

INITIAL WRITTEN ASSESSMENT for Modification Proposal P224 'Reactive Power Flows Associated with Exemptable Generating Plant'

Prepared by: ELEXON Limited¹

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

P224 seeks to revise the Code to allow Reactive Power volumes to be allocated to the Party responsible for the associated flow of Active Power. The aim is to resolve anomalies in the allocation of Reactive Power flows where a Supplier and Exemptable Generating Plant (such as embedded wind powered generators) share a site with a common metered Boundary Point, and the Party responsible for export of the electricity generated is not the same Party responsible for the supply of electricity. At present the Supplier is held responsible for some Reactive Power flows caused by operation of the Exemptable Generating Plant.

This issue does not directly affect Settlement but can materially impact Distributors' ability to implement appropriate Distribution Use of System (DUoS) charging. P224 would allow Reactive Power to be more appropriately allocated on these shared sites, permitting Distributors to improve their DUoS charging. Although the Modification Proposal considers the issue in relation to Supplier Volume Allocation, the Modification Group will also need to assess the issue in relation to Central Volume Allocation.

BSCCO'S RECOMMENDATIONS

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

- **DETERMINE that Modification Proposal P224 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 14 August 2008;**
- **DETERMINE that the P224 Modification Group be formed from members of the VASMG and SSMG Standing Modification Groups supplemented by members with experience of the Distribution and exemptable generation issues; 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 P224.

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

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

1 DESCRIPTION OF PROPOSED MODIFICATION

1.1 Background

Electrical Power is composed of two components: Active Power and Reactive Power. Active Power is what is generally referred to when talking about 'electricity', and can be used to power electrical equipment. Reactive Power is a phenomenon associated with the flow of electrical energy around a circuit (such as the Transmission System). Reactive Power decreases the capacity of a circuit to transmit Active Power; therefore an increase in Reactive Power results in a decrease in the efficiency of the transmission of Active Power by a circuit. Because of this, Licensed Distribution System Operators (LDSOs) employ a system of charging Parties for excessive flows of Reactive Power. These charges are intended to discourage production of Reactive Power, and thereby minimise the action needed to maintain efficiency of transmission.

Issue 24 'Impact of BSC on Reactive Power Charging' considered the constraints placed on Parties responsibilities regarding Reactive Power by the Balancing and Settlement Code (BSC, 'the Code'). The conclusion of the Issue 24 Group was that the BSC does impose constraints in this area, and that these constraints result in anomalous Distribution Use of System (DUoS) charges in relation to Exemptable Generating Plant. The Issue 24 Report recommended that a Modification should be raised to address this, and contained a solution endorsed by the Issue 24 Group which could form the basis of such a Modification. The Issue 24 Report (Panel paper 127/01e) and other documentation can be found on the ELEXON website ([Issue 24 webpage](#)).

Prior to Issue 24, the matter of responsibility for Reactive Power was presented to the Supplier Volume Allocation Group (SVG) and the Imbalance Settlement Group (ISG). The Proposer notes that following Issue 24, a survey by the Renewable Energy Association (REA) indicated its members support a BSC Modification ensuring that 'reactive power flows are correctly allocated to those that cause them'. The REA survey also revealed that a significant proportion of respondents had identified excessive DUoS charges which they had not been able to resolve via queries to the relevant LDSO. The Proposer also notes that the Distribution Charging Methodologies Forum (DCMF) supports addressing the issue through a BSC Modification.

The issue central to both Issue 24 and this Modification is that anomalous DUoS charges can arise where Exemptable Generating Plant and a Supplier share responsibility for power flows at a Boundary Point with the Distribution System. An example of such a 'shared site' is illustrated below. Presently, only the Supplier is permitted to be responsible for certain flows of Reactive Power, due to obligations in Section K of the BSC concerning responsibility for Metered Volumes. However, flows of Reactive Power may be caused by the operation of Exemptable Generating Plant; furthermore, they may occur at times of net Export at the boundary point (i.e. when Export from the Exemptable Generating Plant exceeds the Import caused by the Supplier's site load). This means Suppliers may be held responsible for Reactive Power flows they are not the cause of; this can result in DUoS charges for Reactive Power that are excessive compared with the actual amount of Reactive Power associated with the Supplier.

