127/07

INITIAL WRITTEN ASSESSMENT for Modification Proposal P213 'Facilitating Microgeneration (Optional Single MPAN)'

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This document has been distributed in accordance with Section F2.1.10 of the Balancing and Settlement Code.[2]

P213 seeks amend the current provisions for microgeneration to allow a single MPAN to be used for both Import and Export in Non Half Hourly Settlement. The aim of this modification is to reduce the associated industry costs and the complexity of Settlement processes for Suppliers and Supplier Agents, and thereby facilitate increased settlement of microgeneration Export.

BSCCO'S RECOMMENDATIONS

On the basis of the initial assessment, BSCCo invites the Panel to:

- **DETERMINE that Modification Proposal P213 should be submitted to the Assessment Procedure;**
- **AGREE the Assessment Procedure timetable such that an Assessment Report should be completed and submitted to the Panel for consideration at its meeting of 9 August 2007;**
- **DETERMINE that the P213 Modification Group be formed from members of the Volume Allocation Standing Modification Group and additional members from the Energy Networks Strategy Group (Work Program 4 Project 2 Team); and**
- **AGREE the Modification Group Terms of Reference.**

[1] ELEXON Ltd fulfils the role of the Balancing and Settlement Code Company ('BSCCo'), pursuant to Annex X-1 of the Balancing and Settlement Code (the 'Code').
[2] The current version of the Code can be found at http://www.elexon.co.uk/bscrelateddocs/BSC/default.aspx.

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SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as BSCCo has been able to assess, the following parties/documents are potentially impacted by Modification Proposal P213.

Please note that this table represents a summary of the full initial impact assessment results contained in Appendix 2.

Parties		Party Agents		BSC Agents		Other Agents	
Distribution System Operators	☒	Data Aggregators	☒	SAA	☐	Supplier Meter Registration Agent	☒
Generators	☐	Data Collectors	☒	FAA	☐	Unmetered Supplies Operator	☐
Interconnectors	☐	Meter Administrators	☐	BMRA	☐	Data Transfer Service Provider	☐
Licence Exemptable Generators	☐	Meter Operator Agents	☒	ECVAA	☐		
Non-Physical Traders	☐	ECVNA	☐	CDCA	☐		
Suppliers	☒	MVRNA	☐	TAA	☐		
Transmission Company	☐			CRA	☐		
				SVAA	☒		
				Teleswitch Agent	☐		
				BSC Auditor	☐		
				Profile Administrator	☐		
				Certification Agent	☐		

Sections of the BSC			
A	☐	H	☐
B	☐	I	☐
C	☐	J	☐
D	☐	K	☐
E	☐	L	☐
F	☐	M	☐
G	☐	N	☐
O	☐	P	☐
Q	☐	R	☐
S	☒	T	☐
U	☐	V	☐
W	☐	X	☒

Code Subsidiary Documents		Core Industry Documents		BSCCo		BSC Panel/Panel Committees		Other	
BSC Procedures	☒	Ancillary Services Agreement	☐	Internal Working Procedures	☐	Working Practices	☐	Market Index Data Provider	☐
Codes of Practice	☐	British Grid Systems Agreement	☐					Market Index Definition Statement	☐
BSC Service Descriptions	☒	Data Transfer Services Agreement	☐					System Operator-Transmission Owner Code	☐
Party Service Lines	☐	Distribution Code	☐					Transmission Licence	☐
Data Catalogues	☒	Distribution Connection and Use of System Agreement	☐						
Communication Requirements Documents	☐	Grid Code	☐						
Reporting Catalogue	☒	Master Registration Agreement	☒						
		Supplemental Agreements	☐						
		Use of Interconnector Agreement	☐						

1 DESCRIPTION OF PROPOSED MODIFICATION

1.1 Background

1.1.1 Microgeneration

Microgeneration is the production of electricity by small-scale distributed generators (including domestic customers). The Energy Act 2004 defines microgeneration as having a generation capacity of less than 50 kW. However, it should be noted that not all generation below 50 kW is treated in the same way, and in some contexts other capacity thresholds are important:

- The capacity limit for connecting to the distribution system without prior approval from the Distributor is 16 amps per phase (i.e. about 3.5 kW for a single-phase supply).
- The capacity limit for settling generation using Non Half Hourly meter readings has been set by the BSC Panel (with the approval of Ofgem) to 30 kW.

Microgeneration technologies include; micro-wind, micro-hydro, Solar PV and micro-CHP (modified water/heating boiler).

1.1.2 Energy Networks Strategy Group

This Modification Proposal has arisen following a report by the microgeneration Work Programme of the Distribution Working Group of the Energy Networks Strategy Group (ENSG WP04-P02) - 'Scheme to Reward microgenerators Exporting Excess Electricity'[3] which was published recently. The report recommended that:

'Suppliers should initiate the change management procedures required to progress Option 1 (allowing Suppliers to register a customer's export and import under a single registration (a single Meter Point Administration Number (MPAN)) through the industry's normal change management procedures.'

This proposal was submitted by E.ON UK, who also provided membership on the ENSG WP04-P02 Project Team.

1.1.3 Approved Modification P081

P081 'Removal of the Requirement for Half Hourly Metering on Third Party Generators at Domestic Premises' was implemented in September 2003. P081 introduced a new process of Non Half Hourly 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 Half Hourly Meter was installed.

