a replacement customer will begin as per Section 7.3.

If MOA informs that the customer is suitable, then the MOA will fit equipment provided by the MAP and use current industry processes.

b) *If the Supplier utilises the option to use its own agents*

The Supplier will need to inform its own agents the MSIDs that have been identified as potential recruits to the PrA Sample.

The MOA will contact the customer and will swap out the customer's existing meter for a suitable HH capable meter.

In this instance, if the Supplier's own MOA declares that the customer is not suitable to have the new metering equipment fitted, the MOA will have to inform the Supplier. Consequently the Supplier will inform the PrA that the customer's meter cannot be swapped.

As with the option of the Supplier choosing the PrA's agents, the PrA will reject the customer and the process of randomly recruiting a replacement customer will begin as detailed in Section 7.3.

If MOA informs that the customer is suitable, then the MOA will fit equipment provided by the MAP and use current industry processes.

7.10 NHHDC obligations

For simplicity this sub section has been divided into several sub headings as below:

Appropriate communication method for meter readings

The Group noted that the NHHDC would have additional obligations and discussed the best line of communication between the NHHDC and the PrA for the submission of HH data. The following options were discussed:

- **Email:** A standard format and template would be adopted;
- **A new D flow:** The Group did not pursue this further as the creation of a new D flow would require significant Supplier and NHHDC system changes, would require changes to the Data Transfer Network (DTN)/ Data Transfer Catalogue (DTC), and as a consequence would have increased cost implications;
- **The use of existing HH data D flows:** The use of existing D flows would still require changes to the DTC/DTC, to add the PrA as a flow recipient, and was therefore not seen as a cost effective solution. Additionally it was felt that this option had the potential to confuse agents, especially Data Collectors who operate in both HH and NHH markets. Such confusions could arise from sending a normal HH Settlement flow through a non standard route or for Data Collectors who only operate in the NHH market and are not familiar with sending HH flows. As a consequence, this could create inefficiencies in the HH and NHH data provision to the PrA and into Settlement respectively.

The Group therefore agreed that the default form of communication should be email. However, the Group agreed that P223 should allow for another method to be agreed between the NHHDC, PrA and the Supplier if an alternate and more efficient solution was found (e.g. if it was more efficient for the

Supplier/NHHDC to let the PrA download data from a specified server). The method would need to be agreed with the Supplier as well as the PrA, as the Supplier is ultimately responsible for the Data Collector's actions.

NHHDC responsibilities

In conclusion the Group agreed that the following obligations be placed on the NHHDC:

- a) Collect NHH data from MOA fitted equipment (as currently);
- b) Calculate meter advances based on the NHH data collected or by obtaining a NHH register read from the meter (as currently);
- c) Submit the calculated Annualised Advance (AA) via a D0019 'Metering System EAC/AA' to the NHHDA for Settlement purposes and a copy to the Supplier (as currently);
- d) Remotely collect and provide HH data to the PrA within 10 Working Days of the start of each month. Alternatively the NHHDC can provide the Supplier with the HH data, who in turn can provide the data to the PrA. The NHHDC will batch data from all MSIDs into one data file so as to reduce the volume of email correspondence, and send this via either a standard email template/format or another method as agreed between the NHHDC, Supplier and the PrA. By using a standard format, a more consistent approach would be adopted and it would help reduce processing time for the PrA. This will be undertaken on a monthly basis for Profile production whilst sending a copy to the Supplier for its own research purposes. Obtaining the data on a monthly basis will enable the PrA to pick up any events such as Change of Supplier. It was felt that sending readings more frequently would not be as efficient due to the large volume of email correspondence which in turn would require more effort from the NHHDC (to send) and the PrA to process.

Provision of HH data to the customer

In line with the existing Code requirement on the Supplier (BSC Section L5.1 'Ownership of Metering Data'), the Supplier shall provide HH data to the customer if requested by the customer. This is not a mandatory requirement of P223 and, unless requested, the Supplier would not pass to the customer such data, as there is the risk that the participant's future consumption patterns may consequently alter (making the sample less representative). If the Supplier does pass HH data to the customer, they will inform the PrA of this occurrence.

For the avoidance of doubt, the PrA itself (or the PrA's agents) shall not provide HH data to the customer from which it has been obtained. If the customer requests such data from the PrA or the PrA's agents, then the PrA/its agents shall refer the customer to their Supplier.

The Group acknowledged that the provision of such data could lead to the customer changing their usage, but believed that such a change would be short term. The Group felt that there were other factors, most notably price, that could have bigger impacts on the behaviour of a customer.

