Paper number xx/xxx

Draft MODIFICATION REPORT for Modification Proposal P220 'Provision of new data items for improving market information'

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

Proposed Modification P220 seeks to publish the following new data items on the Balancing Mechanism Reporting Service (BMRS):

a) Out-turn and reference temperatures;

b) Wind generation forecast;

c) Instantaneous and half-hourly generation by fuel type (plus 'real-time' total demand out-turn and half-hourly Interconnector flows);

d) Daily energy volumes transported across the Transmission System (based on Transmission System Demand); and

e) Non-Balancing Mechanism (BM) Short Term Operating Reserve (STOR) Instructed Volumes.

Alternative Modification P220 seeks to publish the same data items, except that the daily energy volumes would be based on Initial National Demand Out-Turn and would include additional trend data. It also includes a further data item of 'real-time' Transmission System Frequency.

BSC PANEL'S RECOMMENDATIONS

Having considered and taken into due account the contents of the P220 draft Modification Report, the BSC Panel recommends:

- **that Proposed Modification P220 should not be made;**
- **that Alternative Modification P220 should be made;**
- **an Implementation Date for Proposed Modification P220 of 6 November 2008 if an Authority decision is received on or before 3 April 2008, or 25 June 2009 if the Authority decision is received after 3 April 2008 but on or before 23 October 2008;**
- **an Implementation Date for Alternative Modification P220 of 6 November 2008 if an Authority decision is received on or before 3 April 2008, or 25 June 2009 if the Authority decision is received after 3 April 2008 but on or before 23 October 2008; and**
- **the proposed text for modifying the Code, as set out in the Modification Report.**

[1] ELEXON Ltd fulfils the role of the Balancing and Settlement Code Company ('BSCCo').

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SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as the Modification Group has been able to assess, the following parties/documents would be impacted by P220.

Please note that this table represents a summary of the full impact assessment results in Appendix 4 of the P220 Assessment Report. A copy of the Assessment Report is provided in Appendix 3 of this Modification Report.

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

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

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

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1 DESCRIPTION OF MODIFICATION

P220 was raised by National Grid ('the Proposer') following discussions with the Demand Side Working Group (DSWG) and other industry forums regarding potential improvements to existing electricity market information. A key area discussed by the DSWG was the current lack of an electricity daily 'summary page' to provide key market information in a single place. It was noted that such a summary page has been available for the gas market from the National Grid website since 2005.[2] DSWG members suggested that it would be beneficial to introduce a similar 'user-friendly' page for electricity market information on the Balancing Mechanism Reporting Service (BMRS), for use by demand-side participants and other infrequent BMRS users or small participants who might not have the resources to regularly search a variety of existing sources for key data.

BSCCo, the Balancing Mechanism Reporting Agent (BMRA) and the Transmission Company are already undertaking work to deliver a summary page of existing data on the BMRS. This work is scheduled for completion in the first quarter of 2008. P220 was raised to give consideration to adding additional data to this summary page which is not currently published on the BMRS, and which (under the current governance arrangements) would therefore need to be referenced within the Balancing and Settlement Code ('the Code') before it could be made available.

An initial proposal (including a 'straw man' of the proposed summary page displays) was developed by National Grid and issued for industry consultation in August 2007 (References 1 and 2). Following consideration of the responses received to this consultation (Reference 3), National Grid raised P220 on 26 October 2007.

The remainder of this section of the Modification Report summarises the solution for the Proposed Modification and Alternative Modification, as developed by the P220 Modification Group ('the Group') during the Assessment Procedure. For a full description of the Modification Proposal as submitted by the Proposer, please refer to the P220 Initial Written Assessment (IWA, Reference 4).

1.1 Proposed Modification

Proposed Modification P220 would publish the following new data items on the BMRS:

a) Out-turn and reference temperatures;

b) Wind generation forecast;

c) Instantaneous and half-hourly generation by fuel type (plus 'real-time' total demand out-turn data and half-hourly flows across the French and Moyle Interconnectors);

d) Daily energy volumes transported across the Transmission System (based on Transmission System Demand); and

e) Non-Balancing Mechanism (BM) Short Term Operating Reserve (STOR) Instructed Volumes.