P081 requires that two MPANs[4] are used for these types of sites – one for Import and another for Export. Each MPAN then has its own Standard Settlement Configuration (SSC), Profile Class (PC) and Time Pattern Regime (TPR). The SSC refers to the number of registers on the Non Half Hourly meter that record consumption (or microgeneration); the TPR the switching times for each register and PC the type of usage by the customer for a given MPAN.

It is noted that the industry take up of the P081 processes has been limited, there are only approximately 30 Export meters of this type registered[5] in Settlement out of over 3000 installations.

[3] The ENSG Report is available to download.
[4] MPAN (Metering Point Administration Number) 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 P213, this IWA shall refer to MPAN.
[5] Panel Paper 121/08 contains more information regarding the approved Modification P81 and the uptake of this process.

1.2 Modification Proposal

P213 was raised on 27 April 2007 by E.ON UK ('the Proposer'). P213 seeks to remove the requirement to have two separate MPANs for NHH Import/Export sites, and to allow (where requested) Import and Export to be registered to a single MPAN. The intention of P213 is to reduce the complexity and cost of the associated industry processes and, in doing so, facilitate increased Settlement of microgeneration Export.

Under the process proposed by P213:

- A Supplier will no longer be required to request an additional MPAN if they wish to settle microgeneration at a particular customer site. Instead they would request that the existing MPAN is allocated to a new Standard Settlement Configuration (SSC) for NHH Import/Export;
- As a result there will be no appointment processes for a new MPAN, just a reconfiguration request (for a new SSC). The reconfiguration request would trigger the MOA and NHHDC to install Import/Export metering and collect meter readings appropriately; and
- No change is proposed to the physical metering at these sites and the solution proposed is intended to be an alternative to the current processes (rather than replacing them).

This process may not, in itself, require a change to the BSC; however, if this process were adopted then it would give rise to problems with the inaccuracy of the Settlement of microgeneration Import and Export. This is because:

- Using a single MPAN would mean that a single Profile Class is assigned for both Import and Export; and
- Using a single MPAN would mean that energy could only be allocated to Import or Export in a given Half Hour. Microgeneration sites often Import and Export in the same Half Hour.

1.2.1 Settlement Accuracy

P213 proposes that changes are made to the Settlement arrangements to ensure that profiling remains accurate for these MPANs. It is expected that any changes will impact Supplier Volume Allocation Agent (SVAA) software in particular.

P213 suggests one possible solution to ensure that profiling accuracy is maintained, however, P213 does not limit the Modification Group to consider this solution alone, and notes that they may find a more appropriate technical solution to ensure Settlement accuracy is maintained.

1.2.2 Settlement Accuracy – Suggested Solution

The possible profiling solution proposed by P213 is intended to apply the current P81 profile shapes to microgenerators with a single MPAN, as well as those with two MPANs. This ensures that the impact of a microgeneration customer on settlement will be unaffected by whether the Supplier chooses to settle their export using the two MPAN (P081) mechanism or the single MPAN (P213) mechanism.

P213 notes that extending the P081 profiling arrangements to single MPAN customers in this way would require profiles to be used in a different way to currently, in that:

- It would require profile coefficients from different Profile Classes to be assigned to different registers of the same Metering System. Currently settlement always applies a single Profile Class (i.e. the one registered in SMRS) to all the registers of a Metering System; and
- It would require settlement to attribute energy to both registers of a Metering System simultaneously. Currently the profiling rules are written on the premise that only a single register will be 'on' (i.e. recording the flow of energy) at a given point in time.

P213 proposes a mechanism for achieving this which is intended to limit the impact on participants, and avoid the need for changes to systems other than SVAA. Key features of this solution are as follows:

- The Import/Export MPAN would be registered in SMRS to the import Profile Class (and a special-purpose Import/Export SSC)
- NHHDC and NHHDA systems would treat this Import/Export SSC in the same way as any other two-register SSC. This approach is intended to avoid any impact on NHHDC or NHHDA systems (although this will need to be confirmed with participants through the impact assessment process)
- SVAA would not attempt to apply the normal profiling rules to Import/Export SSCs (as these profiling rules are not designed to handle two registers recording energy simultaneously). Instead, SVAA would refer to a 'substitution table' telling it which profile coefficients to use for each register. This Panel-approved substitution table would instruct SVAA to use a normal demand profile for the Import register, and a P81 Export profile for the Export register (thus achieving the aim of using the same profile shapes for single-MPAN and two-MPAN microgenerators).

1.2.3 Microgeneration Processes in the Code Subsidiary Documents (CSDs)

The Proposer believes that the current microgeneration processes are not clearly documented in the CSDs and suggests that the Modification Group considers reviewing them.

2 AREAS FOR CONSIDERATION IN PROGRESSING MODIFICATION PROPOSAL

An initial assessment of P213 has identified the following areas which BSCCo recommends should be considered further during the progression of the Modification Proposal:

2.1 Master Registration Agreement (MRA) Interaction

P213 notes that an amendment to Schedule 8 of the MRA will be required to give effect to the changes suggested in the Modification Proposal, and allow participants to use a single MPAN for Import and Export. The Modification Group will need to be aware of any changes proposed to the MRA in this area and their progression. When considering the Implementation Date for P213 the Group will need to consider any related MRA changes and their likely Implementation Date(s).

P213 can be implemented without a requisite change to the MRA; however, the proposed single MPAN solution would not be able to be used by industry without a change to the MRA processes.