Legal advice was sought from BSCCo as to whether it is allowable for a Supplier to pass a customer's HH consumption data to the PrA without the customer's express permission. BSCCo has not found any reason why the Code could not place a requirement on Suppliers to provide this HH information to the PrA in respect of NHH customers. However, in complying with this requirement, Suppliers will need to be mindful of relevant Data Protection legislation, and may wish to review their Terms and Conditions in this area. A copy of the legal advice is provided in Appendix 1 for information.

Treatment of communication link failures

If the NHHDC becomes unable to obtain HH data for a customer (e.g. due to a communications link failure with the meter), the NHHDC shall notify the Supplier (if the NHHDC is the Supplier's own agent) or the PrA (if the NHHDC is the PrA's preferred agent). The Supplier or the PrA (as appropriate, and with the support of the MOA if necessary) shall be responsible for investigating and rectifying the problem (e.g. repairing the meter).

If the PrA notifies the Supplier that data has not been received from the NHHDC for a Sample Participant (where the NHHDC is the Supplier's own agent), then the Supplier shall also be responsible for investigating and rectifying the problem with support from the NHHDC and MOA as required. However, this requirement does not apply where there has been a Change of Supplier for the customer. The obligations relating to a Change of Supplier are set out separately in Section 7.12 below.

7.11 Details of funding for the PrA process (funding for the recruitment and meter installation process)

The intention of the original Issue 29 straw man was that the PrA would fund all applicable MAP, MOA NHHDA, NHHDC and meter costs if a Supplier chose to use the PrA's agents. However Suppliers who chose to use their own agents would have no financial support from the PrA and would have to pay for the associated costs themselves.

The Group felt that this was inappropriate as it would give a financial incentive to Suppliers to use the PrA's agents rather than providing two comparable options. It was believed that this could be seen as anti-competitive. As a result, it was agreed that regardless of what 'agent option' is chosen the cost to the Supplier should remain cost-neutral as far as possible. Therefore, a solution was developed that would refund Suppliers for the cost of obtaining and installing the meter and obtaining the HH data, where the Supplier chose to use its own agents.

It was noted that this did not require an Alternative Modification, since the Modification Proposal itself was silent with respect to funding arrangements. The Group noted that the PrA will fund the cost of obtaining the metering equipment for the Supplier if:

- The Supplier uses the PrA's Agent services; or
- The Supplier's own agents install a meter that meets the minimum metering requirements required to obtain the HH data for the PrA. The PrA will annually pay each Supplier a standard amount per meter based on the cost of obtaining a meter which only met the minimum requirements as set out in Section 7.8 of this document (the PrA will review the amount paid on an annual basis). The Supplier will not be required to inform the PrA of the number of meters it has installed (or the corresponding MSIDs), as the PrA will hold this data and will automatically issue a rebate to the Supplier each year. **Please note that if the Supplier wished to install a meter which went beyond the minimum metering requirements the Supplier would be expected to fund the cost of the extra functionality since this would not be needed for the purposes of profiling.**

If a Supplier has previously installed a HH capable meter that meets the minimum requirements in Section 7.8 at the customer's premises prior to that customer being chosen for the sample, the Supplier will not be offered a rebate by the PrA as such a meter has been installed prior to the customer being part of the PrA sample and therefore no meter replacement has been undertaken.

The Group felt that the choice of agent services should be left to Suppliers. It was also noted that including the requirement for the PrA to rebate Suppliers where a Supplier keeps their own agents would reduce the potential overall cost savings of P223 to the PrA.

For those Suppliers that wish to use the PrA's nominated agents there will be no direct cost to the Supplier for the agency services provided by the PrA. However, the costs incurred by the PrA in funding metering installations and agency services will ultimately form part of the PrA's overall service costs. PrA service costs fall under the SVA Costs under Annex D-2 of the Code, which are in broad terms chargeable 50% to generators (divided between them on generation market share) and 50% to suppliers (a fixed charge per HH meter with the residual recovered from NHH suppliers by NHH market share).

It was agreed that Suppliers which choose to use their own Supplier Agents, an annual rebate will be offered by the PrA that includes:

- The cost of installing a meter which meets the minimum P223 metering requirements (with any additional meter functionality to be separately paid for by the Supplier);
- The associated MOA costs; and
- The airtime and dial costs for the NHHDC to collect the HH data.

The PrA will automatically calculate and issue this rebate to Suppliers once a year, based on its records of which sample customers use Suppliers' own agents.

The Group agreed that the rebate should exclude the costs of collecting normal NHH data for Settlement and associated NHHDA costs, since no changes are proposed to these processes.

It should be noted that the rebate will be calculated on an annual basis and based on the average cost to the PrA in the previous year of providing its own services in these areas for a Sample Participant.

For customers who have only been in the sample for part of the year (due to a CoS), the Supplier will receive 50% of the full agent rebate cost.