The specific concern is that Supplier's suffer anomalously inflated Maximum Capacity Charges³, and therefore incur excessive Reactive Power charges. This also results in disputes between operators of exemptable generating plant and Suppliers regarding who should pay such charges. Wind generators are the type of Exemptable Generating Plant usually involved in such scenarios. The Issue 24 Group concluded that the materiality of this issue is likely to increase due to increased amounts of embedded generation.

³ LDSOs levy charges for exceeding agreed Maximum Capacity, in order to manage the Distribution System. An aspect of Maximum Capacity is that Reactive Power flows remain within set limits. Parties exceeding these limits incur Maximum Capacity Charges.

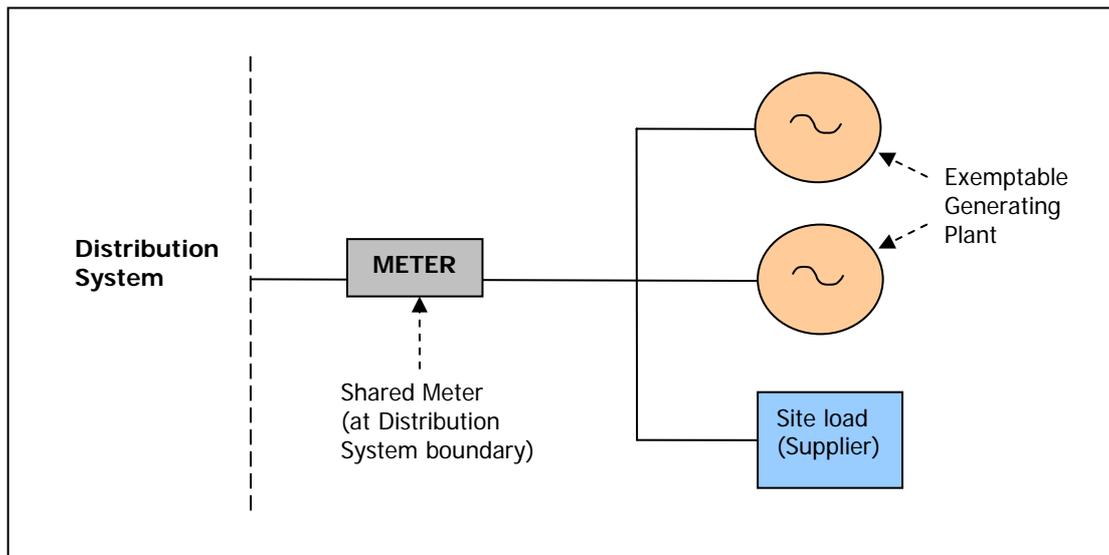


Illustration of a shared site

To clarify, P224 does not seek to address a Settlement issue, and if implemented would not impact Settlement volumes. P224 aims to change Code definitions in order to remove constraints that these definitions cause in regard of responsibility for power flows and ownership of data. Amendment of these BSC constraints would allow LDSOs to introduce more accurate and efficient DUoS charging. Improvement of DUoS charging through the more equitable allocation of charges for Reactive Power would mitigate a burden on Suppliers and remove a potential barrier to entry for embedded generators. The intent is that this would have a positive impact on competition within the electricity market.

Note that it is possible to address this issue to some extent through changes to DUoS charging methodologies. The Issue 24 Group considered this alternative, but concluded that the effectiveness of this solution would be limited due to the metering and data ownership issues imposed by the BSC definitions. Modified DUoS charging methods without any change to the Code would introduce issues around using one Party's data to bill another. Accuracy would also be limited to a half-hourly basis, whereas employing a new metering solution would allow power flows to be allocated to the correct Party on a moment-by-moment basis.

1.2 Modification Proposal

P224 was raised on 28 April 2008 by E.ON UK plc ('the Proposer'). P224 seeks to more correctly allocate responsibility for Reactive Power. This would be achieved by modifying the Code such that Parties other than Suppliers may take responsibility for certain flows of Reactive Power (referred to by convention as Reactive Power Import) caused by the operation of exemptable generating plant. Currently Section K of the Code does not allow this.