2.2 Benefits/Costs of the Single MPAN Solution Proposed

The Modification Group will need to consider the costs and benefits of the single MPAN solution proposed, in terms of the implications for the accuracy of Settlement, possible cost savings/efficiency and the complexity of the proposed solution in comparison to the current baseline.

2.3 Possible Alternatives to the Settlement Accuracy Solution Proposed in P213

The Modification Group will need to consider whether the solution proposed in Annex 2 of P213 is the most appropriate technical and cost effective method of implementing the proposal. P213 notes that the solution proposed to maintain the accuracy of profiling is one option and the Modification Group may consider other options. Any alternative solutions will need to be assessed in detail.

2.4 Central System Impacts and Participants System/Process Impacts

The Modification Group will need to consider the impact of assigning both Import and Export to a single MPAN (and changes needed to ensure a continued level accuracy for these Metering Systems in Settlement) on Settlement systems, particularly the SVAA and Market Domain Data Management (MDDM) software. The Group will also need to consider the impact of the proposed Modification on participants' (parties and their agents) systems and processes. The Group will need to consider the costs of any system changes required against the potential benefits of the Modification Proposal.

2.5 Assessment of the Microgeneration Processes in the CSDs

The Modification Proposal highlights that the current microgeneration processes described within the CSDs are not that clearly documented. The Modification Group will need to consider whether or not they believe changes are needed to the CSDs to more comprehensively document these processes to aid industry understanding. If the group believe that changes are needed to the CSDs, these will need to be defined at a high level, although it may be considered appropriate that the detail of these changes should be progressed outside of this modification.

2.6 Further BSC Changes (to effect the change)

The Modification Group will need to consider if any further changes (over and above those described in the Modification Proposal and this IWA) are needed to allow the use of a single MPAN for NHH Import/Export.

The Group will also need to consider whether assigning a single NHH MPAN to Import and Export will impact other processes set out in BSC.

2.7 Government and Other Initiatives

The Modification Group will need to consider the impact of any other relevant initiatives on their work, including the Smart Metering Review Group and any further relevant government publications.

3 RATIONALE FOR BSCCO'S RECOMMENDATIONS TO THE PANEL

BSCCo believes that further consideration of P213 by a Modification Group is required in order to further consider, and consult upon, the areas raised by this IWA. As the areas for consideration are sufficiently defined, BSCCo recommends that P213 proceeds to the Assessment Procedure.

BSCCo recommends that P213 be submitted to a 3-month Assessment Procedure.

It is estimated that progression of P213 will require:

- 4 Modification Group meetings;
- 1 industry consultation;
- 1 BSC Agent impact assessment;
- 1 Party/Party Agent impact assessment;
- 1 Core Industry Document Owner impact assessment;
- 1 BSCCo impact assessment;
- 1 request for Transmission Company analysis; and

The proposed timetable and estimated costs for the progression of P213 are shown in Appendix 3.

BSCCo recommends that the P213 Modification Group be formed from members of the Volume Allocation Standing Modification Group, whose areas of expertise include NHH Supplier Agents and Supplier Volume Allocation. It is proposed that the group should be supplemented by attendees from the ENSG WP04-P02 Project Team, who have experience of microgeneration and the background to issue behind P213.

BSCCo recommends that the areas for consideration raised by this IWA should form the basis of the Modification Group Terms of Reference, along with any additional areas proposed by the Panel.

4 TERMS USED IN THIS DOCUMENT

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

Acronym / Term	Definition
CSD	Code Subsidiary Document
HH	Half Hourly
LLF	Line Loss Factor
MDDM	Market Domain Data Management
MPAN	Metering Point Administration Number
NHH	Non Half Hourly
PC	Profile Class
SSC	Standard Settlement Configuration
SVAA	Supplier Volume Allocation Agent
TPR	Time Pattern Regime

5 DOCUMENT CONTROL

5.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	01/05/07	Ysanne Hills		For peer review
0.2	02/05/07	Justin Andrews		For technical review
0.3	02/05/07	David Jones		For quality review
1.0	03/05/07	Change Delivery		For Panel decision

5.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	Panel Paper 121/08	ELEXON	14/12/06	N/A
2	ENSG Report	DTI	2007	N/A

APPENDIX 1: MODIFICATION PROPOSAL

Modification Proposal – BSCP40/03	MP No: 213 *(mandatory by BSCCo)*

Title of Modification Proposal *(mandatory by originator)*: **Facilitating microgeneration (Optional Single MPAN)**

Submission Date *(mandatory by originator)*: **27th April 07**

Description of Proposed Modification *(mandatory by originator)*

This Modification Proposal seeks to amend the current provisions for Non Half Hourly settlement of micro-generation by removing the requirement for the Supplier to request a separate Meter Point Administration Number (MPAN) for the Export register of the meter. This is the approach that was proposed in a recently published report ('Scheme to Reward Microgenerators Exporting Excess Electricity'[6]) from the micro-generation Work Programme (WP04) of the Distribution Working Group of the Electricity Networks Strategy Group (http://www.ensg.gov.uk/), which made the following recommendation:

> "Suppliers should initiate the change management procedures required to progress Option 1 (allowing suppliers to register a customer's export and import under a single registration (a single MPAN)) through the industry's normal change management procedures."