7.12 Change of Supplier

The Group noted that the 'description of the Proposed Modification' in the Modification Proposal specified that, upon a Change of Supplier (CoS), the New Supplier would be obliged to continue providing Half Hourly data to the PrA. The Group noted that it would therefore need to develop the detailed requirements to underpin this Proposed Modification solution, and that any change to this principle would require an Alternative Modification.

Under the Proposed Modification, the Group agreed that the responsibility shall be on the PrA to identify where a CoS has occurred and to contact the New Supplier to inform them that the customer is part of the PrA sample (the PrA would be aware through the normal de-appointment process). The new Supplier would be obliged to continue providing HH data to the PrA. Prior to the Group agreeing that it was the PrA's responsibility to identify a CoS, they explored the possibility of placing an obligation on Suppliers to track the movement of the customer and inform the PrA of a CoS. However it was concluded that this was likely to result in significant system and process costs to the Supplier.

The actual CoS process remains unaltered from existing industry processes. If the Supplier uses the Supplier's own agents for the recruitment and data collection processes, then the New Supplier may not know that the customer is a PrA Sample Participant. In such instances the PrA may no longer receive data from the Supplier's NHHDC. In such circumstances, the PrA will use ECOES to find out whether a CoS has occurred. If the PrA establishes that a CoS has taken place, the PrA will contact the New Supplier for the customer. If ECOES indicates that a CoS has not occurred, the PrA shall contact the Old Supplier to establish why it is no longer receiving data for that customer.

In instances where the Supplier has used the PrA's nominated agents, the PrA's nominated agents will be de-appointed on CoS in accordance with existing industry processes. The PrA will contact the New Supplier (using information from ECOES on who the New Supplier is, and through the dedicated profiling contact at the New Supplier) to inform the New Supplier that the customer is part of the PrA sample.

In both scenarios, the Group agreed that the New Supplier will have a choice between either retaining the existing customer in the sample, or retiring that customer from the sample and providing a replacement Sample Participant with another MSID randomly selected from that Supplier's customers. The New Supplier has the option to use its own agent services or the PrA's nominated agents for the customer. The PrA will update its records to:

Where the existing customer is retained:

- Reflect the New Supplier contact details for the existing customer;
- Cease any further rebates to the Old Supplier (if the Old Supplier had used its own agents); and
- Ensure that future rebates are issued to the New Supplier (if the New Supplier chooses to use its own agents), or

Where the existing customer is retired and a replacement customer provided by the Supplier:

- Remove the old customer from the list of Sample Participants;
- Cease any further rebates to the Old Supplier (if the Old Supplier had used its own agents);
- Add the new customer to the list of Sample Participants; and
- Ensure that future rebates are issued to the New Supplier (if the New Supplier chooses to use its own agents).

If on a CoS the existing Sample Participant leaves the PrA sample for e.g. the new Supplier's agents have swapped the meter to one that they are familiar with, then their HH capable meter will be classed by the Old Supplier/PrA as a lost asset and the New Supplier will take ongoing responsibility for the maintenance of that meter under existing industry processes.

The group debated the following alternate approaches to supporting the retention of customers on a CoS under the Proposed Modification:

- **Supplier to Supplier customer tracking:** The principle behind this suggestion was to enable a Supplier to identify whether a particular customer was part of the PrA sample or not, so that a New Supplier would be aware of this at the point of a CoS without needing to be notified by the PrA. The Group felt that tracking a customer on Supplier systems, especially on a CoS, would require significant system changes and as a result significant cost implications when compared to a small number of customers that were part of the PrA sample. For this reason this option was not considered further; and
- **Labelling of PrA meters:** There was a suggestion that PrA meters should be labelled, as a means to identify to the New Supplier that a particular customer is part of the PrA sample. This could highlight to the new Supplier to investigate what further actions would be need to be taken under such scenarios. Additionally it could also stop the new Supplier from replacing the meter to one that it is familiar with, which would mean that the customer has to be withdrawn from the PrA sample.

However, there were concerns from some members that a requirement for such labelling could be overly prescriptive and could result in further financial implications, as agents would have to be trained to identify these labels. As a result this suggestion was not pursued further.

Having agreed the solution for the Proposed Modification, concerns over the costs to Suppliers of retaining/replacing customers on a CoS led the Group to substantially develop an Alternative Modification whereby customers would automatically be lost from the sample on a CoS and not replaced until the following year's recruitment round. Details of this Alternative can be found in Section 8. Other Alternative Modification options which were considered but not progressed by the Group are documented in Section 9 of this document.

7.13 Change of Tenant

BSCCo explained that the intention of the Issue 29 straw man was that the PrA will re-confirm the customer details of each Sample Participants with the relevant Suppliers on a yearly basis, and in particular will request information on any Change of Tenant (CoT) that have occurred during the year. Where a CoT has occurred the PrA would need to review whether the customer is in the correct Profile Class/Stratum for the forthcoming year.