These new data items would be provided to the BMRA by the Transmission Company for publication on the BMRS. With the exception of the Non-BM STOR data, the new data items would be displayed as graphs and/or tables on a single Electricity Data Summary Page located on the public BMRS Low Grade Service website.[3] Additional BMRS web pages would be created to contain the underlying data values. For High Grade Service users, the data would also be published via TIBCO messaging.[4]

Table 1 shows the high-level BMRS publication requirements for the Proposed Modification.

[2] The gas Daily Summary Report can be found at: http://www.nationalgrid.com/uk/Gas/Data/dsr/.
[3] www.bmreports.com.
[4] An overview of the differences between the Low Grade and High Grade BMRS services can be found in Section 2 of the P220 Assessment Report in Appendix 3.

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Table 1 – BMRS publication requirements for Proposed Modification

Data item	New Summary Page graph	New Summary Page table	New 'current data' page	New 'historic data' page
Out-turn and reference temperatures	Yes (rolling 3 months)	No	No	Yes (rolling 6 months)
Wind generation forecast	Yes (D-1, D and D+1)	Yes (D and D+1)	Yes (D-1, D and D+1)	No[5]
Instantaneous generation by fuel type	No	Yes (current snapshot)	No	Yes (rolling 24 hours)
Half hourly generation by fuel type	Yes (rolling 24 hours)	Yes (rolling half hour and 24 hours)	No	Yes (rolling 3 months)
Real-time total demand out-turn	Yes (rolling 60 minutes)	No	No	Yes (rolling 48 hours)
Half-hourly Interconnector flows	Yes x 2 (Yesterday/Today)	No	No	Yes (rolling 30 days)
Daily energy volumes	Yes (rolling 3 months)	No	No	Yes (rolling 6 months)
Non BM-STOR Instructed Volumes	No	No	Yes (Yesterday/Today)	No

Copies of the Group's 'straw man' Summary Page graphs and tables for each Proposed Modification data item can be found in Appendix 5 of this report. For a more detailed explanation of the proposed BMRS displays, please refer to Section 4 of the P220 Assessment Report in Appendix 3.

1.2 Alternative Modification

Alternative Modification P220 would publish all of the data items included in the Proposed Modification, except that the daily energy volumes would be based on Initial National Demand Out-Turn (INDO) as opposed to Transmission System Demand, and would include some additional trend data.

The Alternative Modification would also publish one further additional data item of 'real-time' Transmission System Frequency.

The additional data required by the Alternative Modification would be provided to the BMRA by the Transmission Company. This additional data would be displayed on the BMRS Summary Page and new web pages on the Low Grade Service website, and would be provided to High Grade Service Users through TIBCO messaging. Table 2 shows the high-level BMRS publication requirements for the Alternative Modification.

[5] Available separately as part of the half-hourly generation by fuel type data.

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Table 2 – BMRS publication requirements for Alternative Modification

Data item	New Summary Page graph	New Summary Page table	New 'current data' page	New 'historic data' page
Real-time System Frequency	Yes (rolling 60 minutes)	No	No	Yes (rolling 48 hours)
Out-turn and reference temperatures	As per Proposed Modification.			
Wind generation forecast	As per Proposed Modification.			
Instantaneous generation by fuel type	As per Proposed Modification.			
Half hourly generation by fuel type	As per Proposed Modification.			
Real-time total demand out-turn	As per Proposed Modification.			
Half-hourly Interconnector flows	As per Proposed Modification.			
Daily energy volumes	As per Proposed Modification, but based on INDO and with additional trend data.			
Non BM-STOR Instructed Volumes	As per Proposed Modification.			

Copies of the Group's 'straw man' Summary Page graphs and tables for the amended/additional Alternative Modification data can be found in Appendix 5 of this report. For a more detailed explanation of the proposed BMRS displays, please refer to Section 5 of the P220 Assessment Report in Appendix 3.