The Proposer supplied a 'straw man' solution for consideration by the Group, based on the Issue 24 Group's recommended solution. The straw man solution is:

- a) Replace the terms 'Import' and 'Export' in Section K with 'Active Import' and 'Active Export';
- b) Introduce two new terms to Section K, 'Active Import Related Reactive Power' and 'Active Export Related Reactive Power'; and two supplementary terms to account for time and the flow of Reactive Power, 'Active Import Related Reactive Energy' and 'Active Export Related Reactive Energy'; and
- c) Assign responsibility for Active Import Related Reactive Power to a Supplier and assign responsibility for Active Export Related Reactive Power to an Exemptable Generating Plant.

The implications of the straw man solution for the classification of Reactive Power flows and the allocation of responsibility for such flows are illustrated in the table below. The table indicates the aspect of the solution

that is not permissible under the current drafting of the Code; Exemptable Generating Plant taking responsibility for 'Reactive Import' (in metering terminology) when the net flow of Active Energy at the boundary point of the shared site is Export.

Note that the Issue 24 Group concluded that new definitions referring to Reactive Power as either Active Import Related or Active Export Related would allow Reactive Power to be attributed to operators of Exemptable Generating Plant. These definitions would resolve the issue of some flows of Reactive Power associated with Active Power Export being considered as an unlicensed supply of electricity (and therefore illegal under the provisions of the Electricity Act (1989)) due to their categorisation, if a LEG (or Party acting on their behalf) were to be responsible for them.

Under the straw man solution the D0268 'Half Hourly Meter Technical Details' data flow would assign Reactive Power on the basis of the net flow of Active Power (i.e. Import or Export) of a shared site. This would be achieved by the cross-reference of standard Meter identity data with MSID data.

Active Power flow (at Boundary Point)	Description of Reactive Power flow using metering terminology	Proposed Classification of Reactive Power flow	Proposed Responsible Party	Permissible under BSC currently?
Import	Reactive Import	Active Import Related Reactive Power	Supplier	Yes
Import	Reactive Export	Active Import Related Reactive Power	Supplier	Yes
Export	Reactive Import	Active Export Related Reactive Power	Exemptable Generator (or associated Party)	NO
Export	Reactive Export	Active Export Related Reactive Power	Exemptable Generator (or associated Party)	Yes

Proposed Reactive Power flow classification and responsibility

No change is proposed to the manner in which Section K of the Code determines responsibility for Active Power flows. This means that under the straw man solution a LEG (or a Party acting on its behalf) would need to elect to be responsible for Active Export from Exemptable Generating Plant (by applying to register Metering Systems) in order to be responsible for Active Export Related Reactive Power. The proposal would not apply retrospectively; a LEG or associated Party would need to re-register Metering Systems relating to existing Exemptable Generating Plant in order to fall under the new provisions.

The Modification Proposal aims to avoid any significant impact on physical Metering (such as a requirement for Parties to replace existing systems). However, as it is likely that some Meters will require reconfiguration, a minimum materiality threshold of 100kW is proposed. This threshold is intended to minimise the impact on Meters and ensure the impact is appropriate. The threshold is based on the new Statutory Instrument, SI 1679, related to the Measuring Instrument Directive (MID) and is consistent with the Measurement Class definitions for Metering Systems in Annex X-2 of the BSC.

2 AREAS FOR CONSIDERATION IN PROGRESSING MODIFICATION PROPOSAL

An initial assessment of P224 has identified the following areas which BSCCo recommends should be considered further during the progression of the Modification Proposal:

- Development and confirmation of the P224 solution;

- Implications for LEGs (and Parties associated with them), Generators, Suppliers, LDSOs and Reactive Power charging;
- System impact (including implications for metering and data flows) – for participants, Party Agents and BSC Agents;
- Impacts on any other codes or documentation (e.g. BSCPs, CoPs);
- Impact on CVA metering arrangements;
- Implications of the proposed 100kW materiality threshold, and how this would be implemented;
- Benefits of P224 and quantification of benefits/disadvantages against the Applicable BSC Objectives;
- Quantification of the cost-benefit of P224 (note that analysis is dependent upon provision of data by industry in the form of DUoS billing, or another source, as the benefits are likely to be in this area); and
- Any alternative solutions.

3 RATIONALE FOR BSCCO'S RECOMMENDATIONS TO THE PANEL

BSCCo believes that further consideration of P224 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 P224 proceed to the Assessment Procedure.