The purpose of this change is to reduce the complexity of the settlement process for Suppliers and Supplier Agents, and hence facilitate increased settlement of Microgeneration export. Annex 1 describes the impact on Supplier and Supplier Agent processes, but the key points can be summarised as follows:

- A Supplier who wished to settle Microgeneration at a customer's premises would no longer be required to request an additional MPAN from the Distributor (as they are under the current settlement arrangements, as introduced by Approved Modification P81). They would instead allocate the existing single MPAN to a new Import/Export Standard Settlement Configuration (SSC), signalling that the MPAN was now to be used for settlement of both Import and Export.
- As there is no longer a separate Export MPAN, the Supplier would not need to go through an agent appointment process (as required under the current P81 process). Instead it would be the reconfiguration from an Import SSC to an Import/Export SSC that triggered the Meter Operator Agent (MOA) to install Import/Export metering, and the Non Half Hourly Data Collector (NHHDC) to collect Export meter readings.
- The physical Import/Export metering installed by the MOA would be unchanged from the current P81 baseline. However, Import and Export registers would both be allocated to a single MPAN (rather than separate MPANs, as required under the current baseline).
- As Import and Export registers would both be assigned to a single MPAN, there would no longer be any possibility of erroneously transferring the Import to a new Supplier while leaving the Export with the old Supplier (or vice versa), and the industry would therefore avoid the expense of correcting this type of error.
- It should be noted that this single MPAN solution is intended as an optional alternative to the P81 'two MPAN' solution. The existing two MPAN solution would still be available where (for example) the customer wanted different Suppliers for Import and Export.

Based on discussions at the WP04 project meetings, it is believed that making this change without also amending the profiling arrangements in Annex S2 of the BSC would compromise the accuracy of the profiling arrangements for microgeneration (as introduced by Modification Proposal P81). In particular, profiling a single MPAN containing both Import and Export under the current profiling arrangements would have the following undesirable effects:

[6] http://www.ensg.gov.uk/assets/dgdti0007701.pdf

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- The same Profile Class (i.e. basic profile shape) would have to be used for both the Import and Export registers; and
- In a given Settlement Period, the settlement systems could attribute Import or Export to the customers assigned to a given Standard Settlement Configuration (SSC), but not both.

This Modification Proposal therefore proposes to take forward the recommendations of the above-mentioned ENSG project, by making any changes necessary to the BSC (and associated Code Subsidiary Documents and BSC Systems) to allow settlement of import and microgeneration export on a single MPAN, including changes to the profiling arrangements in Annex S2 of the BSC to ensure that the accuracy of the profiling arrangements will not be compromised.

The specific changes that have been identified as being necessary are:

- amending the profiling rules in Annex S-2 of the BSC, and the Supplier Volume Allocation Agent (SVAA) software that implements them, to lift the restriction that the same Profile Class (i.e. basic profile shape) must be used for both Import and Export where both are registered under a single MPAN;
- amending the profiling rules in Annex S-2 of the BSC, and the SVAA software that implements them, to remove the restriction that prevents the settlement system from allocating both Import and Export energy, recorded using meters registered under a single MPAN, to the customer in the same half hour; and
- changing the mechanism used by the SVAA software to distinguish Export EAC/AA values from Import EAC/AA values so as to allow Import and Export to be included within the same SSC.

Annex 2 to this Modification Proposal (which is again based on ideas discussed at WP04 project meetings) outlines one possible approach to meeting these requirements. Note that the Annex is provided only as a possible starting point for Modification Group discussions, and is not intended to constrain the Modification Group in finding the most efficient technical means of implementing this Proposal.

It is understood that no other changes to the BSC are required to enable suppliers to register both the export and the import meter (or meter register) from generators entitled to use the P81 arrangements under a single MPAN. However, it is the Proposer's intention that, if other changes are identified as being necessary, they should form part of this modification proposal.

Further background to the modification can be found in Panel Paper: Panel 121/08

Description of Issue or Defect that Modification Proposal Seeks to Address *(mandatory by originator)*

Modification Proposal P81 was implemented in September 2003, and was intended to facilitate the settlement of electricity exported by microgenerators. However, few Suppliers have made use of this functionality. Indeed, it was not until June 2005 that the first export meter was registered under the P81 arrangements and by January 2007 the number was still only 23. This compares with more than 3,000 electricity producing microgeneration installations within Great Britain.

Discussions amongst suppliers, under a project established under the auspices of the Ofgem/DTI chaired ENSG, have indicated that a key issue is that the cost of settling microgeneration is artificially increased by the requirement to have separate MPANs for Import and Export.

This increases the cost to suppliers by:
- necessitating more complex industry processes; and
- Increasing the charges levied by Supplier Agents (who typically charge Suppliers on a per MPAN basis).

Where microgeneration export is not registered to a supplier within the settlement system it is spilt to

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the system and the supplier "purchasing" the export receives no direct commercial value for it. However, a number of suppliers have indicated that the costs associated with collecting and processing the meter data from meters registered in settlement mean that it is simply not cost effective to register these small volume export.

This gives rise to two main problems.

Firstly, the commercial value of export from microgeneration to suppliers is very low (and can be negative for the very smallest exporters) limiting the tariff suppliers can offer and undermining the economics of microgeneration. Secondly, as the volume of microgeneration increases, the volume of spill will increase reducing the accuracy of the settlement arrangements as it feeds through into the GSP Group Correction Factor.

To address this problem, changes are being proposed to other industry documents to give suppliers the **option** to register both the export and the import under a single MPAN.