2 AREAS RAISED BY THE TERMS OF REFERENCE

The following areas were considered by the Modification Group during the Assessment Procedure for P220:

- The background work undertaken by National Grid via the DSWG and an industry consultation prior to raising P220;
- The appropriate composition and submission times for each proposed P220 data item;
- The appropriate format in which each new data item would be published on the BMRS (including refinements to National Grid's original 'straw man' displays);
- A potential option for an Alternative Modification which would allow the BSC Panel ('the Panel') to agree future BMRS data items without requiring a Modification Proposal (this option was not subsequently progressed by the Group);
- Any potential confidentiality issues arising from the publication of the proposed P220 data; and
- The merits of including a solution requirement for a real-time 'data incomplete' flag which would highlight if any of the generation by fuel type data had been incomplete and had been overridden by the Transmission Company's Control Room (this option was not subsequently progressed by the Group).

These issues are discussed in Section 6 of the P220 Assessment Report in Appendix 3, and are not covered further here.

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3 IMPLEMENTATION APPROACH AND COSTS

3.1 Central implementation costs

The following tables show the central costs to the BMRA and BSCCo of implementing P220 in the November 2008 Release or the June 2009 Release. Separate tables are provided for the Proposed Modification and the Alternative Modification. An explanation of the cost terms used in these tables can be found on the BSC Website.[6] The costs shown are unchanged from those provided in the P220 Assessment Report.

Modification Proposal P219 'Consistency between forecast and out-turn demand' (P219, Reference 5) has also been raised by National Grid in the area of BMRS reporting. Note that the costs shown in the tables on the following page exclude any cost savings which would be achieved by implementing P220 in parallel with P219. If P219 and P220 were implemented in the same release, it is estimated that this would deliver a 20% reduction in the combined central costs of the two modifications. Further information on these cost savings can be found in Sections 3.2 and 3.3. There would be no difference in the required P220 implementation lead time were it to be delivered in the same release as P219.

There would be no ongoing operational costs for either the BMRA or BSCCo as a result of P220.

Due to the implementation lead times required by both the BMRA and the Transmission Company, the Group agreed that it would not be feasible to implement P220 prior to November 2008. Further details of the required lead times can be found in Section 3.7.

PROPOSED MODIFICATION CENTRAL IMPLEMENTATION COSTS

		November 2008 Release	June 2009 Release	Tolerance
Service provider cost				
	Development, testing & deployment	£107,600	£121,700	+/- 30%
	Porting	£19,400	N/A	+/- 30%
	Total service provider cost	£127,000	£121,700	+/- 30%
Implementation cost				
	External audit	Nil	Nil	N/A
	Design clarifications	Nil	Nil	N/A
	Additional resource costs	Nil	Nil	N/A
	Additional testing & audit support costs	Nil	Nil	N/A
Total demand-led implementation cost		£127,000	£121,700	+/- 30%

ELEXON implementation resource cost		57 man days £12,540	57 man days £12,540	+/- 10%
Total implementation cost		**£139,540**	**£134,240**	**+/- 30%**

[6] http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf. The term 'service provider' relates to both BSC Agent and non-BSC Agent service provider and software costs.

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ALTERNATIVE MODIFICATION CENTRAL IMPLEMENTATION COSTS				
		November 2008 Release	June 2009 Release	Tolerance
Service provider cost				
	Development, testing & deployment	£129,250	£144,800	+/- 30%
	Porting	£20,150	N/A	+/- 30%
	Total service provider cost	£149,400	£144,800	+/- 30%
Implementation cost				
	External audit	Nil	Nil	N/A
	Design clarifications	Nil	Nil	N/A
	Additional resource costs	Nil	Nil	N/A
	Additional testing & audit support costs	Nil	Nil	N/A
Total demand-led implementation cost		£149,400	£144,800	+/- 30%
ELEXON implementation resource cost		57 man days £12,540	57 man days £12,540	+/- 10%
Total implementation cost		**£161,940**	**£157,340**	**+/- 30%**

3.2 Explanation of BSCCo impacts, costs and lead time

The impact on BSCCo would be limited to project-managing the required BSC System and documentation changes for P220. In addition to general project administration, this would include certain testing activities as outlined in Section 3.7 below.

