

ASSESSMENT REPORT for Modification Proposal P218 'Facilitating Microgeneration within the BSC'

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This document has been distributed in accordance with Section F2.1.10 of the Balancing and Settlement Code.¹

Proposed Modification P218 seeks to create a mechanism to allow more microgeneration to be accounted for within Settlement by treating it in a similar way to (but not the same as) Non Half Hourly (NHH) Unmetered Supply (UMS). This Modification aims to introduce a new agent; the Unmetered Export Agent (UEA) who would collate microgeneration data and create Export Estimated Annual Consumptions (EACs) which would be passed into Settlement using the existing Non Half Hourly Data Aggregator (NHHDA) systems. Suppliers would need to register a portfolio Export Meter Point Administration Number² (MPAN) per Distributor so as to settle microgeneration in each GSP Group (but would be restricted to one Export MPAN per Distributor, per GSP Group).

Alternative Modification P218 seeks to create a process similar to the Proposed Modification with the distinction that the UEA collates the microgeneration information into a Supplier Purchase Matrix (SPM) file. This file could be sent directly to the Supplier Volume Allocation Agent (SVAA), therefore bypassing the NHHDA. Suppliers would not be required to register any portfolio Export MPANs.

MODIFICATION GROUP'S RECOMMENDATIONS

The P218 Modification Group invites the Panel to:

- **AGREE a provisional recommendation that Proposed Modification P218 should not be made;**
- **AGREE a provisional recommendation that Alternative Modification P218 should not be made;**
- **AGREE a provisional Implementation Date for Proposed or Alternative Modification P218 of 05 November 2009 if an Authority decision is received on or before 07 August 2008, or 04 February 2010 if the Authority decision is received after 07 August 2008 but on or before 13 November 2008;**
- **AGREE the draft legal text for Proposed Modification P218;**
- **AGREE the draft legal text for Alternative Modification P218;**
- **AGREE that Modification Proposal P218 be submitted to the Report Phase; and**
- **AGREE that the P218 draft Modification Report be issued for consultation and submitted to the Panel for consideration at its meeting of 10 April 2008.**

¹ The current version of the Code can be found at <http://www.elexon.co.uk/bscrelateddocs/BSC/default.aspx>.

² MPAN is the term referred to in the MRA, which identifies a SVA Metering System and Metering System Identifier, or MSID is the term used under the BSC. For consistency with the term used in the MRA, this Assessment Report shall refer to MPAN.

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SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as the Modification Group has been able to assess, the following parties/documents would be impacted by P218.

Please note that this table represents a summary of the full impact assessment results contained in Appendix 4.

Parties	Sections of the	Code Subsidiary Documents
Distribution System Operators <input checked="" type="checkbox"/>	A <input type="checkbox"/>	BSC Procedures <input checked="" type="checkbox"/>
Generators <input type="checkbox"/>	B <input type="checkbox"/>	Codes of Practice <input type="checkbox"/>
Interconnectors <input type="checkbox"/>	C <input type="checkbox"/>	BSC Service Descriptions <input checked="" type="checkbox"/>
Licence Exemptable Generators <input type="checkbox"/>	D <input type="checkbox"/>	Party Service Lines <input checked="" type="checkbox"/>
Non-Physical Traders <input type="checkbox"/>	E <input checked="" type="checkbox"/>	Data Catalogues <input checked="" type="checkbox"/>
Suppliers <input checked="" type="checkbox"/>	F <input type="checkbox"/>	Communication Requirements Documents <input type="checkbox"/>
Transmission Company <input type="checkbox"/>	G <input type="checkbox"/>	Reporting Catalogue <input checked="" type="checkbox"/>
Party Agents	H <input type="checkbox"/>	Core Industry Documents
Data Aggregators <input checked="" type="checkbox"/>	I <input type="checkbox"/>	Ancillary Services Agreement <input type="checkbox"/>
Data Collectors <input checked="" type="checkbox"/>	J <input checked="" type="checkbox"/>	British Grid Systems Agreement <input type="checkbox"/>
Meter Administrators <input type="checkbox"/>	K <input checked="" type="checkbox"/>	Data Transfer Services Agreement <input type="checkbox"/>
Meter Operator Agents <input checked="" type="checkbox"/>	L <input checked="" type="checkbox"/>	Distribution Code <input type="checkbox"/>
ECVNA <input type="checkbox"/>	M <input type="checkbox"/>	Distribution Connection and Use of System <input type="checkbox"/>
MVRNA <input type="checkbox"/>	N <input type="checkbox"/>	Grid Code <input type="checkbox"/>
BSC Agents	O <input type="checkbox"/>	Master Registration Agreement <input checked="" type="checkbox"/>
SAA <input type="checkbox"/>	P <input type="checkbox"/>	Supplemental Agreements <input type="checkbox"/>
FAA <input type="checkbox"/>	Q <input type="checkbox"/>	Use of Interconnector Agreement <input type="checkbox"/>
BMRA <input type="checkbox"/>	R <input type="checkbox"/>	BSCCo
ECVAA <input type="checkbox"/>	S <input checked="" type="checkbox"/>	Internal Working Procedures <input checked="" type="checkbox"/>
CDCA <input type="checkbox"/>	T <input type="checkbox"/>	BSC Panel/Panel Committees
TAA <input type="checkbox"/>	U <input type="checkbox"/>	Working Practices <input checked="" type="checkbox"/>
CRA <input type="checkbox"/>	V <input type="checkbox"/>	Other
SVAA <input checked="" type="checkbox"/>	W <input type="checkbox"/>	Market Index Data Provider <input type="checkbox"/>
Teleswitch Agent <input type="checkbox"/>	X <input checked="" type="checkbox"/>	Market Index Definition Statement <input type="checkbox"/>
BSC Auditor <input checked="" type="checkbox"/>	Z <input type="checkbox"/>	System Operator-Transmission Owner Code <input type="checkbox"/>
Qualification Agent <input type="checkbox"/>		Transmission Licence <input type="checkbox"/>
Other Agents		
Supplier Meter Registration <input type="checkbox"/>		
Unmetered Supplies Operator <input type="checkbox"/>		
Data Transfer Service Provider <input checked="" type="checkbox"/>		

1 EXECUTIVE SUMMARY

The key conclusions of the P218 Modification Group ('the Group') are outlined below.

The Group:

- **DEVELOPED** a solution for the Proposed Modification whereby a new BSC Agent would be created to hold microgeneration³ information, create EACs for microgeneration portfolio MPANs and submit these EACs to the relevant NHHDA;
- **AGREED** an initial view that the Proposed Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives (c) and (d);
- **AGREED** that an Alternative Modification solution should be developed in order to allow microgeneration EAC data to be included in a Supplier Purchase Matrix by the UEA and submitted directly to the Supplier Volume Allocation Agent (SVAA);
- **AGREED** an initial view that the Alternative Modification **WOULD** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared to the Proposed Modification but **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives when compared to the current baseline;
- **NOTED** that the implementation costs for the Proposed/Alternative Modification, including change to current BSC Agent systems, procurement of a new BSC Agent and the cost of developing systems by that new BSC Agent, were estimated to be approximately £400k for the Proposed and Alternative Modifications;
- **NOTED** the estimated Party and Party Agent industry costs that ranged from negligible amounts to £3-4 million (based on a large Supplier automating the solution);
- **AGREED** an Implementation Date for the Proposed or Alternative Modification of 05 November 2009 if a decision is reached on or before 07 August 2008 or 04 February 2010 if a decision is reached after 07 August 2008 but before 13 November 2008.
- **AGREED** that the draft legal text delivers the intended solution for the Proposed and Alternative Modifications; and
- **CONCLUDED** that they could not establish whether the non Settlement of microgeneration was an issue under the BSC and could not estimate the amount or impact of any spill without a comprehensive exercise involving installation of Meters.

A description of the P218 solution is provided in Section 2. Further information regarding the Group's discussions of the areas set out in the P218 Terms of Reference is contained in Section 4, including details of the Group's recommended implementation approach and the estimated implementation costs.

A summary of the Group's views regarding the merits of the Proposed Modification and Alternative Modification can be found in Section 5. A copy of the Group's full Terms of Reference can be found in Appendix 2, whilst a summary of the responses to the Assessment Procedure consultation and impact assessment can be found in Appendices 3 and 4 respectively.

³ For the purposes of P218, microgeneration refers to Export from a Small Scale Third Party Generating Plant as defined in the BSC.

2 DESCRIPTION OF THE PERCEIVED BENEFITS AND CONCERNS OF P218

A summary of the key benefits and concerns raised by the P218 Modification Group ('the Group') are outlined below.

Benefits:

- P218 aims to increase the amount of microgeneration that is settled;
- P218 attempts to more accurately allocate energy volumes to participants within a GSP Group. This would result in less energy being smeared across Suppliers in Group Correction Factor.

Concerns:

- The long term aim is that microgeneration Export is metered, therefore P218 is considered to be a costly interim solution, that may need to be 'unpicked' when a more permanent solution becomes available;
- P218 lacks the appropriate assurances to guarantee to the industry that the Settlement process is secure and accurate;
- P218 introduces estimated EACs which could introduce more error into Settlement than not including microgeneration Export at all;
- P218 would require numerous changes at a cost which some consider too high to justify considering the very small volumes of energy that would be involved;
- P218 offers an additional un-mandated option to the industry. Currently Suppliers are able to settle microgeneration by installing Non Half Hourly Metering (this ability was introduced by Modification Proposal P081 'Removal of the Requirement for Half Hourly (HH) Metering on Third Party Generators at Domestic Premises') or Suppliers can choose to spill any surplus energy onto the Distribution System. It has been suggested that multiple options could lead to lack of clarity to the industry on the BSC requirements;
- the Group noted that the majority of consultation respondents said that they would not choose to settle microgeneration if P218 were to be approved, and all those respondents who already settle microgeneration under P081 advised that they would not swap to P218; and
- the Group queried whether there is actually a defect as microgeneration is not required to be settled under the BSC and Suppliers decisions not to settle microgeneration would be taken for commercial reasons. It was noted that customers tend to choose to install microgeneration to reduce their Import during peak hours, rather than to gain benefits from Exporting. One member commented, that another option would be to educate customers so that they use more of their own microgeneration on site and Export less and noted that this would need to be taken forward outside the BSC.

Further details of the benefits discussed by the Group are included in section 4.10.

3 DESCRIPTION OF MODIFICATION

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

For a full description of the original Modification Proposal as submitted by Good Energy ('the Proposer'), please refer to the P218 Initial Written Assessment (IWA) ELEXON - Modification Proposal P218.

It is noted that previous P218 Reports have referred to the new BSC Agent as MEO (Microgeneration Export Operator), given that microgeneration is not defined within the BSC; for the purposes of this report and in the attached legal text for P218 the new BSC Agent is referred to as the UEA (Unmetered Export Agent).

3.1 Proposed Modification - Summary

The Proposed Modification aims to introduce a new agent; the Unmetered Export Agent (UEA) who would collate microgeneration data and create Export Estimated Annual Consumptions (EACs) which would be passed into Settlement using the existing NHHDA systems. Suppliers would be able to register a single portfolio Export MPAN for microgeneration in each GSP Group per Distributor⁴.

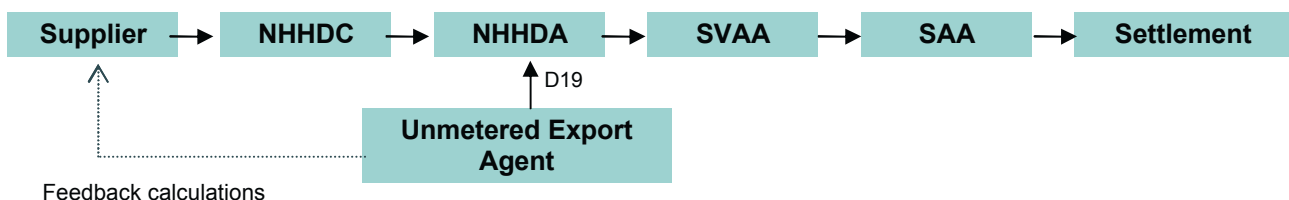
It should be noted that the term pseudo MPAN was used in the Modification Proposal. However, this is already defined in the MRA, therefore the term portfolio MPAN has been used within this document.

It is envisaged that the UEA would receive details of the microgeneration Export site. The UEA would then be able to calculate the Annual Export for the site using the Panel-approved Export Factor. The Annual Export value would be calculated using the equation below (where the 8,766 is derived from 365.25 days*24hours and the Microgeneration Capacity is confirmed by the Supplier to the UEA):

$$\text{Annual Export} = \text{Microgeneration Capacity} * 8766 \text{ hours} * \text{Export Factor}$$

The UEA would aggregate the Annual Exports for all the sites within a Supplier's portfolio for a particular Distributor within a GSP Group to form an EAC for the portfolio MPAN. This EAC value would be passed to a NHHDA. The NHHDA would then process the EAC in the same way as all other EACs and submit it to the SVAA. The SVAA systems would apply the unrestricted Standard Settlement Configuration (SSC) and Profile Class 8 to calculate Half Hourly (HH) values and pass these to the Settlement Administration Agent (SAA).

3.1.1 P218 Proposed Modification Flow Diagram

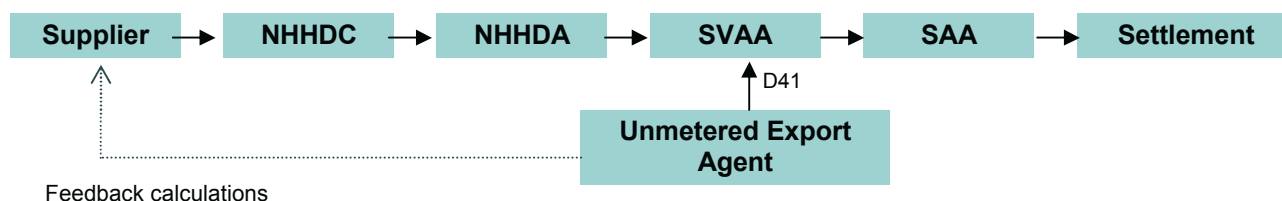


3.2 Alternative Modification - Summary

P218 Alternative Modification seeks to create a process similar to the Proposed Modification with the distinction that the UEA collates the microgeneration information into a Supplier Purchase Matrix (SPM) file. This information would then be sent directly to the SVAA using the existing flow (D0041).