It is understood that this change may not in itself require a change to the BSC. However, the change would give rise to a problem with the profiling arrangements as the current profiling rules may not produce acceptable profiles for a single MPAN with both Import and Export registers. The main reasons for this are that:

- using a single MPAN would mean that the same Profile Class (i.e. basic profile shape) had to be used for both Import and Export. This would be inconsistent with the current P81 profiling solution for microgeneration, and would potentially reduce the accuracy of settlement; and
- using a single MPAN would also prevent the settlement system from allocating both Import and Export energy to the customer in the same half hour. This would again be inconsistent with the current P81 profiling solution, and would arguably not be very realistic (in that microgenerators frequently do import and export electricity in the same half hour).

Further detail can be found in Appendix one to the BSC Panel paper: Panel 121/08 (considered at the BSC Panel meeting on 14 December 2006).

This modification proposal seeks to amend the BSC to address the defects that give rise to high transaction costs for suppliers seeking to register and process data from meters (or meter registers) that record export from microgeneration and to address any consequential reduction in profile accuracy that could arise from solutions that could be implemented under other industry documents.

Impact on Code *(optional by originator)*

Changes to the profiling rules in Annex S-2 of the BSC. Annex 2 to this Modification Proposal outlines one possible approach to amending Annex S-2 (although this is not intended to constrain the deliberations of the Modification Group in any way).

Impact on Core Industry Documents or System Operator-Transmission Owner Code *(optional by originator)*

Amendment to Schedule 8 of the MRA (which defines the rules distributors follow in allocating MPANs).

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Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties (*optional by originator)*

Changes would be required to the agreed industry processes used for microgeneration settlement by Suppliers and Supplier Agents. As outlined in Annex 1 to this Modification Proposal, the 'single MPAN' solution avoids the need for logical connection and disconnection of Export MPANs, simplifying the industry processes.

Amendments to the Supplier Volume Allocation Agent (SVAA) and Market Domain Data Management (MDDM) system, to allow a single Standard Settlement Configuration to have both an Import register and an Export register. Annex 2 to this Modification Proposal discusses these possible changes in more detail.

It is suggested that meter read validation arrangements, for export meters, are also reviewed as part of the process of progressing this modification.

Impact on other Configurable Items (*optional by originator)*

Changes would be required to BSC Procedures and related MRA documentation in order to capture the new agreed industry processes for microgeneration. It should be noted that the current microgeneration processes (introduced by Approved Modification P81) are not that clearly documented in the BSCPs (with key points sometime relegated to footnotes). The Modification Group may wish to consider whether this approach to documenting the processes has contributed to a lack of industry understanding, and whether more comprehensive documentation of the processes would be appropriate.

Changes to BSCP516 to document the rules for allocation of Import/Export SSCs.

Justification for Proposed Modification with Reference to Applicable BSC Objectives *(mandatory by originator)*

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

Addressing the defects that have been identified will:

i) reduce transaction costs associated with registering and collecting/processing data from meters recording the export from microgeneration; and

ii) ensure that the accuracy of profiling arrangements is not compromised if changes are implemented under other industry documents to facilitate this outcome.

Both of these outcomes would contribute to the promotion of effective competition in the generation and supply of electricity and the sale and purchase of electricity. Reducing transaction costs would, in particular, have a major impact on competition in the purchase of electricity from microgeneration which in turn will lead to increased competition in the installation and production of electricity from microgeneration allowing such generation to compete more effectively.

Applicable BSC Objective (d) – Promoting efficiency in the implementation and administration of the balancing and settlement arrangements

The streamlining of processes associated with the collection and processing of data from microgeneration will reduce the potential for errors to occur leading to improved efficiency in the implementation and administration of the balancing and settlement arrangements.

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Urgency Recommended: No *(delete as appropriate) (optional by originator)*	
Justification for Urgency Recommendation *(mandatory by originator if recommending progression as an Urgent Modification Proposal)*	
Details of Proposer: ***Name…Colette Baldwin……*** ***Organisation……..E.ON UK……*** ***Telephone Number….02476 181382……*** ***Email Address Colette.baldwin@powergen.co.uk***	
Details of Proposer's Representative: ***Name……..Colette Baldwin……..*** ***Organisation…E.ON UK……..*** ***Telephone Number…02476 181382……*** ***Email address Colette.baldwin@powergen.co.uk***	

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Details of Representative's Alternate:

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Attachments: Yes / ~~No~~ *(delete as appropriate) (mandatory by originator)*

If Yes, Title and No. of Pages of Each Attachment:

Annex 1 – Comparison of Single MPAN Solution with Current Industry Baseline (3 pages)

Annex 2 – A Possible Approach to Amending the Profiling Process (4 pages)

P213 Annex 1 – Comparison of Single MPAN Solution with Current Industry Baseline

This Annex is intended to compare the proposed 'single MPAN' solution with the current 'two MPAN' baseline introduced by Approved Modification P81. It describes a number of typical microgeneration-related scenarios, focusing on Supplier and Supplier Agent processes rather than the internals of the central settlement systems (which are considered separately in Annex 2).