It was agreed that the Supplier shall inform the PrA on a yearly basis if there has been a CoT for any of its customers who form part of the profiling sample. Where a CoT has occurred, the PrA will review the data subsequently collected from the meter and will decide where the new tenant sits within the sampling frame. Where appropriate the PrA will consequently review its recruitment requirements for the forthcoming year as necessary (e.g. if the CoT has created a shortage of a particular type of Sample Participants in a specific Profile Class).

A majority of members believed that running a once-yearly report to identify any CoT would not be an onerous requirement for Suppliers given the small numbers of customers involved, a view which was subsequently supported by many of the impact assessment respondents.

8 DETAILED ALTERNATIVE MODIFICATION SOLUTION REQUIREMENTS

As required by the P223 Terms of Reference, the Group considered whether there might be any Alternate Modification which would better facilitate the achievement of the Applicable BSC Objectives when compared with the Proposed Modification. The Group subsequently developed an Alternative Modification by majority, details of which can be found below.

The requirements for the Alternative Modification are identical to that of the Proposed Modification other than where a Change of Supplier (CoS) is concerned.

Under the Alternative Modification, where a CoS occurs, the customer will automatically be lost from the PrA sample. There will be no obligation on the Old Supplier, New Supplier or PrA to retain the customer. The meter will therefore be classed by the Old Supplier/PrA as a lost asset and the New Supplier will take ongoing responsibility for the maintenance of that meter under existing industry processes. There will be no responsibility on the Old or New Supplier to provide a replacement customer following a CoS.

This shortfall will be taken into account at the following year's sample recruitment process as explained in Section 7.1, where the number of required customers will again be pro-rated across all Suppliers by market share.

In instances where the PrA's nominated agents have been used, the PrA will become aware of the Change of Supplier at the point of agent de-appointment. Where the Supplier has used its own agents, the PrA will stop receiving data for the customer without any notification⁸. In such circumstances, the PrA will use ECOES to identify whether a CoS has occurred. Following a CoS, the PrA will update its records to:

⁸ If ECOES indicates that a CoS has not occurred, the PrA shall contact the Old Supplier to establish whether there is another reason why it is no longer receiving data for that customer (see section 4.10).

- Remove the old customer from the list of Sample Participants (in order that the PrA can correctly identify the shortfall in the sample for the following year); and
- Cease any further rebates to the Old Supplier (where the Old Supplier used its own agents).

This Alternative Modification was developed as a majority of Group members felt that it would be unworkable for the New Supplier to keep the existing customer in the sample. These members considered that by the time the PrA became aware of the CoS and contacted the New Supplier, the New Supplier was likely to have already replaced the meter. This was because these members believed that it is common practice amongst some Suppliers (especially larger Suppliers) to automatically swap out meters following a CoS.

In addition, it was also believed that requiring the New Supplier to provide a replacement customer on an ad-hoc basis through the year would be an onerous requirement, and that it was preferable to simply lose the customer and replace them in the next year's recruitment round.

A minority of the Group disagreed with these views and believed that nominating replacement customers would not require significant effort. These members noted that not all Suppliers automatically swap out meters following a CoS. These members also believed that high numbers of customers would be likely to change Supplier during a given year, and that this high churn rate would prove to be costly to the industry as a whole if such customers were automatically lost from the sample as their previously-installed meters would become stranded assets with the result that more meters would have to be installed for replacement customers at the beginning of the subsequent year. These members noted that this would increase the costs to the PrA of funding meter installations, which would ultimately be recouped from Parties as part of the PrA's service costs to BSCCo. The cost implications of the Alternative Modification were subsequently considered as part of the Group's cost-benefit analysis of P223, details of which can be found in Section 5.

It was agreed by the Group that the industry impact assessment should ask a specific question as to the costs to Suppliers of retaining/replacing customers on an ad-hoc basis following a Change of Supplier (Proposed Modification), compared with automatically losing the customer from the sample (Alternate Modification) without further Supplier action being taken. The Group noted that the potential cost savings to Suppliers from not replacing the customer until the following year could then be balanced against the increased central costs which would result from replacing the meters lost on a CoS.