3.2.1 P218 Alternative Modification Flow Diagram

⁴ It should be noted that the Modification Proposal referred to one MPAN for microgeneration in each GSP Group. However the Group agreed that this was not a workable solution as information would be required separately for different Distributors.



The process for registering the microgeneration with the UEA and the process of calculating the EAC would be the same as the Proposed Modification. However the Supplier would not be required to register portfolio MPANs for microgeneration Export and would therefore not be required to appoint any Agents.

In addition, the Group agreed that the solution should be flexible so that initially one EAC would be calculated for microgeneration in each GSP Group per Distributor. However, the Panel would have the ability to decide whether to allow separate EACs to be calculated for each technology type at a later date.

4 AREAS RAISED BY THE TERMS OF REFERENCE

This section outlines the conclusions of the Modification Group regarding the areas set out in the P218 Terms of Reference.

4.1 Proposed Modification

This section summarises the solution for the Proposed Modification. For full details of the solution requirements, please refer to the P218 Requirements Specification [ELEXON - Modification Proposal P218](#).

4.1.1 Creation of the UEA

P218 proposed that a new agent be established (the UEA) to calculate EACs for portfolio MPANs and submit these into Settlement. The UEA would be responsible for storing microgeneration information. All microgeneration sites registered under P218 would be assigned to a particular portfolio MPAN based on the Supplier responsible for the site and the GSP Group and Distributor within whose Distribution network it is located. The UEA would also be responsible for producing Export EACs and submitting these EACs to the relevant NHHDA for Settlement processing.

Section 4.4 sets out the Group's discussion regarding the status of the UEA and section 4.1.6 details the processes that the UEA would need to follow regarding registration and deregistration of microgeneration sites.

4.1.2 Export Factors

Export Factors would be determined by the Panel and used to calculate the Annual Export for each microgeneration Export site. Section 4.2 sets out the Group's discussion regarding the methodology for determining Export Factors under P218.

4.1.3 Creation of Portfolio MPANs

P218 requires the creation of portfolio MPANs for different Suppliers. These must be unique and clearly identify vital information. Individual MPANs would be created for each Distributor to cover microgeneration within the relevant Distribution networks. The creation of portfolio MPANs would be undertaken by the relevant Licensed Distribution System Operator (LDSO). A pre-arranged structure agreed by the LDSOs would be preferable to facilitate identification of the MPANs quickly.

The Group initially proposed that as part of the initial implementation approach, LDSOs would set up skeleton MPANs for all Suppliers within areas that they are operating at the time of implementation.

Respondents to the P218 impact assessment were asked to confirm whether they believed such a bulk implementation process was appropriate. Respondents indicated that they did not agree with a bulk implementation approach and this has therefore been excluded from the solution.

Therefore, following the initial implementation, Suppliers wishing to settle microgeneration through the P218 process would request an MPAN from the relevant Distributor using the D0168 'Request for Additional/New MPAN Core(s)' flow as per the existing procedures set out in the MRA. The 'Additional Information' field of the D0168 would need to be used to inform the LDSO that the request relates to a portfolio MPAN. The LDSO would then provide details of the new MPAN to the Supplier using the D0169 'Allocation of New/Additional MPAN Core(s)' flow.

4.1.4 Assignment to Line Loss Factor Class (LLFC)

The Group noted that all MPANs need to be assigned to a specific LLFC; therefore the LDSO may need to set up new LLFCs for portfolio MPANs. Line Loss Factors (LLFs) would need to be calculated for each LLFC and submitted to BSCCo for approval as per the existing process in BSCP28.

The Group noted that this aspect of P218 relates to Modification Proposal P216 'Audit of LLF Production' which is proposing to introduce new rules relating to the calculation of LLFs. Although the solution developed under P218 is not entirely inconsistent with the P216 proposed solution, should both P216 and P218 be approved then the new LLF BSCP being created under P216 would need to be amended to allow a single LLFC to be applied to a portfolio MPAN regardless of the voltage connections for the individual microgeneration sites within that MPAN.

4.1.5 Registration and Appointment of Agents

On receipt of the portfolio MPAN details, the Supplier would need to register the new MPAN in the Supplier Meter Registration System (SMRS), together with details of the agents appointed to that MPAN and the Standard Settlement Configuration (SSC), Profile Class and Measurement Class to be used to process the Metered Data within Settlement. The Group agreed that this information would be sent to SMRS using the existing processes i.e. the D0055 'Registration of Supplier to Specified Metering Point' flow. The Group specifically discussed the following information that should be provided in the flow:

- **SSC** – The SSC allows the SVAA to profile the energy for a particular MPAN across different half hourly periods. Under Proposed Modification P218 a single portfolio MPAN is created per GSP Group per Distributor. Therefore, more than one microgenerator may be assigned to a particular portfolio MPAN which means it is not possible to apply a specific SSC to reflect the Export profile for the MPAN as a whole (unless you created individual SSCs for each portfolio MPAN). The Group therefore agreed that the SSC for unrestricted Export should be applied to all portfolio MPANs. This would apply the energy evenly across all half hourly periods.
- **Profile Class** – As with the SSC; the Profile Class allows the SVAA to profile the energy for a particular MPAN across different half hourly periods. The Group therefore agreed that Profile Class 8 should be used for all portfolio MPANs as this is the Profile Class for large NHH Import sites and would therefore provide the flattest profile available.
- **Measurement Class** – The Group agreed that Measurement Class B would be used for all portfolio MPANs as this would identify them as Non Half Hourly Unmetered MPANs.
- **Meter Timeswitch Code** – The Group were keen to have a specific flag to easily identify portfolio MPANs. It was agreed that a new Meter Timeswitch Code would be created for this purpose.
- **Energisation Status** – The Group agreed that the Energisation Status for all portfolio MPANs would initially be set to de-energised. Once a Supplier registers a microgeneration site with the UEA then it should also send an update to the SMRS (using the D0205 'Update Registration Details' flow)

setting the Energisation Status to energised. This would allow the UEA to send non-zero EACs for the MPAN.

- NHHDC - For the purposes of P218 the UEA would be responsible for undertaking the role (normally that of the NHHDC) of submitting the EAC to the relevant NHHDA using the D0019 'Metering System EAC/AA Data' flow. Therefore the UEA would, for the purposes of the D0055 effectively be the NHHDC. It should be noted that this does not mean that the UEA would need to be Qualified as a NHHDC as it would not be carrying out all of the NHHDC activities prescribed under the Code. The UEA would however need to be registered in a similar way to the NHHDC, for those portfolio MPANs, to ensure that the registration is complete and to enable the NHHDA to receive EAC data from the UEA.

To ensure that the SMRS would accept the D0055 with the UEA registered as NHHDC and so that the NHHDA can accept the D0019 flow containing the EAC, the UEA should be registered in Market Domain Data (MDD) with the NHHDC role code (D). Although the UEA would send and receive data flows using the NHHDC role code, there are a number of NHHDC flows that it would not need to receive. Therefore the UEA would be set up in such a way that any flows received would be rejected unless they are specifically required for the UEA activities. Flows required by the UEA are set out in the P218 Requirements Specification.

On registration of a new portfolio MPAN the Supplier would also send a NHHDC appointment flow (D0155) to the UEA. This would ensure the UEA is aware of the new MPAN so it can be registered in the UEA database. To prevent erroneous appointments it would be mandatory for the 'Agreed Service Details' field to refer to the MPAN being a portfolio Export MPAN. Should the UEA receive an appointment flow without this information then it would query the appointment with the Supplier. This should prevent the UEA from being registered to a non portfolio MPAN.

The Group noted that there are numerous rules relating to the role of NHHDC that the UEA would not be required to undertake. Therefore, the Code and any subsidiary documents would need to be clear that whilst the UEA is assigned a role code of NHHDC in MDD, it is not actually a NHHDC and therefore would not be able to undertake any other NHHDC activities not related to its role as UEA.

- NHHDA – The processes for registering a NHHDA is not affected by P218 e.g. the Supplier would be required to appoint a NHHDA using the existing appointment flow (D0153). The Supplier would also need to include details of the NHHDA in the D0055 being sent to the SMRS. On receipt of the D0055, the SMRA would send a D0209 'Instruction to NHH or HH Data Aggregator' flow to the NHHDA to confirm the registration details. This reflects the existing process for registration of new MPANs.

To enable the UEA to send the D0019 to the correct NHHDA, the Supplier would also need to send a D0148 'Notification of Change to Other Parties' flow to the UEA detailing the NHHDA for the MPAN.

- MOA – Under P218 there would be no requirement for an MOA to be registered to the MPAN. However failure to provide details of an MOA on the D0055 would lead to an incomplete registration. Therefore it is proposed that the UEA should be recorded as the MOA. In order to prevent the SMRS from rejecting this registration, the UEA should be registered in MDD with a MOA role code (M).

The Group noted that although the UEA would be registered as MOA to ensure a complete registration, the UEA would not be able to, or obliged to, carry out any activities associated with the MOA role under the BSC.

The Group proposed that as part of the initial implementation approach, each SMRS would create the relevant portfolio MPANs for all Suppliers. These would be assigned the registration data described above. Respondents to the P218 impact assessment were asked to confirm whether they believed such a bulk implementation process was appropriate.

Respondents indicated that they did not agree with a bulk implementation approach and this has therefore been excluded from the solution.

4.1.6 UEA Processes

As discussed above, the UEA would be required to store microgeneration data, assign microgeneration sites to portfolio MPANs and create EACs for submission to the relevant NHHDA.

4.1.6.1 Portfolio MPAN Registration

When a Supplier decides to create a new portfolio MPAN it would send a NHHDC Appointment flow (D0155) to the UEA stating that the appointment relates to a portfolio MPAN. The UEA would add the new MPAN to the database with the energisation status set to de-energised.

Should the UEA receive a D0155 flow which does not refer to the MPAN as being a portfolio Export MPAN within the 'Agreed Service Details' field, then the UEA would reject the appointment by sending the 'Rejection of Agent Appointment' flow (D0261) to the Supplier.

The Supplier would also send a D0148 flow to the UEA providing the UEA with details of the relevant NHHDA registered to the portfolio MPAN. This would allow the UEA to send the EAC to the correct NHHDA.

When a microgeneration site is added to the MPAN, the Supplier would send a D0205 to the SMRS setting the Energisation Status to energised. A copy of this flow would also be sent to the UEA. On receipt of a D0205, the UEA would update the relevant MPAN record with the revised Energisation Status. Further changes to the Energisation Status of the MPAN would also be sent to the SMRS using the D0205 flow.

If the Supplier decided not to use the P218 process any longer then it would deregister the portfolio MPAN. The Supplier would also send the D0151 'Termination of Appointment or Contract by Supplier' to the UEA so that the portfolio MPAN would be end dated in the UEA database.

4.1.6.2 Microgeneration Registration/ Deregistration

Section 4.6 sets out the Group's discussion regarding the processes required for registering and deregistering microgeneration sites.

4.1.6.3 Obligation to provide portfolio details

In addition to the registration activities, the UEA would be obliged to send portfolio details to Suppliers or LDSOs on request. The Group agreed that this information could be sent manually via email i.e. it would not need to be classified as a new DTC flow.

4.1.6.4 EAC Calculation

When a microgeneration site is either added to or removed from a portfolio MPAN (or the Export Factor / registration data is updated) the UEA would recalculate the EAC for that MPAN (for the Effective From Date) as follows:

- The Annual Export value for the site to be added or removed would be calculated as follows:

$$\text{Annual Export} = \text{Microgeneration Capacity} * 8766 \text{ hours} * \text{Export Factor}$$

- The record for the microgeneration site would be updated to include the Annual Export value;
- The individual Annual Export value would either be added to or subtracted from the EAC value for the relevant portfolio MPAN; and
- The record for the relevant portfolio MPAN would be updated to include the new EAC value.

4.1.6.5 Submission of EACs

The UEA would need to submit EACs to the NHHDA via the D0019 flow. The Group agreed that the existing requirement on NHHDCs to submit EAC data at least 5 Working Days after the Effective From Date of the change and in time for the NHHDA to include the values in their Initial Settlement (SF) Run, should also apply to the UEA.

The Group noted that the NHHDA requires flows to be sent in a sequential order; therefore the UEA would need to ensure that flows for each individual NHHDA are sequential, with no gaps. Should the D0019 file fail validation by the NHHDA, then the NHHDA would send an exception flow. The UEA would therefore need to manage the exception.

4.1.7 Supplier Processes

4.1.7.1 Registration of P081 Export MPAN

Currently Suppliers are required to register microgeneration Export MPANs if the energy is to be taken into account in Settlement (i.e. the P081 solution). It is proposed that the P218 solution is implemented alongside the existing P081 solution. Section 4.3 sets out the discussions of the Group relating to the parallel running of both P218 and P081 processes. This includes a requirement on all Suppliers to inform the UEA if they intend to register a new P081 Export MPAN.

4.1.7.2 Updating Registration Data

The Group agreed that an additional obligation would also be placed on Suppliers to send updated microgeneration registration data to the UEA within 5 WDs of becoming aware of the change. Changes to registration data should be submitted using the new microgeneration registration flow.

In addition the Supplier should send updates to portfolio MPAN registration data to the SMRS using the D0205 'Update Registration Details' flow if any of the information set out in section 4.1.5 needs updating. A copy of the D0205 would also be sent to the UEA so they are aware of any changes, specifically changes to energisation status.

4.1.8 LDSO Processes

As set out in section 4.1.3, the LDSO would be required to create portfolio MPANs and apply new LLFCs.

In addition the LDSO may be requested to disconnect a P081 Export MPAN if a Supplier wishes to transfer the microgeneration site from the P081 process to the P218 process. The Group believed that some LDSOs would not allow the P081 Export MPAN to be disconnected if there was still exporting capability at the site.

The Group agreed to specifically ask LDSO respondents to the impact assessment whether they would allow Export MPANs to be disconnected or whether the MPAN would need to remain.

The responses to the impact assessment varied with some LDSOs stating that they would allow the P081 MPAN to be disconnected, whereas others stated that the MPAN would have to remain. The Group noted that if the MPAN were to remain, the Supplier would have to logically de-energise the MPAN and de-appoint the agents. However, the agents would not be able to be deregistered from SMRS. One member of the Group noted that agents may not accept the de-appointment flow if they are still registered within SMRS, therefore Suppliers may continue to incur costs. The Group agreed that Suppliers would have to take this into account when deciding whether to transfer sites from the P081 process into the P218 process.

