

CP Progression – CP1345

Meeting Name Imbalance Settlement Group

Meeting Date 26 April 2011

Purpose of paper For Decision

Summary This report provides details of the background, solution, impacts and industry views of CP1345 'Migration of interface between National Grid and BMRA/SAA from CSV to XML file format'. The ISG is requested to consider the report and to reach a decision on whether to approve the CP.

1. Why Change?

1.1 Background

1.1.1 National Grid intends to replace its Balancing Mechanism (BM) System in Q3 2013 with a new Electricity Balancing System (EBS). The BM System is the source of System Operator data sent to the following BSC Central Systems:

- The Balancing Mechanism Reporting Agent (BMRA);
- The Settlement Administration Agent (SAA); and
- The Energy Contract Volume Aggregation Agent (ECVAA).

1.1.2 The current BM system uses the comma-separated values (CSV) format to send files to BSC Central Systems. The new EBS will use Extensible Markup Language (XML), a format widely used across the industry. Using XML reduces the development time and effort to make future changes to the interface.

1.1.3 A separate [industry consultation](#) carried out by National Grid on the system interfaces (among other areas of system functionality) between market participants and National Grid has shown that the industry is supportive of moving to modern interfaces such as those based on XML.

1.2 What is the issue?

1.2.1 The current interface between the BM system and the BSC Central Systems uses the CSV format. Migrating this interface to XML will impact the BSC Central Systems.

1.2.2 National Grid raised DCP0048 to consider the requirement and timescales for migrating the interface. Various options were considered, these were:

- **Option 1:** Do nothing i.e. No change at EBS go-live or subsequently. National Grid continues to send CSV files to the BSC Central Systems by creating a CSV converter (and maintaining it indefinitely as new interfaces are introduced or existing interfaces are changed);
- **Option 2:** Migrate all interfaces to XML in time for EBS go-live in 2013. This option avoids the need for the EBS developer to develop a CSV converter, but (due to the nature of the contractual arrangements in place) this would not necessarily reduce the implementation costs passed on to Parties; or
- **Option 3:** No change at EBS go-live in 2013 with subsequent phased migration to XML. National Grid creates a CSV converter to allow for no change to the BSC Central Systems with the intention to eventually migrate all interfaces to XML as appropriate. Costs the same as Option 1 up until EBS Go-Live in 2013, but should be lower than Option 1 after that as CSV converters will not need to be maintained for new and amended interfaces.

- 1.3 ELEXON's preferred option is option 3, as this provides the benefits of using XML, without the high cost and risk associated with migrating all the interfaces in one go. Instead, interfaces will be migrated to XML as and when a change impacting the Central Systems is raised. We believe that this is the most efficient way forward.
- 1.4 We received positive and neutral responses supporting this option. National Grid raised CP1345 'Migration of interface between National Grid and BMRA/SAA from CSV to XML file format' based on this option.
- 1.5 We then received one late response to DCP00048 that did not support Option 3. The respondent wanted to know the cost of migrating to an XML interface post EBS go-live in 2013. The respondent advised that they were not against progress but felt that there was merit in continuing with the existing CSV format.
- 1.6 The idea behind option 3 is that interfaces are only upgraded to XML as and when they are changed for other reasons (e.g. future approved Change Proposals or Modification Proposals). In this context we expect there to be a net benefit in using XML rather than CSV. While there may be some additional cost in updating the relevant BSC System(s) to accept XML files, this will be small, given that the interface is being changed anyway (and hence will need to be tested, regardless of whether CSV or XML is used). And this cost will be offset by savings arising from National Grid's EBS developer not being required to build and maintain a CSV converter. However we acknowledge that we won't know for sure that XML is a more cost-effective option until such future Change Proposals or Modification Proposals are raised and assessed.
- 1.7 As we cannot provide the guarantees about future cost of change that the respondent to DCP048 wanted, we agree with the respondent that we should not be committed to using XML where there is no benefit in doing so. We note that the redlined text for CP1345 does contain a safeguard to prevent this,



in that the intention to use XML is “subject to confirmation when assessing the relevant Modification Proposals or Change Proposals”. Following EBS Go-Live in 2013, the ISG and/or relevant group will need to assess each new CP and Modification and determine whether to implement the change using the CSV or XML interface. For the reasons explained above, we anticipate that XML will generally be the more cost-effective option (once the cost of maintaining both CSV and XML interfaces in the long run, and all other factors relevant to the change, are taken into account). But where a CSV interface remains more cost-effective (e.g. for a very minor change to an existing CSV interface) the redlined text allows for CSV to be retained. Therefore ISG would not be committing Parties to any additional expenditure (other than the 1 man-day implementation cost) by approving CP1345.