Responses from the P223 impact assessment felt that when compared to the Proposed Modification, the loss of meters under the Alternative Modification would prove to be costly while removing the complication of customer tracking during a CoS. The Modification Group noted these concerns and stated that this issue would diminish as smart meters become more common amongst customers. It was suggested that another approach could be to increase the target sample size (i.e. to ask Suppliers for more customers than actually needed each year), so that it would not matter if customers are lost and not replaced following a CoS. However, on balance, the Group did not progress this further as:

- The target sample size is already set higher than the actual data collection target, to take account of natural attrition and data loss in the sample;
- The SVG has the existing ability to amend the sample size at any time outside of P223, and it was not the original intention of P223 to adjust the sample target but to put in place a process to enable the recruitment of a random, representative sample regardless of the target size; and
- There would be no difference in central costs in recruiting these 'buffer' customers in advance at the beginning of the year compared with recruiting them in arrears at the end of the year (since the costs of obtaining and installing the additional meters would be the same). The number of stranded assets which would result from CoS would be the same, as under both approaches customers would still automatically be retired from the sample on a CoS.

9 ALTERNATIVE MODIFICATION SOLUTIONS CONSIDERED BUT NOT PROGRESSED

The Group considered, but agreed not to progress, four other potential Alternative Modifications as set out below:

1. PrA dials meter irrespective of who the Supplier is (variance on the CoS and agent services aspects of the solution): The Group considered the suggestion of allowing the PrA to dial a meter for Half Hourly readings irrespective of who the Supplier and DC were. It was suggested that, under such circumstances, the PrA would not need to be aware or take any action on a CoS and the Supplier could keep its own Supplier Agents. It was noted that this would need to be progressed as an Alternative Modification, since the 'description of Proposed Modification' in the Modification Proposal form specified that Suppliers would either appoint their own agents or the PrA's to obtain the Half Hourly data.

The Group discussed the following implications of this option:

- The PrA would be required to dial all types of meters in light of there being different protocols for accessing different meters, and the PrA would be required to communicate between all MOAs;
- The Group acknowledged that this would also provide complications for the MOA, in that there would be password and access issues. The MOA would be required to set password levels and differing access permissions for the customer, NHHDC and NHHDA;
- Some members of the Group felt uncomfortable in having an organisation who is not the appointed NHHDC accessing a customer's meter readings. It was noted that there are no existing provisions in the Code for such instances;
- Some members also felt that this could potentially cause errors in data that is obtained from the meter. For example, the NHHDC and MOA could align the meter clock with their respective systems, or mistakenly reset the meter clock. In such instances the PrA would not be aware of this and in turn could cause either missing HH data or inaccurate HH data for profiling purposes;
- There could be technical problems with two Parties dialling the meter at the same time. Some members also felt that this suggestion could conflict with the provisions of CoP 5; and
- This solution would not prevent the risk that, following a CoS, the New Supplier might remove the Half Hourly capable meter due to not realising that the customer was in the PrA sample.

On balance, the Group considered that this option would create more complications than it resolved and therefore did not pursue this further since they believed it would not be the most efficient solution.

2. De-minimus threshold (variant of recruitment request process): This suggestion put forward a threshold below which Suppliers would not be requested to provide Sample Participants for the PrA sample. The Group questioned whether it was efficient for a smaller Supplier to put in place systems and/or processes to support P223 if they were only requested to provide a handful of customers. However, the Group on balance did not progress this option further since:

- It did not believe that requesting a very low volume of customers from small Supplier would be an onerous requirement, noting that small Suppliers could probably implement this requirement through manual processes without any costly system changes (this view was subsequently borne out by the impact assessment responses received from small Suppliers, which indicated only minor costs and impacts resulting from P223);
- Excluding all small Suppliers from the requirement to provide customers could make the sample selection less random and representative of the different types of consumption in Great Britain (e.g. a small niche Supplier may cater to a specific customer type which would not be represented in the sample if that Supplier was excluded);
- It was queried whether it was equitable for only some Suppliers to support the sample recruitment process, given that the pro-rating the number of required customers by market share was already designed to achieve an equitable allocation across different sizes of Supplier; and
- Under the Proposed Modification, if a small Supplier was excluded because of the De-minimus threshold, it would still pick up customers on a CoS and be required to keep these customers or provide new ones. Including the threshold would therefore not prevent small Suppliers from having to implement processes to support P223.

4. Supplier appoints the PrA as its appointed MOA whilst enlisting the services of its own Supplier NHHDA and NHHDC (variant of the CoS and agent services aspects of the solution): Under this arrangement, the Supplier would appoint the PrA's agent as MOA while retaining their own NHHDA and NHHDC. It was suggested that this would give a consistent approach in managing the metering solution, as the PrA would install the meters for all Sample participants across all Suppliers. In addition, the PrA's MOA would have direct access to HH data (acting in effect as the data retriever), such that the Supplier could retain its own NHHDC without needing to provide the HH data. With respect to costs, the PrA would pick up the cost of installing the meter. The Supplier's agent management processes are largely unaffected. Where a CoS occurs, it was suggested that standard industry processes could be employed and the likelihood of having a stranded asset or change of meter would be relatively low, which would mean that a consistent PrA sample would be maintained (i.e. on a CoS, the old Supplier could de-appoint its agents via normal existing processes). On notification of de-appointment, the PrA's MOA could contact the old Supplier to enquire about the CoS. As a consequence the MOA could contact the new Supplier and request to be appointed as the MOA for that customer. However, on balance, the Group agreed not to progress this option for the following reasons:

- This approach might cause issues for those Suppliers who have exclusivity arrangements with their MOAs since, if introduced as a mandatory solution, these Suppliers would have to break such arrangements to use the PrA's MOA; and
- Making this approach optional would not solve the issues around CoS, as there would still be the potential that the customer is lost from the sample and Suppliers would still need to put in place special processes for communicating with the PrA following a CoS (adding complexity).

There were also concerns on whether the PrA's MOA could provide its services nationally.

5. Choice of retaining or losing a customer on a CoS: This arrangement would adopt a 'half way' point between the Proposed and Alternate Modifications. When a CoS occurs, the Supplier would have a choice to either retain or lose the customer. The PrA would contact the new Supplier on becoming aware that a CoS has taken place. The Group noted from the P223 impact assessment that some Suppliers had a preference for customers to be retained in the sample, and others for customers to be withdrawn. However, on balance, the Group felt by majority that this option would add more complexity, since it would still require Suppliers to put in place special processes to communicate with the PrA on a CoS. It also considered that, as it was the small Suppliers who would potentially find it easiest to retain the customer, only a small proportion of customers would actually be retained.

10 TERMS USED IN THIS DOCUMENT

Other acronyms and defined terms take the meanings defined in Section X of the Code.

Acronym/Term	Definition
BSCP	Balancing and Settlement Code Procedures
CoP	Code of Practice
CoS	Change of Supplier
CoT	Change of Tenant
EAC/AA	Estimated Annual Consumption / Annualised Advance
ECOES	Electricity Central Online Enquiry Service
GSM	Global System for Mobile
GSP	Grid Supply Point
HH	Half Hourly
IWA	Initial Written Assessment
MAP	Meter Asset Provider
MOA	Meter Operator Agent
MSID	Metering System Identifier
NHH	Non Half Hourly
NHHDA	Non Half Hourly Data Aggregator
NHHDC	Non Half Hourly Data Collector
PARMS	Performance Assurance Reporting and Monitoring System
PrA	Profile Administrator
RTS	Radio Teleswitch Service
SSC	Standard Settlement Class
SME	Small and Medium Enterprises

Acronym/Term	Definition
SMRA	Supplier Meter Registration Service
TPS	Telephone Preference Service

11 DOCUMENT CONTROL

11.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	23/05/08	Sherwin Cotta, Justin Andrews	Kathryn Coffin	For technical/quality review
0.2	06/06/08	Sherwin Cotta		For Modification Group review
0.3	25/06/08	Sherwin Cotta	Kathryn Coffin	For technical/quality review
0.4	23/06/08	Sherwin Cotta	Kathryn Coffin	For technical/quality review
0.5	24/06/08	Sherwin Cotta		For Modification Group review
1.0	02/07/08	P223 Modification Group		For industry consultation

11.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	P223 'Profile Administrator Service' Initial Written Assessment	ELEXON	04/04/08	1.0
2	Issue 29 'Profile Administrator (PrA) Model' - Panel paper 135/01e	ELEXON	11/01/08	1.0
3	Code of Practice Five 'Code of Practice for the metering of Energy transfers with a Maximum Demand of up to (and including) 1MW for Settlement purposes'	ELEXON	28/02/08	5.0
4	Code of Practice Eight 'Code of Practice for the metering of Import Active Energy via Low Voltage Circuits for Non Half Hourly Settlement purposes'	ELEXON	23/08/07	4.0
5	BSCP510 'The Provision of Sampling Data to the Profile Administrator'	ELEXON	BETTA effective date	2.0
6	Code of Practice A 'Code of Practice for the metering of Electricity Transfers between the National Grid Company plc and public Electricity Suppliers using the national interim metering scheme'	ELEXON	21/11/06	n/a
7	P223 'Profile Administrator Service' Requirements Specification	ELEXON	29/04/08	1.0
8	Straw Man PrA Model for discussion by Potential Issue Group – SVG Paper 78/05 ELEXON - Supplier Volume Allocation Group (SVG) Papers - Meeting Number 078 - 31/07/07	ELEXON	09/07/07	1.0

Ref.	Document Title	Owner	Issue Date	Version
9	Issue 21 'Scope of Profiling Administration Service' – Panel Paper 112/06 ELEXON - BSC Panel Paper Meeting number 112 - 09/03/06	ELEXON	02/03/2006	1.0

APPENDIX 1: LEGAL ADVICE

A copy of the BSCCo legal advice referred to in this document is attached as a separate document, Attachment 1.