The BSCCo costs would be identical regardless of whether the Proposed Modification or Alternative Modification was approved, or whether P220 was implemented in the November 2008 or June 2009 Release.

Details of BSCCo's required lead time can be found in Section 3.7. This lead time would be identical for both the Proposed and Alternative Modifications, and would also be the same regardless of whether the P220 was implemented in parallel with P219.

Further details of the documentation changes which would be required to support P220 can be found in Appendix 4 of the P220 Assessment Report.

3.3 Explanation of BMRA impacts, costs and lead times

3.3.1 Impact

The BMRA would be required to amend and test its systems in order to publish the new P220 data. This would include amendments to the BMRS Summary Page display, the creation of supporting new BMRS pages, amendments to the underlying BMRA system functionality, and the creation of new TIBCO messages.

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3.3.2 Costs

Ongoing BSC Agent services are currently the subject of a procurement exercise through BSCCo's Project Isis. It should be noted that the targeted release dates for P220 interact with the potential cutover to both new BMRA systems and the service provider chosen through the procurement.

Of the BMRA testing, deployment and development costs shown in the 'central costs' tables above, £25,000 of the November 2008 figure and £50,000 of the June 2009 figure therefore represent BSCCo's estimates of the chosen service provider costs. The tolerance given in the tables reflects the degree of uncertainty associated with these costs.

The difference between the costs for November 2008 compared with June 2009 is due to the different interaction of these releases with the Isis project timescales. A November 2008 implementation would require the P220 changes to be implemented in existing BMRA systems and then ported to the new system. For June 2009, the changes would be implemented directly into the new system and thus no porting costs would be incurred. However, as a result there is greater uncertainty regarding the June testing, deployment and development costs, since more of these activities would be undertaken by the chosen service provider (for which detailed costs are yet to be determined). This is reflected in the higher estimate for these costs in June.

The existing service provider implementation costs for the Alternative Modification would be approximately 15% higher than those of the Proposed Modification, due to the inclusion of the additional Transmission System Frequency data item and the requirement to display additional daily energy volume trend data under the Alternative.

A further breakdown of the P220 BMRA costs (showing the proportion of these costs which would be attributable to each group of data items under the Proposed and Alternative Modifications) can be found in Section 6.9.2.3 of the P220 Assessment Report in Appendix 3.

3.3.2 Lead time

The BMRA would require a maximum of 5.5 months' implementation lead time from the point of Authority decision to the beginning of integration testing with the Transmission Company and BSCCo, in order to develop the required BMRA system changes and carry out its own testing. This BMRA development and isolated testing would be conducted in parallel with the Transmission Company's own system development and testing.

The lead times provided by the existing service provider varied slightly according to the choice of release or whether the Proposed or Alternative Modification was chosen, and are shown in Table 3. The required BMRA lead time would be identical regardless of whether P220 was implemented in parallel with P219.

Table 3 – BMRA lead time (from Authority decision to start of integration testing)

Required BMRA lead time for:	November 2008 Release	June 2009 Release
Proposed Modification:	20 weeks	13 weeks
Alternative Modification:	24 weeks	18 weeks

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3.4 Explanation of Transmission Company impacts, costs and lead time

The P220 implementation costs and lead time which would be incurred by the Transmission Company are shown in Table 4.