4.1.9 Data Flows

Section 4.7 sets out the Group's discussion regarding the creation of new data flows and the changes required to the recipients of some existing data flows.

4.1.10 NHHDA

It is not anticipated that any changes would be required to NHHDA systems and processes.

Proposed Modification P218 would require the NHHDA to accept EAC data from the UEA. On receipt of the flow the NHHDA would check that the file was received from an agent with a NHHDC role code in MDD. The Group concluded that, provided the UEA was registered in MDD with a NHHDC role code then there would be no impact on the NHHDA systems or processes.

4.1.11 SVAA

The Group agreed that new Consumption Component Classes (CCCs) would be required for portfolio Export MPANs to ensure that the SVAA processes the data correctly and the Supplier's percentage of actual reads is not affected by P218.

The Group noted that, following the changes to SVAA, the remaining processes of Settlement are completed without any changes. The SVAA system would send the volume quantities allocated to the individual Suppliers to the Settlement Administration Agent (SAA) which carries out the Settlement Run.

4.2 Potential methods for calculating EACs for Microgeneration

Under the P218 Proposal, portfolio MPANs would be created to collectively represent a number of microgenerators. Suppliers could register one or more microgeneration sites which would be assigned to the relevant portfolio MPAN, dependent on the GSP Group and Distributor for the specific site. The UEA would calculate an EAC for each portfolio MPAN which would represent an estimate of the amount of energy Exported from all the microgeneration sites assigned to the portfolio MPAN.

4.2.1 Analysis of Export Factors

In order to calculate an EAC for each portfolio MPAN, an estimate of the energy Exported by each individual microgenerator would need to be determined i.e. the Annual Export. To calculate the Annual Export the Group agreed that the UEA should take the generation capacity of the microgenerator (i.e. the amount of energy that the microgenerator is capable of producing in an hour). This value would then be multiplied by 8766 (i.e. the number of hours in the year taking into account leap years) to give the maximum capacity for the microgenerator assuming it is running at full capacity 24 hours a day for the entire year. This value would then be multiplied by an Export Factor. The Export Factor would be a value determined by the Panel to represent the amount of energy actually Exported from the site. This would take into account the estimated load factor for each microgenerator (i.e. assuming the site was not actually running at full capacity), the load factor would estimate the actual level of output for particular sites. In addition, the Export Factor would take into account the fact that not all of the generated energy would actually be Exported from the site as there would usually be some associated level of Import.

$$\text{Annual Export} = \text{Microgeneration Capacity} * 8766 \text{ hours} * \text{Export Factor}$$

As part of the Assessment Procedure, the Group undertook analysis to determine possible values for the Export Factor. The full results of this analysis are contained in Appendix 5 and Attachment 6. It should be noted that a full set of data required to carry out this analysis was only available for a limited number of sites with metered data.

The Group were keen to understand the effect of using one Export Factor based on the weighted average for all types of microgeneration technology compared with separate Export Factors for each microgeneration technology. Therefore for each site the actual Export was recorded and compared with both the estimated Export based on a microgeneration technology specific Export Factor and also the estimated Export based on

a single Export Factor for all sites. The results of the comparison (contained in Attachment 6) represented the gross error introduced by estimating the Export compared with actually using Metered Data.

4.2.2 Analysis Conclusions

The Group noted that the actual Export was widely variable across individual sites and that gross error was greater when using the technology specific Export Factors. It was assumed that this result was based on the limited sample size and the variance of the sample. Therefore when the single Export Factor was used the weighted averaging methodology reduced the effect of any values showing a significant deviation from the main sample.

The Group noted that the methodology for determining Export Factors would be set by the Panel, however they believed the methodology used for the analysis was the most appropriate methodology based on the limited data available. The Group also noted that the data used for the analysis was limited with no data available at all for certain microgeneration technologies. It was assumed that the amount of data available was not likely to increase in the near future. Therefore the Group believed that Export Factors should initially be based on a weighted average across all microgenerators. If the Panel decided at a later date that it would be more appropriate to use microgeneration technology specific values then this should be possible. Therefore separate technology specific Export Factors should be recorded, noting that initially the values for all technology types should be the same. Having separate Export Factors would allow flexibility for the Panel to determine whether there is a benefit in producing separate Export Factors for different technology types at a later date, for example when more data becomes available. Recalculations would depend on having access to the appropriate metered data.

4.2.3 Use of Export Factors

The Group agreed that once the Export Factor values were calculated, they would be approved by the Panel, published on the BSC Website and sent to the UEA. The UEA would then apply the approved Export Factors to the EAC calculation. To ensure the Export Factors are accurate and fit for purpose the Panel would be able to review the values from time to time. The Group confirmed that should the values be amended, then the UEA would be required to recalculate the EACs for all portfolio MPANs and submit these into Settlement.

4.3 Current Microgenerators in Settlement and the Impact of P218 on Existing Processes

The existing process for settling microgeneration was introduced with P081 'Removal of the Requirement for Half Hourly (HH) Metering on Third Party Generators at Domestic Premises' and was implemented in September 2003. P081 introduced a new process of NHH Settlement of Export Metering for small quantities of generation (below a 30kW threshold). Prior to the implementation of P081, generation could only be taken into account in Settlement if a HH Meter was installed. P081 requires that two MPANs are registered for these types of sites – one for Import and another for Export.

The Group noted that the industry take up of the P081 processes has been limited, as there are only approximately 30 Export Meters of this type registered⁵ in Settlement out of over 3,000 installations. Any Export from the sites not currently registered in Settlement is therefore spilled onto the Distribution System reducing the perceived level of demand and therefore reducing the level of GSP Group Correction Factor. This results in any Settlement benefit from microgeneration being smeared across all Suppliers in the relevant GSP Group.

The Group agreed that P218 would not be mandated but offered as an additional option; therefore the impact of P218 on existing Parties would vary depending on the take-up of the P218 processes. As P218 is additional to the current P081 processes, the Group considered whether any special processes were required

⁵ [Panel Paper 121/08](#) contains more information regarding the approved Modification P81 and the uptake of this process.

to allow P218 to run in parallel with P081. Attachment 7 sets out the high level process Suppliers would need to follow when moving sites between the P218 and P081 processes.

To ensure that a microgeneration site was not registered under both a P081 and P218 solutions, a specific obligation would be placed on all Suppliers to inform the UEA when they register a new P081 Export MPAN. This would allow the UEA to search its database to see whether the site is already registered under P218. If the site is registered under P218, then the UEA would inform the current Supplier that a P081 Export MPAN is being created. The UEA would also inform the new Supplier that the microgeneration site is already registered under P218. The Group noted that the UEA would not be able to stop the P081 MPAN from being created. It would be the responsibility of both Suppliers to resolve the issue and prevent double counting of energy in Settlement.

In addition, when a new site is registered with the UEA under the P218 process, the UEA would be required to search to ECOES database to ensure that a P081 MPAN does not already exist. If the site is already registered then the UEA would inform the current Supplier. The current Supplier could lodge an objection if they so wished (as set out in section 4.6.3).

The Group felt that these additional steps in the process would reduce the risk that an individual microgenerator is registered in both processes, offering assurance to the industry.

The Group noted that, where stated, consultation respondents currently using the P081 solution indicated that they would not switch to P218 if it were implemented.

4.4 Status of the Unmetered Export Agent

The Group discussed whether the UEA should be a new Party Agent or whether the role should be carried out by a central BSC Agent/Service Provider.

The Group noted that the EAC calculation to be carried out by the UEA was not complicated. The UEA would need to hold data relating to individual microgeneration sites and portfolio MPANs, and would need to submit EACs to the relevant NHHDA using the D0019 flow. As the majority of data flows to and from the UEA would be communication with the relevant Supplier it was initially felt that the role could be undertaken by Party Agents provided by each Supplier who wished to use the P218 process.

However, the Group had concerns regarding the tracking of individual microgeneration sites and the risk that sites could be duplicated within Settlement. Based on the complicated processes that would be required to manage sites which underwent a change of Supplier, or a transfer to or from the P081 process, the Group concluded that it would be appropriate for the role of the UEA to be undertaken by a central agent. This would result in the costs of establishing the new agent being incurred once centrally and recovered from all BSC Parties. One member of the Group raised concerns that having a single central UEA would be less competitive than allowing Suppliers to procure their own agents. However, it was concluded that the central UEA would be procured via a competitive tendering process and that concerns regarding the complication of using several UEAs outweighed any concerns regarding competition.

The Group then considered whether the central agent should be established as a new BSC Agent (in accordance with section E of the BSC) or a Service Provider where the roles and responsibilities would be assigned to BSCCo who would then be able to sub contract with an appropriate agent. The Group concluded that the UEA should be set up as a BSC Agent as the information provided by the UEA would be used within the Settlement calculations and the procurement processes would be transparent to all BSC Parties. It was noted that as a BSC Agent, the role could not be provided by a BSC Party.

4.5 Assurance of the P218 process

The Modification Group believed the P218 solution must provide appropriate assurance to the industry that errors are not introduced into Settlement through defects in the processes.

The Modification Group believed assurance should be considered for all areas where there is potential for an error to occur in Settlement that could be material. The key areas highlighted were:

- Suppliers' claimed generation capacity for microgeneration sites;
- Connection and operational status of microgeneration equipment;
- Supplier processes for settling microgeneration; and
- UEA processes.

4.5.1 Suppliers

The Group noted that Suppliers are already required under the BSC to provide accurate information into Settlement, to the best of their knowledge (Section U 1.2). In addition, under P218 a new obligation would be placed upon Suppliers to update the UEA with appropriate information in an accurate and timely manner in accordance with the BSC and/or any relevant BSCP.

The Group considered whether specific assurance could be sought to confirm that the generation capacity declared by the Supplier was accurate and whether the microgenerator was actually generating during the period when the site was registered in Settlement. It was noted that the BSC could not place specific obligations on Customers, therefore any assurance techniques would need to be applied to Suppliers. The Group noted that there is a risk that Customers could deliberately provide inaccurate information to Suppliers. However, this was outside of the scope of P218 as the Supplier would deal with this under their contractual arrangements with the customer.

The Group considered introducing a requirement to create a list of 'approved' microgenerators which would indicate the generation capacity of the equipment. Only microgeneration equipment with a past record showing it was capable of Exporting energy would be included on this list. This would prevent microgenerators with a poor Export Factor being registered under P218. The majority of the Group agreed that this process would be too complicated considering the current level of microgeneration and therefore the impact of inaccurate data on Settlement overall.

The Group also considered introducing a process whereby Suppliers would be mandated to hold a contract with the Customer relating to the microgeneration Export. However, it was noted that this was not required for Import sites so should not be required under P218. The Group concluded that an obligation should be placed on Suppliers to provide accurate information, with the onus on the Supplier to decide what information they required to provide comfort that data entered into Settlement was accurate. It was noted that Suppliers would want their own confirmation regarding the accuracy of data provided to them if they were paying the Customer for Export. Suppliers would be required to demonstrate, upon request, to the best of their knowledge, that they have provided accurate information about the generation capacity of the registered microgeneration site. The Suppliers would also be required to confirm that the connection and operational status of the microgeneration equipment is up to date and accurate.

Suppliers would be required to maintain an audit trail of appropriate evidence to demonstrate the reliability of the information provided to the UEA and their processes, including any checks and measures in place to deter exploitation of P218.

Examples of evidence for an audit trail could include:

- Contractual agreement with the customer;
- Copy of the G83 notice provided to the LDSO upon installation of the microgeneration equipment;
- Details of capacity used for claiming Renewable Obligations Certificates (ROCs);
- Record of Customer confirmation capacity;

- Record of Customer notification to Supplier of change in situation i.e. de-energisation /disconnection/downtime, etc; and
- Record of Supplier site visit.

The Group agreed that the Performance Assurance Board (PAB) should be responsible for overseeing the assurance of P218 processes. The Group considered the following options:

- **Option 1** - P218 could draft a specific obligation for the PAB to conduct an annual check on Supplier processes; or
- **Option 2** - P218 could place an obligation on a Category A BSC Signatory to provide an annual declaration that the information provided is accurate; or
- **Option 3** - P218 could use the current Technical Assurance techniques and allow the PAB to conduct checks at its discretion, based on the perceived risk in accordance with the principles established under Modification P207 'Introduction of a new governance regime to allow a risk based Performance Assurance Framework (PAF) to be utilised and reinforce the effectiveness of the current PAF'.

In line with the majority of consultation responses the Group agreed that option 3 should be taken forward as part of the P218 solution, as this is consistent with the risk based assurance principle.

The Group agreed that Suppliers choosing to use the P218 process would be required to comply with all BSCPs outlining the processes for microgeneration, i.e. registration of microgeneration with UEA, change of Supplier and transfer between P081 and P218 solutions.

4.5.1.1 Energisation and De-energisation

One member of the Group suggested that the UEA should monitor the Energisation Status of related Import MPANs using the ECOES database. Should the Import MPAN be de-energised then the UEA should inform the Supplier responsible for the Export site, as data relating to the Export site should no longer be entering Settlement. The Group noted that generally the Import and Export MPANs would be with the same Supplier and therefore the Supplier would know that the Import MPAN was de-energised and should take action to ensure that Export data was no longer entering Settlement. It was acknowledged that the Supplier may fail to de-energise the Export for short term de-energisations, however the complexity and cost of introducing a new monitoring process was felt to outweigh the impact of any error in Settlement should erroneous Export data continue to enter Settlement for a short period of time.

The Group agreed that, where a site has been de-energised, the Export for that site should be de-registered by the Supplier from the UEA records. Should the same site be re-energised then the Supplier would simply re-register the site with the UEA.

4.5.2 UEA

The Group agreed that the UEA would be classified as a BSC Agent and would therefore not need to undergo Qualification (as this relates specifically to Parties and Party Agents). However, as a BSC Agent, the UEA would undergo a rigorous tender process to confirm their ability to manage the responsibilities of the role (e.g. the ability to send and receive DTC flows via the DTN and process and maintain standing data). In addition the UEA would be added to the scope of the BSC Audit which would ensure that the processes undertaken by the UEA are compliant with the BSC. A BSC Service Description would be created setting out the role of the UEA and this would be visible to all BSC Parties and subject to the normal change control provisions.