Scenario 1 - Supplier Decides to Settle Microgeneration for Existing Import Customer

Under the current P81 baseline, a Supplier who wants to settle NHH microgeneration Export for an existing Import customer has to go through a 'logical new connection' process for the Export MPAN. Under the new 'single MPAN' option, the process is treated as a metering reconfiguration for an existing MPAN, and is therefore simpler. The following table compares the key steps for the two processes:

	Current P81 Process	**Proposed New Process**
1.	Supplier requests a second MPAN for the premises from the LDSO	n/a
2.	Supplier registers to supply the new MPAN in SMRS, specifying an Export SSC (and MTC). This should trigger the LDSO to assign an Export LLFC to the new MPAN (if they have not already done so).	Supplier updates the existing MPAN registration to have an Import/Export SSC (and MTC), rather than Import-only. (This should trigger the LDSO to make corresponding changes to the LLFC).
3.	Supplier appoints agents (i.e. Meter Operator Agent, Non Half Hourly Data Collector, Non Half Hourly Data Aggregator) for Export MPAN.	n/a Agents are already appointed for existing MPAN
4.	Supplier sends D0142 to Meter Operator Agent, instructing them to install Export metering for the new Export MPAN. As this flow relates to the Export MPAN, and doesn't explain the connection to the existing Import MPAN, the Supplier may need to use the 'Additional Information' field to explain the scenario.	Supplier sends D0142 to Meter Operator Agent, instructing them to install Import/Export metering for the existing MPAN.
5.	Meter Operator sends Meter Technical Details (D0149/D0150) for new MPAN to Supplier, NHHDC and LDSO. MTD show the new Export MPAN having a single settlement register (for Export).	Meter Operator sends Meter Technical Details (D0149/D0150) for existing MPAN to Supplier, NHHDC and LDSO. MTD show the MPAN having at least two settlement registers (one Export and one Import).

Scenario 2 - Supplier Decides to Discontinue Settlement of Microgeneration for Existing Import/Export Customer

Under the current P81 baseline, a Supplier who decides to discontinue settlement of NHH microgeneration Export (perhaps because the generation plant has been decommissioned by the customer) has to go through a 'logical disconnection' process for the Export MPAN. Under the new 'single MPAN' option, the process is treated as a metering reconfiguration for the single MPAN, and is therefore simpler. The following table compares the key steps for the two processes:

	Current P81 Process	**Proposed New Process**
1.	Supplier requests logical disconnection of the Export MPAN (making it clear in the request that physical disconnection of the property is not required)	Supplier updates SSC (and MTC) in SMRS to Import rather than Import/Export. (This should trigger the LDSO to make corresponding changes to the LLFC).

2.	Supplier de-appoints agents (i.e. Meter Operator Agent, Non Half Hourly Data Collector, Non Half Hourly Data Aggregator)	n/a
3.	Supplier sends D0142 to Meter Operator Agent, instructing them to logically disconnect the metering associated with the Export MPAN. As this flow relates to the Export MPAN, and doesn't explain the connection to the existing Import MPAN, the Supplier may need to use the 'Additional Information' field to explain the scenario.	Supplier sends D0142 to Meter Operator Agent, instructing them to use Import metering rather than Import/Export metering for the single MPAN.
4.	Meter Operator sends Meter Technical Details (D0150) for Export MPAN, to confirm that it is logically disconnected.	Meter Operator sends Meter Technical Details (D0149/D0150) for existing MPAN to Supplier, NHHDC and LDSO. MTD show the MPAN now has only Import settlement register.

Scenario 3 – Change of Supplier (Import/Export)

Under the current P81 baseline, Change of Supplier (for Import and Export together) requires separate Change of Supply events for the Import and Export MPANs. The risk is that error in the process may lead to just one of the MPANs being transferred, leaving one of the Suppliers with Export only, even if that is not the intention of the customer, and isn't supported by the contract between Supplier and customer. The cost of correcting exceptions of this kind is potentially high.

Under the new 'single MPAN' option only a single Change of Supplier event is required, and the risk of this type of error is therefore removed. It is still possible to transfer Export only if required by the customer (as described in scenario 4 below), but this is unlikely to be done unintentionally.

Scenario 4 – Change of Supplier (Export only)

Under the current baseline, transferring the Export to a new Supplier (leaving the Import with the old Supplier) can be done through a normal Change of Supplier event. As discussed above, the process is so easy that there is a risk of it happening erroneously.

Under this Modification Proposal, transferring the Export to a new Supplier (while leaving the Import with the old Supplier) would still be possible (if the customer required it), but would require the Export supplier to request an Export MPAN from the LDSO, and the old Supplier to reconfigure their MPAN to Import (rather than Import/Export).

P213 Annex 2 – A Possible Approach to Amending the Profiling Process

This Annex (which is based on ideas discussed briefly at the WP04 project meeting) proposes one possible approach to amending Annex S-2 of the BSC (and the SVAA software that implements those rules) in order to:

- Lift the restriction that the same Profile Class (i.e. basic profile shape) must be used for both Import and Export where both are registered under a single MPAN; and
- Remove the restriction that prevents the settlement system from allocating both Import and Export energy, recorded using meters registered under a single MPAN, to the customer in the same half hour.

Note that the approach proposed in this Annex is intended only as a possible starting point for Modification Group discussions, and is not intended to constrain the Modification Group in finding the most appropriate technical means of implementing the Proposal.

Overview of A Possible Solution

In effect, this Modification Proposal is seeking to waive (for microgeneration customers) two constraints that are quite deeply built into the design of the SVA market:

- The constraint (built into SMRS and Supplier Agent systems) that each SVA Metering System is assigned to a single Profile Class; and
- The constraint (built into the profiling component of SVAA) that only one of the Time Pattern Regimes (TPRs) associated with a given SSC can be recording energy at a given instant in time.