2. Solution

- 2.1 CP1345 'Migration of interface between National Grid and BMRA/SAA from CSV to XML file format' was raised by National Grid on 02 March 2011, after consideration of the DCP048 responses, in order to progress option 3. It proposes that no changes to the National Grid to BMRA/SAA/ECVAA interface are implemented at EBS go-live in 2013 i.e. the EBS developer will create a converter that changes the XML files produced by the EBS product into CSV files for transfer to BMRA/SAA/ECVAA. Although this requires additional effort from the EBS developer, National Grid has advised that it does not increase the implementation costs passed on to market participants (due to the nature of the contractual arrangements in place). However in order to avoid maintaining the CSV converter indefinitely (which would cause market participants to incur additional costs), interfaces will be upgraded to XML as and when they are changed post-EBS Go-Live (subject in each case to an assessment of the costs and benefits of doing so).
- 2.2 We have amended the NETA IDD Part 1 advising that our intention is to eventually migrate the interface between National Grid and the BSC Central Systems to XML. The details of this format will be agreed closer to the time, and will then be defined in the BMRA-SAA Interface Specification.

3. Industry Views

- 3.1 CP1345 was issued for participant Impact Assessment via [CPC00694](#). We received 6 responses of which 3 agreed and 3 were neutral.
- 3.2 The breakdown of responses is shown in the following table and the full collated participant responses to CP1345 are available on the ELEXON website [here](#).

Respondent Role	Respondent Support		
	Yes	No	Neutral
LDSOs	0	0	1
DC/DA/MOA	1	0	0
Suppliers	0	0	0



System Operator	1	0	0
Mixed (i.e. two or more of Supplier, Generator, Trader, Party agent or Distributor)	1	0	2
Total	3	0	3

3.3 Comments on the Proposed Redlining

3.3.1 We received no comments on the redlining.

3.4 Intended Benefits

3.4.1 Implementing the ability to migrate interfaces to XML in future provides the following benefits:

- The National Grid costs for implementing future Modification Proposals and Change Proposals (which will generally be passed on to market participants, at least in part, through Use of System charges) will be reduced by using XML interfaces (which are supported by the EBS product) without having to convert them to bespoke CSV formats;
- Because XML is a more flexible format, changes will become easier to implement in future: data in XML files is defined by a tag that it is given as opposed to the position in the file as is the case with CSV. This allows configuration changes to National Grid systems and BSC Central Systems at different times; and
- XML is widely used and understood by market participants and software providers worldwide (unlike the GB-specific CSV formats that are currently used).

4. Impacts and Costs

4.1 The following table summarises the ELEXON effort required to implement CPXXX and the Impact on market participants.

Market Participant	Cost/Impact	Implementation time needed
ELEXON (Implementation)	1 man day equating to £240.	November 2011 Release suitable

5. Implementation Approach

5.1 We have amended the NETA IDD Part 1 to reflect that after 2013, the interface between National Grid and BSC Central Systems will be migrated on a case by case basis to XML. Details of the specification will be available in the BMRA & SAA Interface Specification. There will be no change to the BSC Central Systems and no BSC Parties will be impacted.

6. Recommendations

6.1 The ISG is invited to:

- a) **AGREE** the proposed amendments to NETA IDD Part 1; and
- b) **APPROVE** CP1345 for implementation on 3 November 2011, as part of the November 2011 Release.

Attachments:

Attachment A – CP1345 Proposed Redlining

Attachment B – CPC00694 Collated Responses



For more information, please contact:

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CP1345 ‘Using XML Files between National Grid and BMRA/SAA’

Proposed changes to NETA IDD Part 2 v26.0.

Modify section 2.1.2.2 ‘NGC File Format’ to reference the intention to use XML for new or amended data files received from National Grid.

Redlined extract from NETA IDD Part 2 v26.0:

2.1.2.2 NGC File Format

Data received from the System Operator (described in this document as flows BMRA-I002 and BMRA-I003) will be formatted according to the SO’s specification for the flows, given in [NGCSPEC]. For the avoidance of doubt, this format is amplified as follows:

1. The first line of the file will contain an asterisk and the file name.
2. The second through fifth lines of the file will start with an asterisk and will be ignored.
3. The last line of the file will begin with the characters ‘<EOF>’.
4. Lines not beginning with an asterisk or ‘<EOF>’ will contain data records. A data record consists of fields separated by commas as illustrated in Section 14 of [NGCSPEC].
5. A checksum is not included in these files.