Table 4 – Transmission Company costs and lead time

Transmission Company:	Proposed Modification	Alternative Modification
Costs:	£600,000*	Any difference in cost is likely to be in the order of under £20,000
Lead time (from point of Authority decision to start of integration testing):	5.5 months	5.5 months

** £100,000 of this cost is already being incurred by the Transmission Company in initiating feasibility assessment work for P220 and P219, and the Transmission Company continues to be incurring initiation costs at this time.*

The Transmission Company's costs and lead times would include the development and testing of amendments to several of the Transmission Company's operational systems, as well as required documentation changes. These Transmission Company changes would be conducted in parallel with the BMRA's own system development and testing. Note that the lead time shown in Table 4 was clarified from that provided in the Transmission Company's original impact assessment response, following further discussion with BSCCo regarding the required testing activities for P220.

The required Transmission Company lead time would be identical regardless of whether the Proposed Modification or Alternative Modification was approved, or whether P220 was implemented at the same time as P219. However, were P220 to be implemented in parallel with P219, this would deliver a saving of £200,000 off the combined costs to the Transmission Company of the two modifications. Further detail regarding these cost savings can be found in Sections 3.6 and 3.7.

For a copy of the full Transmission Company impact assessment, please refer to Attachment 4 to the P220 Assessment Report.

3.5 Explanation of participant impacts, costs and lead time

Six responses were received to the Party and Party Agent impact assessment of P220. Of these, three respondents indicated that the introduction of the new BMRS data items would have an impact on their systems.

Two of these three respondents stated that the impact and any resulting cost would be minor. The other respondent advised that its costs would be in the region of £30,000. This respondent subsequently clarified to BSCCo that they would need to 'warehouse' the new P220 data as it was received through TIBCO feeds, and then adapt it into a format in which it could be used within their own systems. This respondent noted that, whilst they would not be required to do this by the Code, they would be unable to use the new P220 data unless these activities were undertaken. The respondent therefore believed that it was appropriate to record the costs of their system changes as part of the P220 implementation costs.

The implementation lead times requested by impacted respondents ranged from one to three months from the point of Authority decision, and were therefore well below the lead times required by the BMRA and the Transmission Company.

Copies of the full participant impact assessment responses can be found in Attachment 5 to the P220 Assessment Report.

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3.6 Modification Group's discussion of implementation costs

It was queried whether the Transmission Company's implementation costs were a relevant consideration for the Group, since these costs would not be recovered under the BSC. BSCCo noted that Section F2.8 and Annex F-1 of the Code require Modification Groups to establish any implementation costs to the Transmission Company, and to report these to the Panel and the Authority.[7] The Proposer advised that Ofgem would ultimately decide whether the Transmission Company's P220 implementation costs could be recovered from the industry as part of its Price Control, but that it was likely that the money would be recouped through Balancing Services Use of System (BSUoS) charges. Members of the Group therefore believed that it was appropriate to consider the Transmission Company's P220 implementation costs under Applicable BSC Objective (d), since they believed that these costs were relevant to the efficient implementation and administration of the balancing arrangements.

The Group noted that the Transmission Company's impact assessment indicated that it would have already incurred £100,000 in feasibility assessment work for P219 and P220 by the time that Authority decisions were received for these modifications. The Proposer clarified that it was necessary to undertake this work now if it was to achieve a November 2008 implementation. The Group noted that a similar £100,000 cost had been shown against P219, and queried whether this gave a total of £200,000 already spent. The Proposer clarified that the £100,000 which would be incurred prior to an Authority decision would be shared across both Modification Proposals. However, this £100,000 had been shown separately against each proposal's 'stand-alone' costs – since, if only one of the two modification was approved, the full £100,000 would still have been incurred.

BSCCo noted that this £100,000 would have been incurred by the Transmission Company even if neither of the proposals was approved, and suggested that this could be considered to represent a 'sunk' cost. However, a member stated that whilst this £100,000 was likely to be recovered from the industry were both P219 and P220 to be approved, it was not certain that Ofgem would agree to allow these costs through the Price Control if one or more of the modifications were rejected. The member therefore did not believe that it was appropriate to show this as a 'sunk' cost to the industry. The Group agreed that the £100,000 'feasibility and assessment' costs should continue to be separately shown as part of both the P219 and P220 implementation costs. Table 5 shows the differences in Transmission Company costs with and without the inclusion of this element.