It is believed that directly amending SVA systems to overcome these constraints would be very costly[7]. An alternative (and more efficient) approach would be to 'work around' the constraints by amending Annex S-2 of the BSC to state that:

- The normal provisions for calculation of profile coefficients (i.e. sections 6.2 to 6.8 of Annex S-2) shall not apply to SSCs that include both Import and Export registers;
- Instead, for these SSCs, the profile coefficients for each TPR will be set equal to the profile coefficients that would have been used (in the opinion of the BSC Panel), had the Import and Export been assigned to two MPANs rather than one.

How Would This Approach Work in Practice?

As an example of how this would work in practice, consider a domestic (Profile Class 1) customer with a photovoltaic microgeneration system. Under the current 'two MPAN' solution, this customer has an Import MPAN (assigned to SSC 0393), and an Export MPAN (assigned to SSC 0482). Each of these two SSCs has a single TPR, as follows:

IMPORT MPAN					
Profile Class	**SSC Id**	**SSC Description**	**SSC Type**	**TPR Id**	**TPR 'On' Times**
1	0393	Unrestricted	I	00001	00:00 – 24:00

EXPORT MPAN					
Profile Class	**SSC Id**	**SSC Description**	**SSC Type**	**TPR Id**	**TPR 'On' Times**
8	0482	Micro-PV Export Import Profile Class 1	E	00378	Deemed 'On' times agreed by Panel, and varying by month (e.g. 07:30 – 16:00 in April, 04:30 – 17:00 in May).

[7] It should be noted that the concept of 'related' MPANs was introduced into the MRA in order, at least in part to, to avoid the need for such system changes.

Note that each SSC has an SSC Type (held as part of the SSC definition in Market Domain Data) that distinguishes Import (type 'I') from Export (type 'E'). In order to support this Modification Proposal, a third value (e.g. 'X') would be introduced for Import/Export SSCs. For example, the 'single MPAN' SSC for our Profile Class 1 PV customer might be:

IMPORT/EXPORT MPAN					
Profile Class	**SSC Id**	**SSC Description**	**SSC Type**	**TPR Id**	**TPR 'On' Times**
1	0666	Micro-PV Import/Export Profile Class 1	X	00001	00:00 – 24:00
				00378	Deemed 'On' times agreed by Panel, and varying by month (e.g. 07:30 – 16:00 in April, 04:30 – 17:00 in May).

It is proposed that SVAA would not attempt to calculate profile coefficients for 'X' type SSCs such as this (as the overlapping TPRs would cause the current profiling algorithms to fail). Instead, the software would be provided with a substitution table that tells it which profile coefficients to use:

EXAMPLE SUBSTITUTION TABLE FOR USE BY SVAA IN PROFILING IMPORT/EXPORT SSCs					
IMPORT/EXPORT SSC			**SUBSTITUTE SSC**		
Profile Class	**SSC**	**TPR**	**Profile Class**	**SSC**	**TPR**
1	0666	00001	1	0393	00001
1	0666	00378	8	0482	00378

For example, whenever SVAA required profile coefficients for the Export Register of a single MPAN microgeneration customer (i.e. PC1, SSC 0666, TPR 00378) it would consult the above substitution table, and substitute the profile coefficients for the Export Register of a two MPAN microgeneration customer (i.e. PC8, SSC 0482, TPR 00378). In particular, SVAA would do this substitution when:

- Profiling EAC/AA values provided to NHH settlement by Data Aggregators;
- Producing Daily Profile Coefficient files for use by Non Half Hourly Data Collectors; and
- Producing NHH DUoS reports for Distributors.

The effect of using substitute profile coefficients in this way is that it would make no difference to settlement (or DUoS charging) whether a microgeneration customer was settled on a single MPAN, or two MPANs.

Overview of System Changes Required for this Approach

The primary impact of this approach would be on central settlement systems i.e. the SVAA and MDDM software:

- The MDDM and SVAA software would require amendment to recognise a third value of SSC Type (e.g. 'X'), for use with Import/Export SSCs. This change would also potentially affect the format of MDD flows, and the systems that receive them;
- For SSCs with an SSC Type of 'X', the MDDM and SVAA software would require amendment to include a flag at the TPR level, distinguishing Import registers from Export registers. This change would also potentially affect the format of MDD flows, and the systems that receive them;
- The SVAA software would require a new database table to store the Substitution Table, telling the software which profile coefficients to use for each Import/Export SSC. See above for an example of

the format for this data. A business process would also be required for this substitution data to be approved by SVG, and entered into ISRA;

- The Daily Profile Production module of SVAA would require amendment to exclude SSCs of type 'X' from the calculation of profile coefficients, and instead substitute other profile coefficients (in accordance with the data in the substitution table); and
- Currently the Volume Allocation module of SVAA handles 'I' type SSCs (treating all TPRs as Import), and 'E' type SSCs (treating all TPRs as Export). It would require amendment to handle 'X' type SSCs (treating each TPR as either Import or Export, in accordance with the flag held against the TPR in MDD).