4.6 Processes Required to Ensure Effective Change of Supplier

Under Proposed Modification P218, portfolio MPANs would be created per Supplier, per GSP Group, per Distributor. Suppliers who choose to register microgeneration under the P218 process should send details of the microgeneration site to the UEA and the specific site would be assigned to the relevant portfolio MPAN. Should a different Supplier become responsible for the microgeneration site, then the old Supplier should deregister the site with the UEA, and if the new Supplier also intends to use the P218 process then, the new Supplier should register the site with the UEA. Upon any registration or deregistration the UEA would be required to recalculate the EAC for the related portfolio MPAN(s) and submit the revised value(s) to the relevant NHHDA(s).

4.6.1 Microgeneration Registration/ Deregistration

The Group considered the detailed step by step process for managing registration and deregistration of microgeneration sites with the UEA. The agreed process is detailed in full in Appendix 6 and is based on the current MPAN registration process set out in the MRA. In certain areas the process has been simplified in comparison to the MRA processes based on the assumption that there will be a much small number of sites registering microgeneration in comparison with the number of MPANs registered in SMRS.

The Group considered exactly how the Change of Supplier process would work under P218 and proposed additional steps in the process to minimise the risk that the Export from a specific microgeneration site is double counted in Settlement. Attachment 7 contains the high level process that a Supplier should follow on Change of Supplier. The Group noted that when a Supplier becomes responsible for a microgeneration Export site, it may not necessarily know whether the site is already registered in Settlement under the P081 process or the P218 process, or whether the site is simply spilling onto the system. Therefore the Supplier would not be able to indicate to the UEA the existing status, if any, of the site, resulting in the UEA following the same process for new and change of Supplier registration/deregistration.

4.6.2 UEA Checks

As highlighted above, when the UEA receives a microgeneration registration flow it would not know whether the site is already registered in Settlement. The Group specified that the UEA would be required to check firstly whether an identical site is registered in its database under the P218 process; and secondly whether an identical site is registered on ECOES as a P081 Export MPAN. Should the UEA find the particular site on either the UEA database or on ECOES then the UEA would inform the current Supplier. The new registration would only be progressed if the current Supplier did not lodge an objection.

The Group discussed how the UEA would know whether two microgeneration sites were the same. It was agreed that in the majority of cases the microgeneration site would be linked to an Import MPAN. Therefore Suppliers would be required to provide details of the Import MPAN and the full address for the site on the microgeneration registration flow. The UEA would then use this information to search for an identical site. It was noted that some sites are linked to several Import MPANs. Therefore guidance would be provided to ensure Suppliers provided the correct Import MPAN: where multiple related Import MPANs are present then the primary Import MPAN should be provided; and where the multiple Import MPANs are not related then all Import MPANs should be provided. The Group noted that the UEA would also have information regarding the microgeneration capacity and technology that could be used if more than one match was found. Finally, in order to make the search more robust, the Group agreed that Suppliers would be limited to one Supplier registering microgeneration under P218 for any given address.

4.6.3 Objection Process

The Group were keen to include a Supplier objection process under P218 to prevent erroneous registrations being progressed. The Group considered the grounds for objection and concluded that a Supplier could only

object to losing a microgeneration site if it believed it had a commercial contract in place with the relevant Customer.

Under the current Change of Supplier process set out in the MRA there is a detailed objection process and Suppliers are required to withdraw their objection once the issue is resolved. The Group did not believe it was necessary to include this level of complexity under P218 due to the reduced number of sites involved. Therefore the process agreed would allow the current Supplier 5 Working Days to lodge an objection with the UEA. On receipt of an objection, the UEA would inform the new Supplier and would not progress the new registration. The Suppliers would therefore be responsible for resolving the issues between them and the new Supplier would be required to submit a new registration flow if it still wanted to register the site after resolution of the issue.

4.7 Impact on the Master Registration Agreement (MRA) and Data Transfer Catalogue (DTC)

The Group noted that P218 would introduce a number of requirements relating to communication between the UEA and individual Suppliers. The Group felt that the most robust solution would be for this communication to be carried out using the Data Transfer Network (DTN). The P218 Requirements Specification sets out a number of new DTC flows that would be required relating to the registration of microgeneration sites. This information could not be contained within current data flows as there are several new data items such as microgeneration capacity and technology that need to be included.

In addition to the new DTC flows needed to manage the registration of microgeneration sites, the Group acknowledged that P218 would also need to amend the recipients of several current DTC flows relating to MPAN registration and EAC submission.

The P218 Requirements Specification was issued to MRASCo for Impact Assessment. Their impact assessment highlighted that some changes would need to be made to the MRA itself, in particular the definition of a Metering Point and Clause 15. These changes are Priority Provisions of the MRA and would therefore require Authority consent. Additionally the UEA would need to be permitted access to ECOES. It was felt that these changes could be progressed through the MRA within a 12 month implementation window.

The impact assessment also highlighted a number of additional flows that may be impacted, which had not been referenced in the P218 Requirements Specification. The Group considered these additional flows as follows:

- D0168 'Request for Additional/New MPAN Core(s)' - The Group noted that this flow would not be sent to or from the UEA. However it would be mandatory for the 'Additional Information' field to highlight that the flow relates to a portfolio MPAN. Therefore additional notes would need to be added to the DTC.
- D0132 'Request for Disconnection of Supply' – The Group noted that this flow would be used if a Supplier decided to disconnect a P081 MPAN. It was agreed that the 'Additional Information' field would be used to inform the LDSO that the P081 MPAN was being disconnected as the site was moving to the P218 process; therefore notes would need to be added to the DTC.
- D0011 'Agreement of Contractual Terms' – Following receipt of an appointment flow from the Supplier, a NHHDC would normally reply with a D0011 flow, accepting the appointment. The Group noted that it may be possible to oblige the UEA to respond with a D0011. However, it was agreed that to keep the process simple, there would be no requirement on the UEA to send a D0011 flow. If the UEA believed it had received an erroneous appointment then it would contact the Supplier. In the absence of any query, the Supplier should assume the UEA had registered the portfolio MPAN.
- D0148 'Notification of Change to Other Parties' – It was noted that the P218 Requirements Specification had not set out how the UEA would know which NHHDA to send the D0019 to.

Therefore the Group agreed that the Supplier would send the D0148 to the UEA informing it of the correct NHHDA.

- D0171 'Notification of Distributor Changes to Metering Point Details' – The Group noted that under the Proposed Modification the portfolio MPAN would be assigned to a LLFC, therefore there would be no need for the UEA to receive the D0171. Under the Alternative Modification it was noted that BSCCo would provide LLFC details to the UEA.
- D0203 'Rejection of Changes to Metering Point Details' – as for the D0171 above.
- D0151 'Termination of Appointment or Contract by Supplier'. The Group noted that a Supplier may want to deregister a portfolio MPAN if it no longer wished to use the P218 process. Therefore the Group agreed that the UEA should be added as a recipient of the D0151.

A full set of DTC flows impacted by P218 has been provided in Appendix 8.

4.8 Alternative Modification

The Group considered three potential alternative solutions. The Alternative solution which the Group consulted upon is described below. The other two Alternatives were discarded by the Group prior to the consultation and are described in Appendix 7. Several suggestions for further P218 Alternatives were proposed within the consultation responses, the Group's response to each of these suggestions is also included in Appendix 7.

4.8.1 Removal of Requirement for Portfolio MPANs

Proposed Modification P218 states that a new agent, the UEA, would create EACs for portfolio MPANs and submit these to the NHHDA so that they can be entered into Settlement via the normal processes. The Group noted that the requirement to create portfolio MPANs and manage the registration processes relating to these MPANs introduces complexity to the process for settling microgeneration. Therefore the Group considered a potential Alternative Modification whereby the UEA would calculate Annual Export values for microgeneration sites (as per the Proposed Modification). These values would then be aggregated into a Supplier Purchase Matrix (SPM) and submitted directly to the SVAA.

4.8.2 Ability to Apply Individual SSCs

Proposed Modification P218 allows Suppliers to register a single portfolio MPAN for each GSP Group and Distributor. This means that a single EAC would be calculated estimating the Export for one or more microgenerators, and that a single set of registration data would be assigned to the MPAN. Part of the registration data for any MPAN is the Profile Class, the SSC and the Time Pattern Regime (TPR). Together these pieces of information allow the SVAA to profile the energy for a particular MPAN across different half hourly periods. Under Proposed Modification P218 a single portfolio MPAN is created which may have microgenerators with different technologies assigned to it. However these would all have to have the same Profile Class, SSC and TPR as they are aggregated together under a single MPAN.

The Group therefore considered whether it would be more appropriate to allow separate EACs to be created for different microgeneration technologies. These separate EACs could then be assigned Profile Classes, SSCs and TPRs that more accurately reflect the profile of Export e.g. the portfolio MPAN representing solar energy could be profiled so that there is no Export during the night. SSCs for different microgeneration technologies already exist in MDD as they are used for registering P081 Export MPANs under the existing process. It was noted that a single Profile Class (8) would still be applied to all portfolio MPANs as this would be the flattest profile available.

The Group carried out analysis to see whether a significant profiling error would be introduced by aggregating a number of different microgeneration technologies together under one portfolio MPAN. The results of this analysis are contained in Appendix 5 and Attachment 6. The results showed the percentage

of energy misallocated when using separate SSCs (i.e. the current level of error under the P081 solution) compared with the percentage of energy that would be misallocated if a flat unrestricted SSC were to be applied to all portfolio MPANs. The Group noted that there was an overall increase in profiling error of 7.4% when moving to an unrestricted SSC, although this was not a significant increase in error considering the profiling error itself was already approximately 50%.

The Group concluded that, initially microgeneration should be settled using a single EAC for all microgeneration sites registered by a Supplier per GSP Group, per Distributor. The unrestricted Export SSC would be applied to this EAC. However as data would be aggregated based on the Supplier, GSP Group, Distributor, Profile Class, SSC, TPR and Line Loss Factor Class (LLFC) within the Supplier Purchase Matrix, it would be possible to apply separate SSCs to different microgeneration technologies if the Panel felt this was appropriate at a later date, for example, if more data became available that indicated the profiling error was worse than anticipated.

4.8.3 Alternative Modification Solution

In summary, the Alternative Modification is very similar to the Proposed Modification set out in section 4.1 with the following differences:

- Portfolio MPANs are not required therefore there is no interaction with the SMRS and no requirement for the UEA to hold MPAN data;
- EAC data is aggregated into a Supplier Purchase Matrix and submitted directly to the SVAA so there is no interaction with the NHHDA. The UEA would need to produce a D0041 'Supplier Purchase Matrix' flow rather than a D0019 flow;
- When creating the D0041, the UEA may need to include the correct SSC for the particular microgeneration technology. Therefore the UEA would need to determine SSC details for each microgeneration site;
- The Panel would be able to determine that separate SSCs could be applied to separate microgeneration technology types at a later date;
- The creation and submission of SPM data would need to be undertaken in accordance with the Settlement Calendar; and
- The LDSO would be required to inform BSCCo which SVA LLFCs should be applied to microgeneration sites in their area. It is not envisaged that different LLFs would be applied to individual sites. Therefore a single set of LLFs would be applied to each combination of Supplier, GSP Group, LDSO and, for the Alternative, technology type (i.e. for each Unmetered Export Registration).

4.8.4 Modification Group Conclusion

The Group concluded that this option would be less complex than the Proposed Modification as portfolio MPANs are not required and it would bypass the NHHDA systems and processes.

4.9 Implementation Approach and Costs

4.9.1 Modification Group's Initial Discussions

To implement P218, the UEA BSC Agent would be established through a procurement exercise undertaken by BSCCo. The new UEA would require software to calculate EACs and would maintain a database that registers the different microgenerators and portfolio MPANs. The UEA would also require a connection to the DTN.

In addition, the Implementation Date for P218 would need to be set to take into account the raising, progression and implementation of changes to SVAA, the DTC, the BSC and its subsidiary documents. Export Factors would need to be determined by the Panel and provided to the UEA prior to the Implementation Date. Suppliers and LDSOs would also need to update their processes to ensure they can meet the new obligations introduced by P218.

Parties and Party Agents generally indicated that one year was required to implement P218 and the Group believes that the associated MRA changes (including any decisions required by the Authority) could be progressed within this timeframe.

Taking into account all the impact assessment responses, the proposed Implementation Date for P218 Proposed and Alternative Modifications is:

- **05 November 2009** should an Authority decision be received by 7 August 2008; or
- **04 February 2010** should an Authority decision be received after 7 August 2008 but before 13 November 2008.

This would allow implementation of P218 as part of a Release. The Group did not consider that P218 should be implemented outside of a standard release.

P218 would be implemented such that Settlement systems and processes are capable of supporting portfolio MPANs from the Implementation Date. P218 would be implemented on a Settlement Day basis i.e. microgeneration sites could be registered on or after the Implementation Date with the Effective From Date of Implementation Date + 1 at the earliest. Data for registered sites would therefore enter Settlement at the first settlement run for the Implementation Date + 1.

4.9.2 Results of Proposed and Alternative Modification Impact Assessments

The Modification Group issued the P218 Requirements Specification for Impact Assessment by Parties, Party Agents, MRASCo, BSCCo, BSC Agents and the Transmission Company. The high level results of these Impact Assessments are provided below, more detail is available in Appendix 4.

PROPOSED MODIFICATION IMPLEMENTATION COSTS⁶

		Proposed Solution	Alternative Solution	Tolerance
Service Provider⁷ Cost				
New Service Provider		£250,000	£250,000	+/-50%
Current Service Provider		£49,560	£50,100	+/-20%
	Total Service Provider Cost	£299,560	£300,100	
Implementation Cost				
	External Audit	£0	£0	+/-10%
	Design Clarifications	£20,969	£21,007	
	Additional Resource Costs	£0	£0	
	Additional Testing and Audit Support Costs	£0	£0	
Total Demand Led		£320,529	£321,107	

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

⁷ BSC Agent and non-BSC Agent Service Provider and software costs.

Implementation Cost				
ELEXON Implementation Resource Cost		man days £73,810	man days £73,810	+/- 10%
Total Implementation Cost		£394,339	£394,917	

PROPOSED MODIFICATION ONGOING SUPPORT AND MAINTENANCE COSTS

	Proposed Solution	Alternative Solution	Tolerance
ELEXON Operational Cost	£29,040 annum	£29,040 annum	+/-10%
The Service Provider Operation and Maintenance Costs can not be provided until the procurement is progressed.			

a) BSC Agent Impact

Central System costs: Changes are required to SVAA based on the addition of new CCCs. The costs are estimated to be approximately £50k.

b) BSC Party and Party Agent Impact

Supplier and Supplier Agent Costs: Limited costs were provided by Parties and Party Agents. The Group noted some concerns over costs for NHHDA's (under the Proposed solution), however as the UEA would effectively be acting as a NHHDC, under a role code 'D', the Group reiterated their view that NHHDA impact and costs should be small.