Table 5 – Further explanation of Transmission Company costs

	Delivery approaches			
National Grid delivery costs[8]	**Stand-alone costs including 'F&A' element**	**Stand-alone costs excluding 'F&A' element**	**Combined P219/P220 costs including 'F&A' element**	**Combined P219/P220 costs excluding 'F&A' element**
P219	£300,000	£200,000	£600,000	£500,000
P220	£600,000	£500,000		

The Group noted that the savings of implementing P219 and P220 in parallel were equivalent to the total implementation cost of P219. However, it noted that these represented savings in project overheads due to similarities between aspects of the development work for P219 and P220, which would be spread across the costs of both modifications. The Group noted that it would therefore not be accurate to describe the savings as effectively delivering P219 at zero cost.

[7] Section F2.8.4 also requires a Modification Group to have regard to these costs when formulating its views as to whether a Modification Proposal would better facilitate the achievement of the Applicable BSC Objectives.
[8] For an explanation of the P219 costs, please refer to the P219 Modification Report (Reference 2).

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Several respondents to the P220 Assessment Procedure consultation commented on the desirability of implementing P219 and P220 in parallel in order to achieve these cost savings. The Group agreed with this view. However it noted that, whilst the potential cost-savings were relevant information to be noted in the Modification Report (in order to bring them to the attention of the Authority when making its decision), the Group and the Panel were required by the Code to make their recommendations on P220 based on its costs and benefits in isolation of P219 and in comparison with the existing arrangements.

3.7 Modification Group's recommended Implementation Date

3.7.1 P220 Implementation Date

The Group noted that the lead time required by the Transmission Company to develop its system changes from the point of an Authority decision to the start of integration testing was 5.5 months. The Group noted that the lead time required by the BMRA for the same activities varied according to the solution and release, but agreed to use the maximum BMRA lead time of 5.5 months for simplicity in its consideration of Implementation Dates (given that this was no longer than the Transmission Company lead time, and since the BMRA's and Transmission Company's system development would be undertaken in parallel).

BSCCo clarified that these lead times would include 'isolated' testing by the BMRA and the Transmission Company of their own system changes. However, the Group noted that, once this isolated testing had been completed, further integration testing managed by BSCCo would be required in order to confirm whether the two sets of systems were able to communicate correctly with each other (i.e. whether the new P220 data items could be transmitted from the Transmission Company's systems, successfully received by the BMRA systems, and correctly displayed on the BMRS). Following this integration testing, BSCCo clarified that it would use a small sample of participants to test the new TIBCO functionality. The Group noted BSCCo's advice that the P220 implementation period needed to allow sufficient lead time to fix and retest any bugs which might be found during the integration and/or participant testing.

The gantt chart in Figure 1 on the following page shows the critical path for a November 2008 implementation. The Group noted BSCCo's advice that the crucial date in this plan was 16 September 2008, when BSCCo would need to begin integration testing. The Group noted that the proposed implementation period for a November 2008 deployment would allow only a short period of time (around 11-12 Working Days) for the Authority to make its decision on P220. However, the Group noted BSCCo's advice that it had compressed its integration/participant testing timescales into a shorter period than it would usually allow – and that it would not be possible to reduce these further, as doing so would not allow adequate time to address any bugs which might arise from the testing.

The Group noted that the required lead time would be identical regardless of whether the Proposed Modification or Alternative Modification was approved, or whether P220 was implemented in parallel with P219.

Taking into account the required lead times, the Group therefore recommended the following Implementation Dates for both the P220 Proposed Modification and Alternative Modification:

- 6 November 2008 if an Authority decision is received on or before 3 April 2008; or
- 25 June 2009 if an Authority decision is received after 3 April 2008 but on or before 23 October 2008.

The Group agreed that it was not necessary to compress the testing activities for a June 2009 implementation in the same way as for November 2008, since the Authority would have much longer to make a decision for implementation in the June 2009 Release. The Group noted that a slightly longer implementation lead time had therefore been allowed for June 2009.