APPENDIX 2: INITIAL ASSESSMENT OF IMPACTS OF MODIFICATION PROPOSAL

An initial assessment has been undertaken by BSCCo in respect of all BSC systems, documentation and processes. The following have been identified as being potentially impacted by P213.

a) Impact on BSC Systems and Processes

BSC System / Process	Potential Impact of Proposed Modification
SVAA Software	Changes will be required to the SVAA software to allow profiling for Import and Export on a single MPAN. The extent of the changes required will be dependent on the solution chosen.
MDD Software	Changes may be required to recognise an Import/Export MPAN within MDD. The extent of the changes required will be dependent on the solution chosen.

b) Impact on BSC Agent Contractual Arrangements

An initial assessment has been undertaken in respect of BSC Agent contractual arrangements and no areas have been identified as potentially being impacted by the Modification Proposal.

c) Impact on BSC Parties and Party Agents

If a change to MDD is required (for example a new identifier for Import/Export MPANs) then this could impact Supplier's internal systems.

Suppliers will potentially not be impacted that greatly by the proposed Modification, as they do not have to adopt the new processes, and could continue to use two MPANs for microgeneration sites (one for Import and another for Export).

NHH Supplier Agents may need to update their systems and will need to update their processes for identifying collecting, recording and aggregating Import and Export data from a single MPAN.

LDSOs will be impacted by the Proposed Modification as they will need to accept new SSCs for Import/Export MPANs and assign the correct LLFCs etc.

d) Impact on Transmission Company

No impact.

e) Impact on BSCCo

Area of Business	Potential Impact of Proposed Modification
Implementation	ELEXON will be required to implement changes to the Code, CSDs and BSC Systems to support this Modification Proposal.
MDD	There may be a minor impact on the Customer Operations Team, depending on the solution chosen for Market Domain Data.

f) Impact on Code

Code Section	Potential Impact of Proposed Modification
Annex S-2 (Supplier Volume Allocation)	There would be changes needed to profiling in Annex S-2 and possibly other sections of the Code. Changes may be needed for

Code Section	Potential Impact of Proposed Modification
	other processes set out in Section S.

g) Impact on Code Subsidiary Documents

Document	Potential Impact of Proposed Modification
BSCP504	The obligation on Suppliers to register Import and Export MPANs separately will need to be updated.
BSCP505	Possible Impact depending on final solution.
BSCP508	Possible Impact depending on final solution.
BSCP509	Changes to MDD forms are possible, depending on the final solution.
BSCP514	Possible Impact depending on final solution.
BSCP516	The rules for allocating SSCs are very likely to need to be updated to allow for Import/Export SSCs.
PSL120	Changes may be needed regarding the collection Import and Export readings for Import/Export MPANs.
SVA Data Catalogue	P flows may need to be amended. Any changes to D-flows will affect DTC although, some notes may need to be added to the SVA DCs.
ELEXON BPM	Changes may be needed to reflect the modified processes.
SVAA URS	Changes would be required to the SVAA software (and supporting documentation) to allow the use of more than one PC and TPR for a single MPAN at any given time. The extent of the changes required will be dependent on the solution chosen.
SVAA SD	Changes would be required to the SVAA software (and supporting documentation) to allow the use of more than one PC and TPR for a single MPAN at any given time. The extent of the changes required will be dependent on the solution chosen.
NHHDA URS	Possible impact depending on final solution.

h) Impact on Core Industry Documents and Other Documents

Document	Potential Impact of Proposed Modification
Master Registration Agreement	P213 notes that an amendment to Schedule 8 of the MRA will be required to give effect to the changes suggested in the Modification Proposal. If this change is not made the assigning a single NHH MPAN for Import and Export will not be possible.

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 3: COSTS AND TIMETABLE FOR PROGRESSION

ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL[8]

Meeting Cost	£ 2,000
Legal/Expert Cost	£ 0
Impact Assessment Cost	£ 8,000
ELEXON Resource	60 man days £ 16,260

[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

ANNEX 2 GANTT CHART

ID	Task Name	Duration	Start
1	Assessment of P213	66 days	Thu 10/05/07
2	IWA Presented to Panel	0 days	Thu 10/05/07
3	MG Meeting 1 (IWA, Spec, issues)	0 days	Wed 16/05/07
4	MG Meeting 2 (Alt.Solutions, issues, Spec)	0 days	Mon 21/05/07
5	Draft Requirements Specification	3 days	Tue 22/05/07
6	MG Review Requirements Specification by Corres.	3 days	Mon 28/05/07
7	Update Requirements Specifcation	2 days	Thu 31/05/07
8	Impact Assessment	9 days	Mon 04/06/07
9	Collate and distribute Responses	2 days	Fri 15/06/07
10	MG Meeting 3 (IA Respinses, Cons. Doc., CSDs)	0 days	Tue 19/06/07
11	Draft Consultation Document	5 days	Wed 20/06/07
12	MG Review Consultation Document by Corres.	3 days	Wed 27/06/07
13	Update Consultation Document	2 days	Mon 02/07/07
14	Consultation	10 days	Wed 04/07/07
15	Transmission Company Analysis	10 days	Wed 04/07/07
16	Draft Legal Text	10 days	Wed 04/07/07
17	Collate and Distribute Responses	2 days	Wed 18/07/07
18	MG Meeting 4 (Cons. Responses, Recom. Sol.)	0 days	Fri 20/07/07
19	MG Review Legal Text by Correspondence	4 days	Fri 20/07/07
20	Draft Assessment Report	3 days	Mon 23/07/07
21	MG Review Assessment Report by Corres.	3 days	Thu 26/07/07
22	Update Assessment Report	1 day	Tue 31/07/07
23	Submit Assessment Report to Panel	1 day	Fri 03/08/07
24	Present Assessment Report to Panel	0 days	Thu 09/08/07