BSCCo recommends that P224 be submitted to a 3-month Assessment Procedure.

It is estimated that progression of P224 will require:

- 4 Modification Group meetings;
- 1 industry consultation;
- 1 BSC Agent impact assessment;
- 1 Party/Party Agent impact assessment;
- 1 BSCCo impact assessments; and
- 1 request for Transmission Company analysis.

The proposed timetable and estimated costs for the progression of P224 are shown in Appendix 3.

BSCCo recommends that the P224 Modification Group be formed from members of the VASMG and SSMG Standing Modification Groups supplemented by members with experience of the Distribution and exemptable generation issues.

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
CDCA	Central Data Collection Agent
CVA	Central Volume Allocation

DUoS	Distribution Use of System
Exemptable Generating Plant	Generating plant that are exempt from the requirement to hold an electricity licence to operate because their export capability is below a threshold (100MW in England and Wales)
LDSO	Licensed Distribution System Operators
LEG	Licence Exempt Generator
MSID	Metering System Identifier (equivalent to MPAN for an SVA Metering System)
SVA	Supplier Volume Allocation

5 DOCUMENT CONTROL

5.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	01/05/08	Dean Riddell	David Jones	For peer review
0.1	01/05/08	Dean Riddell	John Lucas	For technical review
0.2	01/05/08	Dean Riddell	David Jones	For quality review
1.0	02/05/08	Change Delivery		For Panel decision

5.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	Issue 24 Report (see Issue 24 webpage , www.elexon.co.uk)	ELEXON	04/04/07	1.0

APPENDIX 1: MODIFICATION PROPOSAL

Modification Proposal – BSCP40/03	MP No: P224 <i>(mandatory by BSCCo)</i>
Title of Modification Proposal Reactive Power Flows Associated with Exemptable Generating Plant	
Submission Date Monday 28 April 2008	
<p>Description of Proposed Modification</p> <p>Section K of the Balancing and Settlement Code (BSC) currently prevents Parties other than Licensed Suppliers from taking responsibility for Reactive Power flows absorbed (imported) by Licence exempt generating plant (Exemptable Generating Plant). This proposal seeks to alter the Code such that Parties other than licensed suppliers may take responsibility for reactive power flows absorbed by licence exempt generating plant, The “straw man” solution for consideration by the Group is as follows:</p> <ul style="list-style-type: none"> a) Replace the terms ‘Import’ and ‘Export’ in Section K with ‘Active Import’ and ‘Active Export’; and b) Introduce two new terms to Section K, ‘Active Import Related Reactive Power’ and ‘Active Export Related Reactive Power’; and two supplementary terms to account for time and the flow of Reactive Power, ‘Active Import Related Reactive Energy’ and ‘Active Export Related Reactive Energy’; and c) Assign responsibility for Active Import Related Reactive Power to a Supplier and assign responsibility for Active Export Related Reactive Power to an Exemptable Generating Plant. <p>The configurer of the data flow D0268, ‘Half Hourly Meter Technical Details’, will be instructed to cross-reference standard meter identity data with MPAN/MSID data to recognise when a site is importing Reactive Power during times when the presence of generating equipment results in a net export of Active Power from that site. For the purpose of accurate Distribution Use of System (DUoS) charging, such imported Reactive Power will be, correctly, attributed to the generator. A detailed explanation of how the configurer could identify combinations of Active and Reactive Power flows is included in attachment, ‘Explanation of Proposed Solution’.</p> <p>Under this proposal how Section K determines responsibility for Active Power flows will not change. This means that an Exemptable Generating Plant, or its authorised Party, will need to have elected to be responsible for Active Export (by applying to register Metering Systems) in order to be responsible for Active Export Related Reactive Power. It also means that the proposal will not apply retrospectively; and an existing generator will need to re-register Metering Systems to qualify.</p> <p>Finally, it is the proposal's intention to avoid any significant impact on physical Meters, such as a requirement for Parties to replace existing systems. However, as it is likely that certain Meters will have to be re-configured, the proposal includes a materiality threshold of 100kW. This figure is based on the new Statutory Instrument, SI 1679, related to the Measuring Instrument Directive (MID) and is consistent with the Measurement Class definitions for Metering Systems in Annex X-2 of the BSC.</p>	
<p>Description of Issue or Defect that Modification Proposal Seeks to Address</p> <p>At present, only Licensed Suppliers are taken to be responsible for Reactive Power flows, which can result in inaccurate DUoS charges. Such inaccuracies are known to occur where there is Exemptable Generating Plant, typically wind generation, behind a single Meter on the boundary between a site and the Distribution System. The problem is therefore likely to become of increased significance as continually more new Licence exempt wind generation is built.</p> <p>Specifically, if unaddressed, there are likely to be more incidences where a Supplier’s Maximum Capacity Charge is artificially inflated and more incidences of charges for excess Reactive Power. This could in turn result in more disputes between the operators of Licence exempt generating plant and supply companies about who should pick up such costs.</p>	