APPENDIX 2: APPLICABLE BSC OBJECTIVES

For reference the Applicable BSC Objectives, as contained in the Transmission Licence, are:

- (a) The efficient discharge by the licensee [i.e. the Transmission Company] of the obligations imposed upon it by this licence [i.e. the Transmission Licence];
- (b) The efficient, economic and co-ordinated operation of the GB transmission system;
- (c) Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity;
- (d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

APPENDIX 3: PROCESS FOLLOWED

Copies of all documents referred to in the table below can be found on the BSC Website at:

<http://www.elexon.co.uk/changeimplementation/ModificationProcess/modificationdocumentation/modProposalView.aspx?propID=243>

Date	Event
10/04/08	Modification Proposal raised by the Panel
10/04/08	IWA presented to the Panel
11/04/08	First Assessment Procedure Modification Group meeting held
18/04/08	Second Assessment Procedure Modification Group meeting held
02/05/08	Third Assessment Procedure Modification Group meeting held
08/05/08	One-month timetable extension agreed by the Panel
14/05/08	Requirements Specification issued for PrA impact assessment
14/05/08	Request for Party/Party Agent impact assessments request issued
14/05/08	Request for BSCCo impact assessment issued
30/05/08	BSCCo impact assessment returned
11/06/08	PrA impact assessment returned
11/06/08	Party/Party Agent impact assessment responses returned
19/06/08	Fourth Assessment Procedure Modification Group meeting held

Date	Event
02/07/08	Assessment Procedure consultation issued
02/07/08	Request for Transmission Company analysis issued

ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL⁹

Meeting Cost	£ 2,500
Legal/Expert Cost	£ 0
Impact Assessment Cost	£ 5,000
ELEXON Resource	103 man days £ 21,965

The above costs have changed from the IWA phase, reflecting the one month extension to the P223 Assessment Procedure.

MODIFICATION GROUP MEMBERSHIP

Member	Organisation	11/04/08	18/04/08	02/05/08	19/06/08
Kathryn Coffin	ELEXON (Chair)	√	√	√	√
Sherwin Cotta	ELEXON (Lead Analyst)	√	√	√	√
Mo Rezvani	Scottish and Southern	√	√ (part)	X	√
Neil Lawrence	Centrica	√ (part)	X	√	√
Louisa Stuart-Smith	npower	√	√	√	√
Tim Roberts	Scottish Power	√	√ (part)	√	√
Malcolm Davis	Bizz Energy	√	√	√	√
Colette Baldwin	E.ON	X	√	√	√
Ed Reed	Cornwall Energy Associates	√	√	√	X

Attendee	Organisation	11/04	18/04	02/05/08	19/06/08
Kevin Spencer	ELEXON (Technical Support)	√	√	√	√
Richard O'Malley	ELEXON (Lawyer)	X	√ (part)	X	X
Steve Francis	ELEXON (Design Authority)	√	√	X	√
Nigel Nash	Ofgem	X	√ (part)	X	X
Claire Rosyn	Ofgem	x	√	X	X
Matthew Osborne	Ofgem	X	X	X	√
Justin Andrews	ELEXON	X	X	X	√

⁹ Clarification of the meanings of the cost terms in this appendix can be found on the BSC Website at the following link:
http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf.

MODIFICATION GROUP TERMS OF REFERENCE

TERMS OF REFERENCE (Version 1.0)

APPENDIX FOR MODIFICATION PROPOSAL P223

Modification Proposal P223 will be considered by the P223 Modification Group (which will be formed from the Volume Allocation Standing Modification Group), in accordance with the VASMG's Terms of Reference and this Appendix.

P223 – Profile Administrator Service

- 1.1 The Modification Group will carry out an Assessment Procedure in respect of Modification Proposal P223 in accordance with Section F2.6 of the Code.
- 1.2 The Modification Group will produce an Assessment Report for consideration at the BSC Panel Meeting on 10 July 2008.
- 1.3 In addition to the areas set out in Annex F-1 of the Code, the Modification Group shall consider and/or include in the Assessment Report as appropriate:
 - The detailed solution requirements to support the Issue 29 'straw man', including:
 - The most appropriate line of communication between Suppliers, Party Agents and the Profile Administrator (PrA) (including whether any changes may be required to the Master Registration Agreement's (MRA) Data Transfer Catalogue (DTC) or Data Transfer Network (DTN));
 - The process by which the PrA informs Suppliers which Participant Samples are required;
 - How Suppliers would utilise the option to use the PrA's Party Agents (NHHDC, NHHDA and MOA);
 - Whether there is an issue with P223 introducing the retrospective appointment of MOAs;
 - How the proposed P223 process would interact with a Change of Supplier, Change of Supplier Agent or/and Change of Tenant, to ensure continuity of a participant in a Sample; and
 - The minimum metering requirements to collect Half Hourly consumption data from Non Half Hourly customers.
 - Confirm whether the proposed P223 solution does not create barriers to any industry-wide smart meter roll-out which may occur within the next few years (including any specific considerations in this area which may arise for individual Profile Classes or types of customers)¹⁰;
 - Whether placing a Code obligation on Suppliers to install certain metering is compatible with existing primary legislation;

¹⁰ Please note that this depends on the forthcoming decision from BERR on smart metering.