Supplier costs ranged from a small Supplier verbally quoting a few thousand pounds to £3-4 million estimated costs from a large Supplier based on developing an automated process for Settlement and other business systems. The Group noted that P218 was not compulsory and Suppliers could still opt not to settle microgeneration, in which case they would not be impacted by P218. However any Supplier currently settling using the P081 metered arrangements would have to adapt their systems and processes to support provision of information to the UEA regardless of whether or not they wished to use the P218 mechanism.

Finally, those Suppliers wishing to use the P218 mechanism would need to put in place new systems and processes and may also need to handle moving between the current arrangements and a P218 solution. It was acknowledged that an automated solution would only be palatable for Suppliers where there was a critical mass of microgeneration that could be shown to actually be exporting. There is no confidence that anybody understands what that critical mass would be.

LDSO Costs: LDSO respondents quoted costs ranging from £500 per year to £50-£100,000 to manage the processes. One respondent expressed concern that customers are not informing LDSOs of installations currently and these arrangements could exacerbate the problem. However the Group noted that under P218 LDSOs could request a list of registered microgeneration sites from the UEA, therefore the visibility of sites should not be reduced. The Group also noted that LDSO costs related to the creation of portfolio MPANs and potentially the creation of an additional LLFC and its associated LLFs. As P218 will be implemented outside of the LLF approval window the costs of creating a new LLFC may be higher.

c) Transmission Company Impact

No impact.

d) BSCCo Impact

ELEXON Costs: ELEXON provided costs based on the implementation work and procurement of a new BSC Agent. The estimated costs are 126K with 50k for implementation and £76k for the procurement exercise (ELEXON also provided a cost estimate of procuring a new Service Provider, as opposed to BSC Agent, these costs were estimated at £62k). ELEXON asked for feedback from a Party Agent regarding the costs of set up and operation of a service of the type the UEA would provide. An estimate of up to £250k was suggested.

4.9.3 Views of Respondents to Assessment Procedure Consultation

The majority of respondents agreed with the implementation approach recommended by the Group.

One respondent suggested that the timetable was unachievable, and that at least 12 months is needed between approval and implementation. The Group confirmed that the implementation allows 15 months.

4.9.4 Modification Group's Conclusions

The Modification Group therefore confirmed the following recommended implementation date for P218:

- An Implementation Date for the Proposed or Alternative Modification of **05 November 2009** should an Authority decision be received by 7 August 2008; or **04 February 2010** should an Authority decision be received after 7 August 2008 but before 13 November 2008.

4.10 Benefits and Concerns

4.10.1 Initial Modification Group Views

The Modification Group discussed whether it would be possible to collate meaningful information to analyse the benefits of increasing the amount of microgeneration in Settlement. The Group recognised that P213 had not been approved due, in part, to the lack of justification of the perceived benefits of the additional process for settling microgeneration.

A number of respondents to the Impact Assessment took the opportunity to describe their concerns with the costs of introducing a second process to settle microgeneration when it has not been proved that the current processes are deficient nor is there evidence that microgeneration Export is being 'spilled'. The Group sympathised with this view and referred to the issue 2 discussions indicating that the current arrangements can and do work.

The Proposer set out the concerns that had led to the raising of P218. P218 is meant to be an interim solution pending the development of a long term solution based on either the development of new technology or resulting from a better understanding of the impacts of microgeneration as the population of sites increases. The cost of metering microgeneration seems prohibitive, therefore microgeneration is not being accounted for in Settlement. Any export greater than the on site demand must arguably be being spilled and used elsewhere. The benefit of this spilt energy is therefore going to the largest Supplier in the GSP Group. It was anticipated that a P218 solution would at least ensure some values entered Settlement, as opposed to potentially zero values. The Proposer noted that whilst the solution developed was correct to deliver the proposal, the impact assessments had shown it was more complicated than originally hoped.

The Group observed that there was still limited information regarding the impact of microgeneration on Settlement (within the UK). One impact assessment respondent made it clear that they believe settling volumes less than 400KW per annum is not currently economically efficient. This suggests that the earnings from these sites must be around £16 per year as this is the cost of metering and servicing the account. Another respondent suggested the problem lies in participant systems' inability to accept Export data rather than with the metering. The Group expressed sympathy with these comments and noted there is no evidence that microgeneration is having a detrimental impact on Settlement and that were it cost effective to do so, they would Meter the volumes for Settlement purposes. The Group were concerned with quoted

costs for implementing P218 given this lack of evidence. It was considered that a proper study into the impact of microgeneration on Settlement would be necessary to prove the impact on Settlement. This study would not be cheap to administer and there was a general feeling that this in itself would not be a cost effective exercise.

The Group considered the impact of P218 estimates on Settlement and for the reasons outlined above some members suggested that these volumes would not be better than the current perceived spill. Microgeneration can be unpredictable dependent upon the customer's load and the local conditions. Early discussions regarding the limited data upon which to base the Export Factors concluded that a non metered solution could exacerbate the issue of data quality as there would be no real data upon which to base any revised estimates.

The Group acknowledged that there is a desire to ensure the promotion of positive behaviours in respect of climate change and carbon saving requirements. However it is not felt that Settlement is a barrier to this goal and this can be achieved by the industry without further changes to Settlement.

4.10.2 Views of Respondents to the Assessment Procedure Consultation

In order to help quantify the potential benefits, or at least understand how these benefits could be assessed, the Group asked a specific question in the Assessment Consultation. The responses have been summarised below:

Question 1: Is there any evidence that microgeneration is being spilled? If so, what is the impact?

Many respondents stated that it was not possible to assess whether microgeneration is being spilt at present. It was stated that it would only be possible to assess this if metered data from microgeneration sites was available. It was noted that this may only be possible if a study was carried out mandating the installation of metering for a sample of sites. One respondent highlighted a report that had been published by ILEX which provided data relating to the level of energy being spilt (Reference 1).

Question 2: Is the issue that microgeneration needs to be promoted, if so, does it actually need to be settled?

As the modification focused on facilitating the Settlement of microgeneration Export, it was not necessarily intended to increase the amount of microgeneration installed. One consultation respondent noted that customers tend to choose to install microgeneration to reduce their Import during peak hours, rather than to gain benefits from Exporting. Therefore, another option would be to educate customers so that they use more of their own microgeneration on site and Export less noting that this would need to be taken forward outside the BSC.

Question 3: What is the 'critical mass' above which Suppliers would automate a solution to register and/or settle microgeneration?

Only one respondent provided a confidential response in this area.

4.11 Legal Text

The Group reviewed and agreed the Legal Text for P218 Proposed and Alternative.

A copy of the Proposed and Alternative draft legal text can be found in Appendix 1.

5 ASSESSMENT OF MODIFICATION AGAINST APPLICABLE BSC OBJECTIVES

This section outlines the views of consultation respondents and the Modification Group regarding the merits of P218 against the Applicable BSC Objectives.

5.1 Proposed Modification

5.1.1 Modification Group's Initial Discussions

The initial **MAJORITY** view of the Modification Group was that the Proposed Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline, for the following reasons:

Applicable BSC Objective (c)

- It was felt the proposed solution did not encourage greater uptake of microgeneration and no evidence was presented to suggest that it would actually be used;
- This was not the correct or cost effective mechanism to incorporate greater microgeneration into Settlement; and
- It does not encourage competition within the industry, however, it is acknowledged that some Suppliers may receive a benefit, attributed to their microgeneration customers.

Applicable BSC Objective (d)

- The proposed solution is inefficient and increases the level of error introduced into Settlement;
- It is over complicated and costly without increased efficiency; and
- By offering an additional option of P218 to the existing process of P081 and the option of spillage, the Group felt that numerous options further complicated the industry and could lead to confusion.

The initial **MINORITY** view of the Modification Group was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline, for the following reasons:

Applicable BSC Objective (c)

- It was felt the proposed solution would encourage greater Settlement of microgeneration through the ability to settle without a Meter.

Applicable BSC Objective (d)

- The proposed solution would be more cost reflective as it allows appropriate volumes to be settled and therefore recorded against the correct Supplier, instead of being spilled.

The Group agreed that the Proposed Modification would have a neutral impact on Applicable BSC Objectives (a) and (b).

5.1.2 Views of Respondents to Assessment Procedure Consultation

The **MAJORITY** view of the respondents to the Assessment Procedure consultation was that the Proposed Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline, for the same reasons identified by the Modification Group.

The **MINORITY** view of the respondents to the Assessment Procedure consultation was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline, for the same reasons identified by the Modification Group.

5.1.3 Modification Group's Assessment

The final **MAJORITY** view of the Modification Group was that the Proposed Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline, for the reasons stated above, and in addition:

Applicable BSC Objective (d)

- P218 is seen to be an interim solution, however it does not provide a neat 'stepping-stone' to a final solution, which is likely to involve metering of NHH Export. This means that P218 will be costly to implement, and will potentially be removed when a more long term solution becomes available.

The final **MINORITY** view of the Modification Group was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline, for the reasons stated above.

The Group confirmed that the Proposed Modification would have a neutral impact on Applicable BSC Objectives (a) and (b).

5.2 Alternative Modification Compared to the Proposed Modification

5.2.1 Modification Group's Initial Discussions

The initial **UNANIMOUS** view of the Modification Group was that the Alternative Modification **WOULD** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the Proposed Modification, for the following reasons:

Applicable BSC Objective (c)

- A simpler process presented by the Alternative would better facilitate equitable competition to those wanting to settle microgeneration due to reduced impacts on Parties, Party Agents and the MRA.

Applicable BSC Objective (d)

- The Alternative solution requires fewer changes to existing processes and systems, simplifying the implementation and impact on the industry; and
- It would be cheaper to implement compared to the proposed solution.

5.2.2 Views of Respondents to Assessment Procedure Consultation

The **MAJORITY** view of respondents to the Assessment Procedure consultation was that the Alternative Modification **WOULD** better facilitate the achievement of **Applicable BSC Objectives (c) and (d)** when compared to the Proposed Modification. The same arguments as those expressed in section 5.2.1 were expressed by respondents in support of this view.

The **MINORITY** view of respondents to the Assessment Procedure consultation was that the Alternative Modification **WOULD NOT** better facilitate the achievement of **Applicable BSC Objectives (c) and (d)** when compared to the Proposed Modification, for the following reasons:

Applicable BSC Objective (d)

- while the Alternative would be simpler and cheaper in the short term, there would be a lack of visibility and long term costs associated with this solution.

5.2.3 Modification Group's Conclusions

The **UNANIMOUS** view of the Modification Group was that the Alternative Modification **WOULD** better facilitate the achievement of **Applicable BSC Objectives (c) and (d)** when compared to the Proposed Modification, for the reasons described above in section 5.2.1.

The Group agreed that the Alternative Modification would have a neutral impact on Applicable BSC Objectives (a) and (b).

5.3 Alternative Modification Compared to the Code Baseline

5.3.1 Modification Group's Initial Discussions

The initial **MAJORITY** view of the Modification Group was that the Alternative Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline for the same reasons stated in relation to the Proposed Modification (section 5.1.1).

The initial **MINORITY** view of the Modification Group was that the Alternative Modification **WOULD** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline for the same reasons stated in relation to the Proposed Modification (section 5.1.1).

5.3.2 Views of Respondents to Assessment Procedure Consultation

The **MAJORITY** view of respondents to the Assessment Procedure consultation was that the Alternative Modification **WOULD NOT** better facilitate the achievement of **Applicable BSC Objectives (c) and (d)** for the same reasons stated in relation to the Proposed Modification (section 5.1.1).

The **MINORITY** view of respondents to the Assessment Procedure consultation was that the Alternative Modification **WOULD** better facilitate the achievement of **Applicable BSC Objectives (c) and (d)** for the same reasons stated in relation to the Proposed Modification (section 5.1.1).

5.3.3 Modification Group's Conclusions

The final **MAJORITY** view of the Modification Group was that the Alternative Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline for the same reasons stated in relation to the Proposed Modification (section 5.1.1).

The final **MINORITY** view of the Modification Group was that the Alternative Modification **WOULD** better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared with the existing Code baseline for the same reasons stated in relation to the Proposed Modification (section 5.1.1).

The Group agreed that the Alternative Modification would have a neutral impact on Applicable BSC Objectives (a) and (b).

5.4 Final Recommendation to the Panel

On the basis of the above assessment, the Modification Group therefore agreed a **MAJORITY** recommendation to the Panel that:

- The Proposed Modification **SHOULD NOT** be made; and that
- The Alternative Modification **SHOULD NOT** be made.

Details of the Group's recommended Implementation Date and legal text can be found in Section 4.9.

6 TERMS USED IN THIS DOCUMENT

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

Acronym/Term	Definition
CCC	Consumption Component Class
DTC	Data Transfer Catalogue
DTN	Data Transfer Network
EAC	Estimated Annual Consumption
FAA	Funds Administration Agent
GSP	Grid Supply Point
HH	Half Hourly
LDSO	Licensed Distribution System Operator
LLF	Line Loss Factor
UEA	Unmetered Export Agent
MOA	Meter Operator Agent
NHHDA	Non Half Hourly Data Aggregator
NHHDC	Non Half Hourly Data Collector
PAB	Performance Assurance Board
SAA	Settlement Administration Agent
SMRS	Supplier Meter Registration Service
SPM	Supplier Purchase Matrix
SSC	Standard Settlement Class/Configuration
SVAA	Supplier Volume Allocation Agent

7 DOCUMENT CONTROL

7.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	22/02/08	Change Delivery	Ysanne Hills	For peer review
0.2	25/02/08	Change Delivery	Modification Group	For Modification Group review
0.3	28/02/08	Change Delivery	Sarah Jones	For technical review
0.4	28/02/08	Change Delivery	David Jones	For quality review
1.0	07/03/08	Change Delivery		For Panel decision

7.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	Ilex Report	DTI	12/2004	N/A
2	SVG Paper 81/03 – Update on CP issue 2	ELEXON	10/2007	1.0
3	SVG Paper 85/03 – Recommendations of the CP issue 2 Working Group	ELEXON	03/2008	1.0
4	SVG Paper 85/04 – Review of the SSTPGPL	ELEXON	03/2008	1.0

APPENDIX 1: DRAFT LEGAL TEXT

Draft legal text for the Proposed Modification is attached as a separate document, Attachment 1.