Modification Proposal – BSCP40/03	MP No: P224 <i>(mandatory by BSCCo)</i>
<p>The matter has been investigated by the industry in recent years. Papers were brought to both the Supplier Volume Allocation Group (SVG62/08, SVG63/11 and SVG64/07) and the Imbalance Settlement Group (ISG62/04). Consequently an Issues Group was formed (Issue 24 'Impact of BSC on Reactive Power Charging'), which reported to the BSC Panel in May 2007 (paper 127/01e). Since then a broad consensus has formed at the industry's Distribution Charging Methodologies Forum (DCMF) that the problem will be best addressed through a BSC Modification.</p> <p>Further work to judge the need for a proposal was undertaken by the Renewable Energy Association. The Association issued a survey to its members in February 2008, with a view to supporting investigation of a solution to the problem by a BSC Modification Group. Of 11 respondents, all "wanted to see a modification to the BSC which would ensure that reactive power flows are correctly allocated to those that cause them."</p> <p>The survey also specifically asked whether, on a site by site basis, respondents were aware of excessive import DUoS charges and whether they had queried these charges with the relevant Distribution Network Operator (DNO). From this sample, 40% of sites had identified excessive charges and had put queries to the DNO, without successful resolution.</p> <p>To be clear, this survey was specifically intended to validate that there is wider interest in resolving the issue; and it is therefore not expected that it will be of further use to the Modification Group.</p> <p>Finally, it should be noted that the proposal is based on the solution recommended by the Issue 24 Group. The Group believes that the new definitions referring to 'Active <i>Related</i> Reactive Power' allow Reactive Power flows to be attributable to an unlicensed Party in a way that would avoid these power flows being considered to be an unlicensed supply of electricity, which is contrary to the provisions of the Electricity Act (1989).</p>	
<p>Impact on Code <i>(optional by originator)</i> In addition to amendments to Section K, it is expected that amendments will be required to the General Glossary (Annex X-1) and the Technical Glossary (Annex X-2).</p>	
<p>Impact on Core Industry Documents or System Operator-Transmission Owner Code <i>(optional by originator)</i> None expected.</p>	
<p>Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties <i>(optional by originator)</i> It is likely that Parties will report an impact on their settlement systems and processes.</p>	
<p>Impact on other Configurable Items <i>(optional by originator)</i> It is anticipated that BSCCo will advise the Modification Group where consequential changes will be required to the Codes of Practice (CoPs) for Metering Systems.</p>	
<p>Justification for Proposed Modification with Reference to Applicable BSC Objectives <i>(mandatory by originator)</i></p> <p>It is important to note that the accurate DUoS charging is principally a concern for the DNO's charging methodologies. However, the Issue 24 Group acknowledged that it is the baseline BSC text that causes a problem, as it amounts to an inappropriate constraint on the accurate apportioning of Reactive Power costs.</p> <p>The Group went on to note that an amendment to the BSC would therefore better facilitate competition in the generation and supply of electricity, against Objective (c). The baseline drafting of the BSC leads to anomalies in DUoS charges relating to Reactive Power. It is detrimental to competition if Parties are subject to inappropriate costs. Furthermore, inaccurate charging could prove to be a barrier to entry in the growing embedded generation market.</p>	