The files use the ASCII character set.

In addition, receipt of these files will not be acknowledged by the BSC Central Systems in any way. Files contain sequence numbers - each file type has its own sequence, and duplicate or missing file detection is the same as described in section 2.2 of Part 1, except that instead of sending an out of sequence message, a warning is logged so that the operator can instigate manual processed to resolve the problem.

[NGCSPEC] defines one file which has a different format: the System Warning file, file name SYS_WARN_<CREATION DATE>.bmr. This is a free format text file with no special formats for the first five lines or the last line.

An exception is the SO-SO Price interface (BMRA-I025). This data is also provided as an XML file, but in a format defined by the XML Schema for Merit Order List documents (published in the ENTSO-E Reserve Resource Planning [EDI library](#)).

All other interfaces with the System Operators will use the common conventions specified in Section 2.2 of Part 1 of the Interface Definition and Design.

NOTE: following implementation of the new Electricity Balancing System (currently scheduled for 2013), we plan to begin migrating all interfaces with the System Operator from CSV to XML. Our intention (subject to confirmation when assessing the relevant Modification Proposals or Change Proposals) is that all new or amended files provided by the System Operator, whether in relation to BMRA-I002, BMRA-I003 or any other relevant interface requirement, will make use of an XML format. The details of this format will be agreed with the System Operator closer to the time, and will then be defined in [NGCSPEC].



Change Proposal Circular

CPC00694: Impact Assessment of CP1345

Responses for CP1345 'Migration of interface between National Grid and BMRA/SAA/ECVAA from CSV to XML file format'



Any Questions

If you have any queries, please contact:
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Or contact:
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Summary of Responses				
Organisation	Capacity in which Organisation operates in	Agree?	Impacted?	Days needed to implement
TMA Data Management Ltd	HHDC, HHDA, NHHDC and NHHDA	Yes	No	-
London Power Networks plc, Eastern Power Networks plc, Eastern Power Networks plc, UK Power Networks (Operations) Ltd, UK Power Networks (Operations) Ltd	Distributor	Neutral	No	-
Accenture Services Limited (for and on behalf of Scottish Power)	ScottishPower Energy Management Ltd. ScottishPower Generation Ltd. ScottishPower Energy Retail Ltd. ScottishPower Manweb plc. ScottishPower Distribution Ltd	Yes	No	-
Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy	Supplier/Generator/ Trader / Party Agent / Distributor	Neutral	No	-

Summary of Responses

Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd; SSE Metering Ltd				
National Grid	Transmission Company (Network Owner and System Operator)	Yes	Yes	-
npower	Supplier & Supplier Agents	Neutral	No	-

Detailed Impact Assessment Responses

Organisation	Agree?	Impacted?	Comments
TMA Data Management Ltd	Yes	No	-
London Power Networks plc, Eastern Power Networks plc, Eastern Power Networks plc, UK Power Networks (Operations) Ltd, UK Power Networks (Operations) Ltd	Neutral	No	-
Accenture Services Limited (for and on behalf of Scottish Power)	Yes	No	-
Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd; SSE Metering Ltd	Neutral	No	-
National Grid	Yes	Yes	<p>Agree change comment – for those reasons cited in the Change Proposal</p> <p>For which role is your organisation impacted? System Operator</p> <p>Please state what the impact is? A XML interface between National Grid IT systems and BMRA/ SAA/ECVAA systems will need to be developed in parallel to the CSV interface, as part of the longer term BM system replacement work discussed in this Change Proposal.</p> <p>Implementation notice – As the change, if approved, will not take effect until</p>

CPC00694

31 March 2011

Version 1.0

Page 2 of 3

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Detailed Impact Assessment Responses

			<p>post Q3, we don't anticipate needing any additional days of notice ahead of any implementation.</p> <p>Would implementation in the proposed Release have an adverse impact on your organisation? No</p> <p>Associated costs – No additional costs directly associated with this Change Proposal are foreseen.</p>
npower	Neutral	No	<p>Implementation notice - As this change does not impact npower, we didn't deem it necessary to provide a timescale here. However, we would always push for a six-month minimum lead time on all changes where possible.</p>



About Severity Codes

H (High):
Prejudices document's conclusions, recommendations or fitness for purpose.

M (Medium):
Matter of substance, but not high.

L (Low):
Minor error but document's intention is clear.

CPC00694

31 March 2011

Version 1.0

Page 3 of 3

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