Draft legal text for the Alternative Modification is attached as a separate document, Attachment 2.

APPENDIX 2: PROCESS FOLLOWED

Copies of all documents referred to in the table below can be found on the BSC Website at: [ELEXON - Modification Proposal P218](#).

Date	Event
23/10/07	Modification Proposal raised by Good Energy
09/11/07	IWA presented to the Panel
12/11/07	First Assessment Procedure Modification Group meeting held
11/12/07	Second Assessment Procedure Modification Group meeting held
07/01/08	Third Assessment Procedure Modification Group meeting held
15/01/08	Requirements Specification issued for BSC Agent impact assessment
14/01/08	Request for Party/Party Agent impact assessments request issued
15/01/08	Request for Transmission Company analysis issued
15/01/08	Request for BSCCo impact assessment issued
25/01/08	BSC Agent impact assessment response returned
25/01/08	Party/Party Agent impact assessment responses returned
25/01/08	Transmission Company analysis returned
25/01/08	BSCCo impact assessment returned
30/01/08	Fourth Assessment Procedure Modification Group meeting held
11/02/08	Assessment Consultation and Questions presented for Industry Review
21/02/08	Industry Consultation responses returned
25/02/08	Fifth Assessment Procedure Modification Group meeting held

ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL⁸

Meeting Cost	£2,500
Legal/Expert Cost	£14,000
Impact Assessment Cost	£8,000
ELEXON Resource	154 man days £27,315

The Legal/Expert Costs stated above vary from those stipulated in the Initial Written Assessment Report as external Legal costs (£14,000) were incurred to complete the legal text for this Modification.

MODIFICATION GROUP MEMBERSHIP

Member	Organisation	12/11/07	11/12/07	07/01/08	30/01/08	25/02/08
David Jones	ELEXON (Chair)	✓	✓	✓	✓	-
Dina Solanki	ELEXON (Lead Analyst)	✓	-	✓	✓	✓
Chris Welby	Good energy (Proposer)	✓	✓	✓	✓	✓

⁸ 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

Member	Organisation	12/11/07	11/12/07	07/01/08	30/01/08	25/02/08
Craig Maloney	National Grid	✓	-	-	-	-
Graham Smith	Western Power Distribution	-	✓	✓	✓	✓
Cher Harris	Scottish and Southern	✓	✓	✓	✓	-
Tim Roberts	Scottish Power	✓	✓	✓	✓	✓
Seth Chapman	AccuRead	✓	✓	✓	✓	✓
Louisa Stuart-Smith	npower	✓	✓	✓	✓	✓
Colette Baldwin	E.ON	✓	✓	✓	✓	✓
Attendee	Organisation	12/11/07	11/12/07	07/01/08	30/01/08	25/02/08
Victoria Arr	Ofgem	✓	✓	✓	✓	✓
Nigel Nash	Ofgem	✓	✓	-	-	-
Anna Kulhavy	Ofgem	-	-	-	✓	✓
Jill Ashby	MRASCo	-	✓	✓	-	-
Brendan McGarry	MRASCo	-	-	-	✓	-
Andrew Blackett	Good Energy	-	✓	-	-	-
Sarah Jones	ELEXON (Design Authority)	✓	✓	✓	✓	✓
Helen Boothman	ELEXON	✓	✓	✓	✓	✓
Ysanne Hills	ELEXON	-	-	-	-	✓

MODIFICATION GROUP TERMS OF REFERENCE

The Modification Group shall consider the following topics as deemed appropriate:

- Details of the Proposed Solution.
- Potential methods for calculating EACs for Microgeneration.
- Current Microgenerators in Settlement and the impact of P218 on existing generators if any.
- Status of Unmetered Export Agent within the industry.
- Auditing and Qualification of the new Unmetered Export Agent.
- Processes required to ensure effective Change of Suppliers.
- Master Registration Agreement (MRA) and the impacts to their processes.
- Benefit/Costs analysis of Microgeneration Settlement.

APPENDIX 3: RESULTS OF ASSESSMENT PROCEDURE CONSULTATION

13 responses (representing 54 Parties and 15 non-Parties) were received to the P218 Assessment Procedure consultation.

Q	Consultation Question	Yes	No	Neutral
1	Do you believe Proposed Modification P218 would better facilitate the achievement of the Applicable BSC Objectives?	2	10	1
2	Do you believe Alternative Modification P218 would better facilitate the achievement of the Applicable BSC Objectives when compared to the current baseline?	3	9	1
3	Do you believe Alternative Modification P218 would better facilitate the achievement of the Applicable BSC Objectives when compared to the Proposed Modification?	9	4	-
4	Do you support the implementation approach described in the consultation document?	8	3	2
5	If you do not currently settle microgeneration would you start using P218 to record NHH Export in Settlement?	1	8	4
6	If you currently settle microgeneration using the P081 solution would you start using P218 to record NHH Export in Settlement instead?	-	4	9
7	Which assurance option would you prefer to be implemented as part of P218 (see section 3.5 of the consultation document for a description of the different options)?	Option 1 – 2 Option 2 – 2 Option 3 – 6 Hybrid of Options 2 and 3 – 1 All Options – 1		1
8	Do you believe there are any other solutions or options that the Modification Group has not identified and that could be considered in the remaining timeframe?	4	9	-
9	Please provide suggestions on how the potential benefits of better facilitating Settlement of microgeneration could be determined. You may want to consider whether there is currently a significant amount of energy being spilt; if not, then what level would be significant, and what is currently preventing Supplier's registering microgeneration in Settlement.	The comments provided in response to this question are included within the un-summarised responses in Attachment 3.		
10	Are there any further comments on P218 that you wish to make?	5	8	-

Full copies of the consultation responses are attached as a separate document, Attachment 3.

APPENDIX 4: RESULTS OF IMPACT ASSESSMENT

During the Assessment Procedure an impact assessment was undertaken in respect of all BSC systems, processes, documentation and parties. The following have been identified as impacted by P218.

For details of the costs associated with these impacts, please refer to section 4.9.

a) Impact on BSC Systems and Processes

System / Process	Impact of Proposed Modification	Impact of Alternative Modification
SVAA	The SVAA software would need to be amended to account for the new CCCs and to ensure that the portfolio Export MPAN data is entered into Settlement correctly. The SVAA would need to apply an unrestricted SSC and Profile Class 8 to calculate Half Hourly values.	The impact on SVAA would be the same as the Proposed Modification. In addition, the SVAA may need to apply microgeneration technology specific SSCs to calculate Half Hourly values. Also, the SVAA system would need to accept the D0041 file from the UEA.
New Unmetered Export Agent	A new BSC Agent would need to be procured to undertake the role of UEA. This agent would need to store information regarding microgeneration sites registered under the P218 process and also portfolio MPAN data. In addition, the UEA would need to develop an EAC calculator and would need software to create DTC flows such as the D0019 which would need to be transmitted via the DTN. Finally the UEA would need to communicate with various Suppliers regarding registration and deregistration of microgeneration sites and portfolio MPANs, and where necessary, search the ECOES database for duplicate sites.	As per the Proposed Modification, apart from the following: the UEA would not need to store information regarding portfolio MPANs as these would not be created; the UEA would need to create D0041 files for submission to the SVAA rather than D0019 files; and the UEA would not need to communicate with Suppliers regarding portfolio MPAN registration.

b) Impact on BSC Agent Contractual Arrangements

BSC Agents	Impact of Proposed and Alternative Modifications
Cap Gemini (SVA AO)	It is not anticipated that this contractual agreement would be effected by P218, but it is subject to change, depending on the extent of amendments required to the SVAA system.
PwC (BSC Auditor)	As a new BSC Agent, the UEA systems and processes would be added to the scope of the BSC Audit.
Technical Assurance Agent	It is not anticipated that this contractual agreement would be effected by P218, although additional TAA checks may be required.
New UEA Agent	BSCCo would be required to procure, establish contracts and manage a new BSC Agent.

c) Impact on BSC Parties and Party Agents

As the P081 and P218 processes are expected to run parallel with each other, the impact on existing Suppliers will depend on whether they chose to register microgeneration in Settlement, and if so, which process they intend to follow. Should a Supplier choose to register microgeneration using the P218 process

then the impact on their systems and processes is detailed below. Some Supplier processes would need to manage two different arrangements and the change of Supplier processes would need to allow for smooth transfer between the arrangements of P081 and P218. New obligations would also be placed on Suppliers choosing to register P081 Export MPANs to reduce the risk of duplicate registrations. NHH Supplier Agents would need to amend their processes to enable them to process portfolio MPAN data.

BSC Parties and Party Agents		Impact of Proposed Modification	Impact of Alternative Modification
Suppliers		Suppliers wishing to use the P218 process would need to communicate with the UEA regarding registration and deregistration of microgeneration sites. Suppliers would also need to register portfolio MPANs with SMRS. Suppliers would be obliged to deregister microgeneration sites when they are no longer responsible for the Export. In addition, all Suppliers would be obliged to inform the UEA when they wish to register a microgeneration Export MPAN under the current P081 rules.	As per the Proposed Modification, except Suppliers wishing to use the P218 process would not be required to register portfolio MPANs.
Licensed Distribution System Operator (LDSO)		LDSOs would need to create portfolio MPANs on request from a Supplier. In addition LDSOs may need to create a LLFC for portfolio Export MPANs and submit LLFs for approval through the current process.	As per the Proposed Modification. Note – BSCCo would need to inform the UEA which LLFCs to use within the SPM.
Supplier Registration (SMRS)	Meter System	SMRS would need to register portfolio MPANs on request from a Supplier.	There would be no impact on the SMRS as no portfolio MPANs are created.
NHHDA		Only NHHDA which have been contracted by Suppliers wishing to use the P218 process would be affected by this Modification. Affected NHHDA would need to accept D0019 data from the UEA. As this information should look as though it has been submitted by a normal NHHDC, it is not anticipated that there would be any changes required to NHHDA systems and processes.	NHHDA would not be affected by P218 Alternative Modification.
Meter Operators and Data Collectors		Meter Operators and Data Collectors would not be affected by P218.	As per Proposed Modification.

Full copies of the Party and Party Agent impact assessment responses are attached as a separate document, Attachment 5.

d) Impact on Transmission Company

No impact.

e) Impact on BSCCo

Area of Business	Impact of Proposed and Alternative Modifications
Implementation	BSCCo would be required to implement changes to the Code, Code Subsidiary Documents (CSDs) and BSC Systems to support this Modification Proposal.
Procurement	BSCCo would be required to procure a new BSC Agent to undertake the role of UEA.
LLF processing	Under the Alternative Modification, BSCCo would be required to send the UEA details of the LLFC to be used in the SPM for each GSP Group/Distributor.
BSC Panel processes	The BSC Panel would be required to approve Export Factors to be used in the calculation of microgeneration Export EACs. BSCCo would facilitate this process and undertake reviews of the process where requested by the Panel. BSCCo would also ensure that the approved Export values are published on the BSC website and sent to the UEA.
Market Domain Data (MDD)	Under the Proposed Modification, the UEA would be registered in MDD as a NHHDC and potentially a MOA. Therefore there would be additional information contained within MDD as a result of P218. However it is assumed that these new data items would be added via the current processes set out in BSCP 509 'Changes to Market Domain Data', therefore no changes to the actual systems would be required.
Performance Assurance	The PAB would be required to ensure that the Suppliers are fulfilling their obligations by updating the UEA with the appropriate information in a timely manner and maintaining an audit trail of information passed between the Supplier and Customers. The actual technique required is yet to be agreed.

f) Impact on Code

Code Section	Impact of Proposed and Alternative Modifications
Section E	Amendment to reflect new BSC Agent role.
Section J	Amendment to reflect the fact that NHHDCs and MOAs are not required for portfolio MPANs.
Section K	Amendment to reflect the fact that microgeneration Exports would not need to be metered.
Section L	Amendment to reflect the fact that microgeneration Exports would not need to be metered.
Section S, Annex S-2	Amendment to include the role of UEA and the rules for registering microgeneration sites and calculating the EAC for Export portfolio MPANs. Additional obligations to be added for Suppliers to deregister microgeneration sites for which they are no longer responsible. Also an obligation on all Suppliers should be added to inform the UEA

Code Section	Impact of Proposed and Alternative Modifications
	when registering a P081 Export MPAN.
Section X, Annex X-1, X-2	Amendment to the General and Technical Glossary section would be required to represent the Proposed/Alternative Solution. This would include the addition of new CCCs to table 8 in Annex X-2.
Section Z	Amendment to reflect any new assurance requirements.