Modification Proposal – BSCP40/03	MP No: P224 <i>(mandatory by BSCCo)</i>
Urgency Recommended: No <i>(delete as appropriate) (optional by originator)</i>	
Justification for Urgency Recommendation <i>(mandatory by originator if recommending progression as an Urgent Modification Proposal)</i> n/a	
Details of Proposer: <i>Name.....Ben Sheehy.....</i> <i>Organisation.....E.ON UK plc.....</i> <i>Telephone Number.....02476 183381.....</i> <i>Email Address.....ben.sheehy@eon-uk.com.....</i>	
Details of Proposer’s Representative: <i>Name.....Glenn Sheern.....</i> <i>Organisation.....E.ON UK plc.....</i> <i>Telephone Number....07834 621647.....</i> <i>Email address.....glenn.sheern@eonenergy.com.....</i>	
Details of Representative’s Alternate: <i>Name.....Gaynor Hartnell.....</i> <i>Organisation.....Renewable Energy Association.....</i> <i>Telephone Number....020 7747 1830.....</i> <i>Email address.....ghartnell@r-e-a.net.....</i>	
Attachments: Yes <i>(delete as appropriate) (mandatory by originator)</i> ‘Explanation of Proposed Solution: Reactive Power Flows Associated with Exemptable Generating Plant, Draft Solution’, 2 pages. If Yes, Title and No. of Pages of Each Attachment:	

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 P224.

a) Impact on BSC Systems and Processes

BSC System / Process	Potential Impact of Proposed Modification
CDCA	May be impacted by data flow and metering requirements.

b) Impact on BSC Agent Contractual Arrangements

BSC Agent Contract	Potential Impact of Proposed Modification
LogicaCMG (CDCA)	CDCA may be impacted by new requirements.
PwC (BSC Auditor, Certification Agent)	Potential audit requirement due to system changes.

c) Impact on BSC Parties and Party Agents

Although the Modification Proposal refers primarily to the SVA market (e.g. by referencing the D0268 flow), the same issues would apply to sites with demand registered in SVA and Export registered in CVA (though the number of sites registered in this way is believed to be low).

Suppliers and Licence Exemptable Generators will be affected by the different allocation of metered flows, but their systems will not be affected. Distribution System Operators' charging methodologies will be affected by new available data.

Half Hourly Data Collectors and both CVA and SVA Meter Operator Agents will be impacted by metering requirements and amendment to the configuration of data flows.

d) Impact on Transmission Company

No impact.

e) Impact on BSCCo

Area of Business	Potential Impact of Proposed Modification
Corporate Services	Implementation support, varying according to whether Consumption Component Classes in Settlement systems are affected.
Legal	Advising Modification Group and drafting legal text.
Change Implementation	P224 implementation, including changes required to Code Subsidiary Documents and any other Configurable Items that are impacted. Management of implementation as part of a Release. Further impacts may be identified following development of the solution.

f) Impact on Code

Code Section	Potential Impact of Proposed Modification
K	Amendment and introduction of terminology, change to obligations.
X-1	Changes to definitions.

g) Impact on Code Subsidiary Documents

Document	Potential Impact of Proposed Modification
BSCP20 'Registration of Metering Systems for Central Volume Allocation'	Consequential changes to requirements due to the changes to Code Provisions.
BSCP514 'SVA Meter Operations for Metering Systems Registered in SMRS'	Consequential changes to requirements due to the changes to Code Provisions.
BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'	Consequential changes to requirements due to the changes to Code Provisions.
CoP1 'The Metering of Circuits with a Rated Capacity Exceeding 100MVA for Settlement Purposes'	Consequential changes to requirements due to the changes to Code Provisions.
CoP2 'The Metering of Circuits with a Rated Capacity not exceeding 100 MVA for Settlement Purposes'	Consequential changes to requirements due to the changes to Code Provisions.
CoP3 'The Metering of Circuits with a Rated Capacity not exceeding 10 MVA for Settlement Purposes'	Consequential changes to requirements due to the changes to Code Provisions.
CoP5 'The Metering of Energy Transfers with Max Demand of up to (and including) 1MW for Settlement Purposes'	Consequential changes to requirements due to the changes to Code Provisions.

h) Impact on Core Industry Documents and Other Documents

No impact.

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 PROPOSAL⁴**

Meeting Cost	£2,000
Legal/Expert Cost	£0
Impact Assessment Cost	£5,000
ELEXON Resource	68 man days £14,405

⁴ 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