- A cost-benefit analysis of P223, to be undertaken by:
 - Establishing when the benefits of P223 will be realised in practice, and considering whether these benefits are likely to continue to be realised in the long term (e.g. will the P223 solution become redundant under an industry-wide smart meter roll-out?);
 - Establishing any central cost/effort savings to the PrA/BSCCo which will occur as a result of P223;
 - Modelling hypothetical scenarios to attempt to identify the materiality of the issue/defect identified by P223 and its impact on types of participant; and
 - The implementation costs to Suppliers and Supplier Agents from P223, over and above the current costs of supporting Suppliers' existing Code obligations in relation to profiling.
- Whether the solution set out in the Modification Proposal is appropriate, or if there may be any Alternative Modification which (when compared with the Proposed Modification) would better facilitate the achievement of the Applicable BSC Objectives in relation to the issue or defect identified in the Modification Proposal.

APPENDIX 4: RESULTS OF IMPACT ASSESSMENT

a) Impact on BSC Agent contractual arrangements

BSC Agent Contract	Impact of Proposed/Alternative Modification
Profile Administrator	The Profile Administrator will need to implement and operate the new PrA process as proposed by P223.

b) Impact on BSC Parties and Party Agents

- **Suppliers** will be required to fulfil the obligations of:
 - a) The provision to the PrA of applicable MSIDs for the Profiling Sample;
 - b) The provision of a metering solution which will deliver the PrA data requirements; and
 - c) The responsibility for collecting Half Hourly data and sending it to the PrA.
- **NHHDCs will be required to:**
 - a) Collect NHH data from MOA fitted equipment (as currently);
 - b) Calculate meter advances based on the NHH data collected or by obtaining a NHH register read from the meter (as currently);
 - c) Submit the calculated Annualised Advance via a D0019 'Metering System EAC/AA' to the NHHDA for Settlement purposes and a copy to the Supplier as per existing industry processes (using existing industry processes); and
 - d) Collect HH data remotely and provide the HH data to the PrA (new process). This will be undertaken on a monthly basis for Profile production whilst sending a copy to the Supplier for its own research purposes.
- **MOAs** will be required to support the metering solution for the new PrA process.

- **No changes are required to any NHHDA processes.**

c) Impact on Transmission Company

None.

d) Impact on BSCCo

Area of Business	Impact of Proposed /Alternative Modification
Contractual	Contractual amendments to the terms and charges in the PrA contract will need to be drafted, negotiated and agreed with the PrA. This may also have an impact depending on date of implementation on the re-procurement activity of the PrA contract in 2009/10 with the new contract starting on 1 April 2010.
Operational	BSCCo will be required to facilitate the new annual P223 recruitment process, by pro-rating the PrA's number of required customers across Suppliers by market share.
Change management	BSCCo will be required to oversee the implementation of P223, including any necessary changes to BSC Systems, processes and documentation.

e) Impact on Code

Code Section	Impact of Proposed /Alternative Modification
Section S 'Supplier Volume Allocation'	Changes to sub sections 2.7.5 and 4.2 would be required to reflect the new process that is proposed under P223.

f) Impact on Code Subsidiary Documents

Document	Impact of Proposed /Alternative Modification
Profile Administrator Service Description	Changes would be required to reflect the new process that is proposed under P223.
BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems registered in SMRS'	
BSCP510 'The Provision of Sampling Data to the Profile Administrator'	
BSCP514 'SVA meter operations for Metering Systems registered in SMRS'	

g) Impact on Core Industry Documents/System Operator-Transmission Owner Code

None, as no changes to any D flows are proposed by P223, there is no impact on the MRA, DTC or DTN.

h) Impact on other configurable items

None.

i) Impact on BSCCo Memorandum and Articles of Association

None.

j) Impact on governance and regulatory framework

None.

APPENDIX 5: FULL IMPACT ASSESSMENT RESPONSES

See separate document Attachment 2.

APPENDIX 6: FULL COST-BENEFIT ANALYSIS

See separate document Attachment 3.

APPENDIX 7: NUMBER OF CUSTOMERS REQUIRED FROM SUPPLIERS

See separate document Attachment 4.