A copy of the draft legal text to give effect to these changes can be found in Appendix 1.

g) Impact on Code Subsidiary Documents

Document	Impact of Proposed Modification	Impact of Alternative Modification
New Unmetered Export Agent BSCP	A new BSCP would need to be produced setting out the role of the UEA and the processes to be followed relating to registration and deregistration of microgeneration sites and portfolio MPANs.	Same as Proposed Modification, except the BSCP would not contain reference to portfolio MPANs.
New Unmetered Export Agent Service Description	As the UEA would be a new BSC Agent, then a new Service Description would be required setting out the roles and responsibilities of the UEA.	Same as the Proposed Modification except the BSCP would not contain reference to portfolio MPANs.
BSCP 01 Overview of Trading Arrangements	This BSCP would be amended to add the UEA as a new BSC Agent.	Same as Proposed Modification.
BSCP504 Non Half Hourly Data Collection for Metering Systems Registered in SMRS	Possible minor change to ensure that NHHDCs are not obliged to calculate EACs for portfolio MPANs	No impact.
BSCP 505 Non Half Hourly Data Aggregation for SVA Metering Systems Registered in SMRS	Possible minor change to ensure that NHHDCs would process D0019 files received from the UEA.	No impact.
BSCP 507 Supplier Volume Allocation Standing Data Changes	Possible minor change to account for the registration of portfolio Export MPANs.	No impact.
BSCP 508 Supplier Volume Allocation Agent	Possible minor change to describe the relationship between the UEA and SVAA.	Same as Proposed Modification.
BSCP 514 SVA Meter Operations for Metering Systems registered in SMRS	Possible minor change.	No impact.
BSCP 516 Allocation of Profiles &	This BSCP would be amended to	This BSCP would be amended

Document	Impact of Proposed Modification	Impact of Alternative Modification
SSCs for Non Half Hourly Metering System Registered in SMRS	describe allocation of Profile Classes and SSCs applied to portfolio Export MPANs in Settlement.	to describe allocation of Profile Classes and SSCs to microgeneration data in the SPM.
BSCP528 Supplier Volume Allocation Line Loss Factors for Half Hourly and Non-Half Hourly SVA Metering Systems registered in SMRS	Possible minor change to account for the LLFC to be applied to the portfolio MPAN.	This BSCP would be amended to describe how Distributors would be required to indicate to BSCCo which LLFCs would need to be applied to microgeneration.
BSCP128 (dependent on P216)	P216 will introduce a new BSCP to manage the LLF approval process. If P216 is approved, this BSCP would require minor change to account for the LLFC to be applied to the portfolio MPAN.	If P216 is approved, this BSCP would require minor change to describe how Distributors would be required to indicate to BSCCo which LLFCs would need to be applied to microgeneration
PSL100	Possible minor generic amendment to PSL100.	Same as Proposed Modification.
SVA Data Catalogues	The Data Catalogues would be amended to reflect changes to the recipients of certain data flows and also the new data flows required for communication with the UEA.	Same as Proposed Modification.
SVAA Service Description	The SVAA Service Description would need to be amended to take into account the new CCC and the process that the SVAA would follow to ensure microgeneration data is accurately entered into Settlement.	Same as Proposed Modification.
SVAA User Requirements Specification	The SVAA URS would need to be amended to reflect the changes to the SVAA processes.	Same as Proposed Modification.
SVAA (ISRA) Functional Definition	The SVAA Functional Definition would need to be amended to reflect the changes to the SVAA processes.	Same as Proposed Modification.
SVAA (ISRA) Logical Data Design	The SVAA Logical Data Design would need to be amended to reflect the changes to the SVAA processes.	Same as Proposed Modification.
SVAA (ISRA) Release Notes	The SVAA Release Notes would need to be amended to reflect the	Same as Proposed

Document	Impact of Proposed Modification	Impact of Alternative Modification
	changes to the SVAA processes.	Modification.
SVAA (ISRA) Technical Specification	The SVAA Technical Specification would need to be amended to reflect the changes to the SVAA processes.	Same as Proposed Modification.
BSCCo Agents model	Amendments required if software changes are undertaken.	Same as Proposed Modification.

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

Document	Impact of Proposed Modification	Impact of Alternative Modification
Master Registration Agreement	<p>DTC changes would be required to enable new DTC flows to be created for communication between the Supplier and UEA. The recipients of a number of current DTC flows would also need amending to add the UEA to the list.</p> <p>Some changes would also need to be made to the MRA itself, in particular the definition of a Metering Point and Clause 15. These changes are Priority Provisions of the MRA and would therefore require Authority consent.</p>	As per the Proposed Modification although the flows affected would differ.

i) Impact on Other Configurable Items

No impact.

j) Impact on BSCCo Memorandum and Articles of Association

No impact.

k) Impact on Governance and Regulatory Framework

No impact.

APPENDIX 5: P218 DATA ANALYSIS

The following analysis looks at the volume error and profiling error that would be created by the Proposed and Alternative solutions. Volume error would be created when using export factors to calculate EACs. This analysis considers the difference in the error created by using:

- different export factors for each technology type and;
- one export factor for all technology types.

Regarding profiling error, this analysis looks at the difference in error between using the current P81 profiling solution and using an unrestricted Profile Class 8 profile for all technology types.

The tables referred to below are within the Excel spreadsheet to which this explanatory note is attached.

Export Factor Analysis

The data used for this analysis was taken from the British Electrotechnical and Allied Manufacturers (BEAMA) trial. Only those sites with a full year of export data were included as actual export totals for the whole year were needed. Four wind sites and fifteen photovoltaic (PV) sites with differing generation capacities and 19 micro combined heat and power (CHP) sites all with a generation capacity of 1kW were used.

Assumption 1: The data used is a representative sample of the microgeneration sites in GB.

Description of Tables

Table 1.1 shows the export factors calculated for each technology type and the general microgeneration export factor. The technology specific export factors were calculated by summing the total amount of export across all the sites and dividing it by the total maximum generation across all the sites. The general microgeneration export factor was calculated as a weighted average of the previously calculated export factors. The weightings were determined from a table contained in the government's microgeneration strategy published in March 2006:

Technology	No. Installations
Micro-wind	650
Micro-hydro	90
Ground source heat pumps	546
Biomass boilers (pellets)	150
Solar water heating	78,470
Solar PV	1,301
MicroCHP	990
Fuel Cells	5
Total	82,202

Assumption 2: The proportions in the above table are the same as the proportions of sites that would be entering Settlement.

Table 1.2 contains the following information for each site used in the analysis:

Generation Capacity	The kWh value of the sites declared generation capacity
Actual Export	The kWh values of the energy exported from the site over the whole year
Individual Export Factor	The percentage value of the energy exported calculated by dividing the actual export by the maximum generation: $(\text{Actual export} / (\text{generation capacity} * 365 * 24)) * 100$
Technology Specific EAC	The EAC value that would be submitted to Settlement if the technology specific export factors in table 1.1 were used: $\text{generation capacity} * 24 * 365 * \text{technology specific export factor}$
% Difference	The percentage difference between the technology specific EAC and the actual export
Error	The volume difference in kWh between the technology specific EAC and the actual export
Non-Technology Specific EAC	The EAC value that would be submitted to Settlement if the general microgeneration export factor in table 1.1 were used: $\text{generation capacity} * 24 * 365 * \text{general microgeneration export factor}$
% Difference	The percentage difference between the non-technology specific EAC and the actual export
Error	The volume difference in kWh between the non-technology specific EAC and the actual export

Table 1.3 (available in Attachment 6a) is a gross error comparison between using the technology specific and the non-technology specific export factors. It contains the total gross error across all the sites for each

technology type for both export factors and the totals. The last two columns are the errors per site (the first two columns divided by the amount of sites). The 'TOTAL' row for these columns contains the total errors per site (the values in the first two columns divided by the total number of sites) and not the sum of the above rows.

Table 1.4 (available in Attachment 6a) is a net error comparison between using the technology specific and the non-technology specific export factors. It contains the net error across all the sites for each technology type for both export factors and the totals. The last two columns are the errors per site (the first two columns divided by the amount of sites). The 'TOTAL' row for these columns contains the total errors per site (the values in the first two columns divided by the total number of sites) and not the sum of the above rows.

Outcomes

The gross error is greater when using the technology specific export factors, this seems counter intuitive. The probable cause is the sample size and the variance of the sample. These factors combined mean that removing any outliers (values showing significant deviation from the main sample) would be a very subjective process and is not really appropriate. When the weighted average is taken the effects of any outliers is reduced.

The net error is the opposite of this with the technology specific export factors yielding less error. This is not that statistically significant though as the export factors were calculated from a sample and then applied back to the same sample as the population. Although it is expected that using site specific export factors would in practice (when applied to the whole market) give a lower net error, the difference proportionally between the two solutions may be very different. To give a better indication of the net error an out of sample test could be used. This involves using most of the sample to create the export factor and then relating it to the rest of the sample to determine the error. This would mean that the sample was not also being treated as the population. There is not enough data here however to make this a valid approach.

One thing to note is the relatively low error for the micro CHP calculations. This may be due to two factors:

- All the sites in the sample have the same generation capacity meaning the same weight was given to each site in the calculation and/or;
- Micro CHP export is more predictable (generally the generation will correlate to the customers demand) and therefore more uniform.

Profiling Error Analysis

The data used for this analysis were all the sites in the BEAMA trial with export data. An average profile was created for each technology by taking an average of the volume in each half hour. It is worth noting that a different amount of sites were used to create the average profile for each technology. Generally, the more sites used in the average, the flatter the profile would be as erratic export would be smoothed over when averaged over more sites. For this analysis the same profiles were used to compare each profiling solution. As it is the comparison that is being looked at this averaging shouldn't be an issue. However, the percentage of misallocated energy would tend to be higher for individual sites than is shown here for the average profile for this reason.

Assumption 3: The profiles calculated are representative of the profiles of all sites of that technology.

Description of Tables

Table 2.1 (available in Attachment 6b) shows the energy misallocated when using each profiling solution. The left hand side of the table shows the energy misallocated for each of the average profiles and the total misallocated energy. The total percentage figure is calculated using the total volumes. On the right hand

side of the table the data is weighted in the same proportions as the table taken from the government's microgeneration strategy above.

Table 2.2 (available in Attachment 6b) shows the imbalance costs associated with the misallocated energy when the volumes are related to the system prices. The Settlement error cost in £/MWh is calculated by dividing the net charge by the appropriate total volume taken from table 2.1.

Outcomes

The percentage of misallocated energy when using separate Standard Settlement Configurations (SSC) is the current level of profiling error under the P81 solution. The increase in error if switching to the PC8 unrestricted solution is 7.4%. However, as stated above, the fact that these are averaged profiles means that the error of individual sites may be higher (or in some cases lower) in reality and so the difference between the two solutions may also differ. The analysis is based on the assumptions above.

Regarding the imbalance costs calculated, the fact that the separate SSCs solution comes out at a higher cost is again counter intuitive. The reason for this anomaly is that the system prices are highly variable and the outcome will just depend on the price allocated to those half hours where more energy is misallocated. Presumably more error will be misallocated over night using the PC8 unrestricted solution when prices would be on average lower. These costs would vary depending on which time period and therefore prices were used. The analysis also make assumptions that a Supplier is perfectly in balance before the inclusion of the microgeneration sites and also that they're the only Supplier operating in that GSP Group (as the misallocation will come out in the GSP Group Correction Factor).

APPENDIX 6: UEA PROCESSES FOR REGISTRATION/DEREGISTRATION

Microgeneration Registration (and Change of Supplier)

The microgeneration registration process described below is based on the current process followed by SMRS for registering MPANs. However, the process has been simplified in places due to the lower number of microgeneration sites expected to be registered by the UEA compared to the number of MPANs registered in SMRS. This section sets out the process to be followed by the UEA. Appendix 2 shows the high level registration process to be followed in various scenarios e.g. change of Supplier.

- A Supplier wishing to register a new microgeneration site would need to send details to the UEA using a new DTC flow (Microgeneration Registration Details). It is envisaged that this flow would include the registration details listed in section 2.1.1 above together with an 'event indicator' field, stating that the flow relates to a new registration. As the Supplier may not know whether the site is a completely new registration, or a change of Supplier registration then these are given the same event indicator and treated the same by the UEA.
- A new site can only be registered with the UEA for effective days between 1 and 28 calendar days into the future. No retrospective registrations would be allowed. The UEA should initially check that this requirement has been met, and if not, then the UEA would reject the registration flow.
- The UEA would then:
 1. Check that a site with the same address⁹ and Import MPAN¹⁰ (where provided) was not already registered within its database to a different Supplier.

⁹ The Group agreed that only one Supplier could register microgeneration for one specific address. Therefore if there are a number of microgenerators at one address, they could only be registered under the P218 solution if they have the same Supplier.

¹⁰ The technology and capacity information will be available if additional information is required.

- If the site was registered to a different Supplier then the UEA would contact that Supplier (using a new Deregistration Notification flow) to inform the current Supplier that the site is being transferred to a new Supplier.
 - Within 5 Working Days the current Supplier should either send a new 'Microgeneration Registration Details' flow to the UEA deregistering the site or an 'Objection' flow stating that it does not believe the site should be transferred. An objection can only be made if the current Supplier believes that they have a commercial contract in place with the Customer.
 - Should the UEA receive nothing from the current Supplier within 5 Working Days, then the UEA would progress the transfer i.e. the new Supplier would be assigned to the microgeneration site from the relevant effective from date. The UEA would also recalculate the EAC for both the old Supplier and the new Supplier's MPANs and send the revised EACs to the relevant NHHDA.
 - Should the UEA receive a request from the current Supplier to deregister the site, then the UEA would progress the transfer i.e. the new Supplier would be assigned to the microgeneration site from the relevant effective from date. The UEA would also recalculate the EAC for both the old Supplier and the new Supplier's MPANs and send the revised EACs to the relevant NHHDA.
 - Should the UEA receive an 'Objection' flow, then the UEA would not progress the transfer. The UEA would forward the 'Objection' flow to the new Supplier and the Suppliers would be responsible for resolving the issue. There would be no requirement for the Supplier to withdraw the objection; the new Supplier would simply submit a new registration flow once the issue was resolved.
2. If a site with the same address and Import MPAN was not already registered within its database, then the UEA would check whether an Export MPAN has been registered on ECOES with the same address.
- If an Export MPAN is already registered on ECOES then the UEA would contact that Supplier (using a new Deregistration Notification flow) to inform the current Supplier that the site is being registered to a new Supplier.
 - Within 5 Working Days the current Supplier should de-energise the Export MPAN or send an 'Objection' flow stating that it does not believe the site should be transferred. An objection can only be made if the current Supplier believes that they have a commercial contract in place with the Customer.
 - Should the UEA receive nothing from the current Supplier within 5 Working Days, then the UEA would register the site to the new Supplier. The UEA would also recalculate the EAC for the new Supplier's MPAN and send the revised EAC to the relevant NHHDA.
 - Should the UEA receive an 'Objection' flow, then the UEA would not progress the transfer. The UEA would forward the 'Objection' flow to the new Supplier and the Suppliers would be responsible for resolving the issue. There would be no requirement for the Supplier to withdraw the objection; the new Supplier would simply submit a new registration flow once the issue was resolved.
3. If a site with the same address and Import MPAN was not already registered within its database or on ECOES, then the UEA would add the site and calculate a new EAC for the relevant MPAN and submit this to the relevant NHHDA.
- In addition to the above, on receipt of a registration flow for a site, the UEA would 'lock' the record to prevent a potential third Supplier from attempting to register the site whilst the UEA checks are being carried out. The record would be 'locked' to prevent further

registration requests from being processed within 10 Working Days of the initial request. Any registration requests received within the 'locked' period would be rejected by the UEA with the reason for rejection provided.

- Also whilst a Supplier's registration is pending, the UEA would reject any further registration requests with an effective date up to and including the effective date of the initial registration for the same site. For example if Supplier A submits a registration flow to become effective in 28 days time; Supplier B cannot register the same site with the same (or earlier effective date).

Microgeneration Deregistration

- A Supplier wishing to deregister a microgeneration site would need to send details to the UEA using a new DTC flow (Microgeneration Registration Details). It is envisaged that this flow would include the registration details listed in section 2.1.1 above together with an 'event indicator' field, stating that the flow relates to deregistration. The Supplier should include an Effective To Date on the flow to indicate that it relates to a deregistration. The Supplier can not deregister a site more than 28 days in the future. In addition the Supplier must include a reason for deregistration in the 'Additional Information' field.
- The UEA would confirm that the relevant site was registered to that Supplier.
- If the site was not registered to that Supplier then the UEA would reject the flow.
- If the site was registered to that Supplier then the UEA would remove reference to the Supplier from the relevant microgenerator record for the effective from date specified in the deregistration flow – the Supplier and MPAN fields would be set to the given Effective To Date.
- The UEA would also confirm whether there are any pending registration requests in relation to the specific site. If there are pending registrations, then the UEA would forward the deregistration flow to the potential new Supplier. The new Supplier could then check that they are still in a position to take over responsibility for the site.
- The UEA would then calculate a new EAC for the relevant MPAN and submit this to the relevant NHHDA.

Registration Updates

Suppliers may, from time to time, send updated registration details to the UEA via the new microgeneration registration flow. The UEA would be required to update the registration data within 1WD and if necessary send updated EACs to the NHHDA. Changes to data can only be made retrospectively to cover the last 14 months. Changes would only be made to registration data relating to the Supplier informing the UEA of the change. If the site has been the subject of a change of Supplier, then the records relating to other Suppliers would not be amended.

APPENDIX 7: ALTERNATIVE SOLUTIONS DISCARDED BY THE GROUP

Portfolio MPANs for technology type:

Proposed Modification P218 allows Suppliers to register a single portfolio MPAN for each GSP Group and Distributor. This means that a single EAC would be calculated estimating the Export for one or more microgenerators, and that a single set of registration data would be assigned to the MPAN. Part of the registration data for any MPAN is the Profile Class, the SSC and the Time Pattern Regime (TPR). Together these pieces of information allow the SVAA to profile the energy for a particular MPAN across different half hourly periods. Under Proposed Modification P218 a single portfolio MPAN is created which may have

microgenerators with different technologies assigned to it. However these would all have to have the same Profile Class, SSC and TPR as they are aggregated together under a single MPAN.

The Group therefore considered whether it would be more appropriate to allow separate portfolio MPANs to be created for different microgeneration technologies. These separate MPANs could then be assigned Profile Classes, SSCs and TPRs that more accurately reflect the profile of Export e.g. the portfolio MPAN representing solar energy could be profiled so that there is no Export during the night. SSCs for different microgeneration technologies already exist in MDD as they are used for registering P081 Export MPANs under the existing process. It was noted that a single Profile Class (8) would still be applied to all portfolio MPANs as this would be the flattest profile available.

As detailed in section 4.8.2, the Group carried out analysis to see whether a significant profiling error would be introduced by aggregating a number of different microgeneration technologies together under one portfolio MPAN. The results of this analysis are contained in Appendix 5 and Attachment 6. The results showed the percentage of energy misallocated when using separate SSCs (i.e. the current level of error under the P081 solution) compared with the percentage of energy that would be misallocated if a flat unrestricted SSC were to be applied to all portfolio MPANs. The Group noted that there was an overall increase in profiling error of 7.4% when moving to an unrestricted SSC, although this was not a significant increase in error considering the profiling error itself was already approximately 50%.

The Group considered a potential Alternative Modification that allows the Panel to determine, at a later date, that separate portfolio MPANs for different microgeneration technologies may be created if more data became available that indicated the profiling error was worse than anticipated. However after the Group had discussed the impact assessments it was agreed to progress with a single Alternative. The Group felt that the Alternative that removed the requirement for portfolio MPANs was more efficient than this solution and agreed to consult on that Alternative only.

Portfolio MPANs with individual registers:

As set out above, the Group were aware that the requirement to have a single portfolio MPAN per GSP Group, per Distributor would mean that only one SSC could be applied to that MPAN. This would therefore increase the profiling error for microgeneration sites compared with the current situation. The Group therefore considered an alternative solution where separate EACs would be created for different technology types. Although these would be assigned to a single portfolio MPAN, they would be treated as if they were individual registers for a single Meter. Therefore the SVAA would be able to identify the EACs for different microgeneration technologies and apply a specific SSC. This SSC would be included in a substitution table which would indicate the actual SSC to be applied to the different EACs. The Group concluded that although this would minimise the profiling error, it would require a change to the SVAA software and therefore the potential cost of this change outweighed the perceived benefit in terms of profiling error. The Group therefore agreed not to pursue this option further.

Options suggested by Consultation Respondents:

- A single solution for settling NHH Export (removing the option to settle under P081) – the Group agreed that P218 is not intended to replace P081, but to make it financially viable to settle microgeneration sites that are not currently settled. The Group noted that those consultation respondents who use P081 indicated that they wouldn't switch to the P218 solution if it were approved. The Group also agreed that a single solution which would work for all microgeneration sites would be the most efficient but felt that a metered solution would be more appropriate.
- A single solution for settling NHH Export (making P081 mandatory) – the Group agreed that a metered solution was more appropriate. However, mandating the installation of meters (on customer request) was outside the scope of the modification.

- Continue with the current (P081) solution, but look to make improvements to the process – the Group noted that [CP issue 2 'Review of Microgeneration Processes in the CSDs'](#) was raised to consider changes to improve the current microgeneration processes.
- Undertake a data collection exercise to obtain better data on NHH Export in order to establish the correct solution – the Group agreed that more data is needed to accurately assess any future Modification and noted that this issue needs to be resolved regardless of whether or not P218 is approved.
- A Smart metering based solution – the Group agreed that Smart metering may provide a solution to settling microgeneration, although the cost of a Smart metering could still be prohibitive. The Group noted that although Smart metering may well be the right way to settle microgeneration in the future, it is not a viable solution now.
- Subsidy from Government to provide Export metering – the Group noted that this option is outside the scope of the BSC.

APPENDIX 8: IMPACT ON CURRENT DTC FLOWS

Current flows that would need to be sent to or from the UEA:

- D0019 – EAC/AA Submission flow to submit EACs to the NHHDA;
- D0023 – Failed Instructions flow – should the NHHDA reject a flow provided by the UEA;
- D0155 – DC Appointment flow;
- D0148 'Notification of Change to Other Parties' – to inform the UEA of the registered NHHDA;
- D0205 - Update Registration Details flow;
- D0151 Termination of Appointment or Contract by Supplier' – to inform the UEA that the portfolio MPAN is being deregistered; and
- D0261 – Rejection of Agent Appointment flow should the UEA receive an appointment flow in relation to a non portfolio MPAN.

Current flows where additional guidance is required:

- D0168 'Request for Additional/New MPAN Core(s)'
- D0132 'Request for Disconnection of Supply'

APPENDIX 9: P218 SCENARIOS

The following scenarios detail the process that would be required for Change of Supplier and for switching between the arrangements under P218 (portfolio MPAN) and P81 (two-MPANs plus physical meter).

Scenario diagrams are attached as a separate document, Attachment 7.

It should be noted that the scenarios do not separate out situations under P81 where the site has one meter compared to the site having two meters as this is not impacted by the implementation of P218. Therefore reference to meter under P81 could also be taken to refer to meters.

The scenarios detailed below are based on the Proposed Modification i.e. one portfolio MPAN per Supplier, per GSP Group, per Distributor. Alternative Solution 1 would be very similar although only one of the Suppliers portfolio MPANs in the GSP Group would be impacted by any change. This would introduce added complication as the parties would need to ensure that the correct portfolio MPAN was affected.

The scenarios are listed below:

- a) P218 solution (portfolio MPAN) to P81 solution (actual MPAN) **no** Change of Supplier (CoS);
- b) P218 solution (portfolio MPAN) to P81 solution (actual MPAN) **with** Change of Supplier (CoS);
- c) P081 solution (actual MPAN) to P218 solution (portfolio MPAN) no Change of Supplier;
- d) P081 solution (actual MPAN) to P218 solution (portfolio MPAN) **with** Change of Supplier;
- e) P218 solution with Change of Supplier;
- f) P218 solution to Microgeneration Export not registered no Change of Supplier; and
- g) P218 solution to Microgeneration Export not registered with Change of Supplier

1. P218 – P81 no CoS

A single site would need to be removed from the Supplier's portfolio Export MPAN in the relevant GSP Group. The Supplier would need to inform the MEO so that a new EAC is calculated for the relevant portfolio MPAN and submitted into Settlements.

The Supplier would have to set up a new MPAN and appoint a MOA, NHHDC and NHHDA of its choice. The NHHDC would need to be provided with an appropriate EAC for the MPAN. The initial EAC would be zero in line with the rules set out under P81 where the Profile Class Average EAC for new Export MPANs is set to zero until actual metered data is received. The Supplier may also need to install a Meter if there is not already an appropriate Meter on site. If there is only one Meter recording Import and Export separately, then the Supplier would need to ensure that the same MOA is appointed to both Import and Export MPANs.

2. P218 – P81 with CoS

A single site would need to be removed from a Supplier's portfolio and hence removed from the Supplier's portfolio Export MPAN in the relevant GSP Group. The old Supplier would need to inform the MEO so that a new EAC is calculated for the relevant portfolio MPAN and submitted into Settlements.

The new Supplier would have to set up a new MPAN and appoint a MOA, NHHDC and NHHDA of its choice. The NHHDC would need to be provided with an appropriate EAC for the MPAN. The initial EAC would be zero in line with the rules set out under P81 where the Profile Class Average EAC for new Export MPANs is set to zero until actual metered data is received. The new Supplier may also need to install a Meter if there is not already an appropriate Meter on site. If there is only one Meter recording Import and Export separately, then the new Supplier would need to ensure that the same MOA is appointed to both Import and Export MPANs.

It is assumed that the Import MPAN would also be transferred, however this process would be carried out separately following the current CoS rules.

3. P81 - P218 no CoS

Under this scenario the Supplier would need to disconnect the Export MPAN and ensure that the site is added to its portfolio Export MPAN. Note that this is only logical disconnection, there is no requirement for the Meter to be physically removed. The Supplier would need to obtain information regarding the Microgenerator capacity and possibly the type of technology and inform the MEO so that the EAC for the portfolio MPAN can be recalculated taking into account the new site.

4. P81 – P218 with CoS

Under this scenario the old Supplier would be responsible for disconnecting the Export MPAN, therefore only the Import MPAN would be transferred to the New Supplier using the current CoS process. The old Supplier would disconnect the Export. The new Supplier would need to obtain information regarding the

Microgeneration Capacity and possibly the type of technology from the customer. The new Supplier would provide this information to the MEO for calculation of the EAC.

5. CoS only – under P218

A single site would need to be removed from the old Supplier's portfolio and hence removed from the old Supplier's portfolio Export MPAN in the relevant GSP Group. The old Supplier would need to inform the MEO so that a new EAC is calculated for the relevant portfolio MPAN and submitted into Settlements. The new Supplier would need to obtain information regarding the Microgeneration Capacity and possibly the type of technology from the customer.

The new Supplier would need to inform the MEO so that the EAC for its portfolio Export MPAN is recalculated taking into account the new site.

It is assumed that the Import MPAN would also be transferred, however this process would be carried out separately following the current CoS rules.

6. P218 – Microgeneration Export not registered

Under this scenario the Supplier would decide not to register the Microgeneration Export within Settlements any longer. The Supplier would simply need to inform the MEO who would remove the site from its portfolio Export MPAN in the relevant GSP Group. The MEO would also need to calculate a new EAC for the relevant pseudo MPAN and submit it into Settlements.

7. P218 – Microgeneration Export not registered on CoS

Under this scenario the new Supplier would decide not to register the Microgeneration Export within Settlements and take no action other than transfer the Import MPAN using current processes. The old Supplier would need to remove the site from its portfolio Export MPAN in the relevant GSP Group. The old Supplier would need to inform the MEO so that a new EAC is calculated for the relevant portfolio MPAN and submitted into Settlements. If the new Supplier were not aware of the site having Export then this process could accidentally happen on CoS.

Key to diagrams:

The diagrams show three streams; the main process steps in the centre; the key issues on the right and indication of either new or existing process on the left of the page. Significant issues are shown in red. DTC flows are shown in green.

Terms:

MPANI	= Import only MPAN
MPANE	= Export only MPAN
S1	= Old Supplier
S2	= New Supplier
MEO	= Microgeneration Export Operator
MOA	= Meter Operator Agent
NHHDA	= Non Half Hourly Data Aggregator
NHHDC	= Non Half Hourly Data Collector
SMRS	= Supplier Meter Registration Service

Key assumptions:

- The diagrams have assumed that the same Supplier is taking both the Import and Export site. However the same process would be followed if the Import and Export are transferred to different Suppliers.
- It is assumed that one central MEO will be created. This MEO can therefore check whether a site is already registered to another Supplier when it receives a request to register an Export site. If it is registered to another Supplier, the MEO can check that the other Supplier is requesting removal of this site from its portfolio MPAN.
- There will be an obligation on Suppliers to remove an Export site from its portfolio MPAN when it is not longer responsible for that site. It is therefore assumed that the MEO will not do any additional checks when it receives a request from a Supplier to remove a site from its portfolio MPAN i.e. the MEO will not check that the site is being registered elsewhere.

It is assumed that the rules relating to the registration of Export MPANs will not change e.g. a new Export MPAN will be assigned a zero EAC until actual metered date is received.

LIST OF ATTACHMENTS:**ATTACHMENT 1: LEGAL TEXT - PROPOSED**

This is attached as a separate document.

ATTACHMENT 2: LEGAL TEXT - ALTERNATIVE

This is attached as a separate document.

ATTACHMENT 3: FULL VERSION OF THE NON-CONFIDENTIAL CONSULTATION RESPONSES

This is attached as a separate document.

ATTACHMENT 4: FULL BSC AGENT IMPACT ASSESSMENT

This is attached as a separate document.

ATTACHMENT 5: PARTY AND PARTY AGENT IMPACT ASSESSMENT RESPONSES

This is attached as a separate document.

ATTACHMENT 6: P218 ANALYSIS SPREADSHEET

This is attached as a separate document.

ATTACHMENT 7: SCENARIO DIAGRAMS

This is attached as a separate document.