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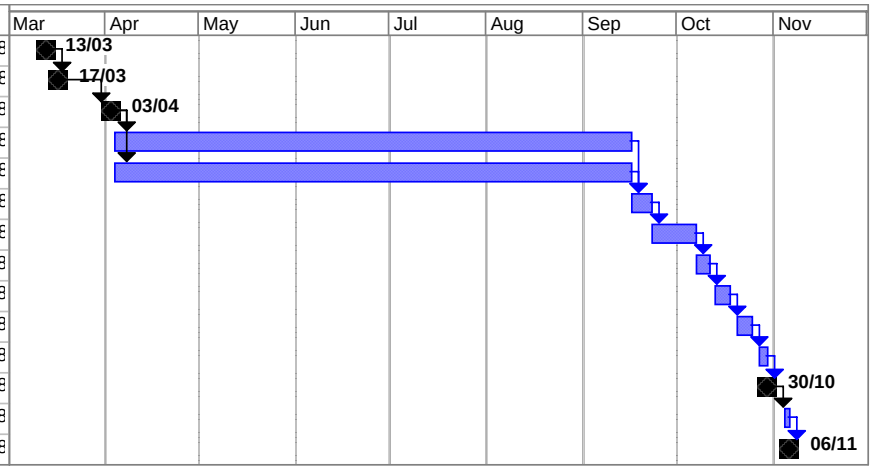
A specific question regarding the Group's recommended Implementation Date was included in the P220 Assessment Procedure consultation. All respondents to this consultation who expressed a view supported the dates recommended by the Group. Full copies of the responses received can be found in Attachment 3 to the P220 Assessment Report.

Figure 1 – Critical path for November 2008 implementation

ID	Task Name	Duration	Start	Finish
1	P220 draft Modification Report presented to Panel	0 days	Thu 13/03/08	Thu 13/03/08
2	P220 final Modification Report submitted to Authority	0 days	Mon 17/03/08	Mon 17/03/08
3	Cut-off date for Authority decision	0 days	Thu 03/04/08	Thu 03/04/08
4	Transmission Company system development and isolated testing	117 days	Fri 04/04/08	Mon 15/09/08
5	BMRA system development and isolated testing	117 days	Fri 04/04/08	Mon 15/09/08
6	Integration testing between Transmission Company and BMRA systems - managed by BSCCo	5 days	Tue 16/09/08	Mon 22/09/08
7	Contingency for developing fixes to any bugs identified during integration testing	10 days	Tue 23/09/08	Mon 06/10/08
8	Contingency for re-testing of bug fixes	4 days	Tue 07/10/08	Fri 10/10/08
9	Participant testing (e.g. of new BMRS display / TIBCO messages) - managed by BSCCo	5 days	Mon 13/10/08	Fri 17/10/08
10	Contingency for addressing any issues raised by participant testing	5 days	Mon 20/10/08	Fri 24/10/08
11	Contingency for re-testing by participants	3 days	Mon 27/10/08	Wed 29/10/08
12	Final date for go-live decision by Project Board	0 days	Thu 30/10/08	Thu 30/10/08
13	Deployment	2 days	Tue 04/11/08	Wed 05/11/08
14	Implementation Date	0 days	Thu 06/11/08	Thu 06/11/08



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3.7.2 Interaction with P219

The Group noted that the following Implementation Dates were being recommended separately for P219:

- 6 November 2008 if an Authority decision is received on or before 29 May 2008; or
- 25 June 2009 if an Authority decision is received after 29 May 2008 but on or before 15 January 2009.

The Group noted that the longer Authority decision-making timescales for P219 reflected its shorter implementation lead time, and gave the potential for the modifications to be implemented in different releases should the Authority consider this to be appropriate (or should the Authority be unable to make its P220 decision by 3 April 2008).

However, BSCCo advised that, if the Authority wished to achieve the cost savings of implementing P219 and P220 in parallel, it would need to make its decisions on both modifications by the P220 cut-off dates.

The Group noted that if either the P219 or P220 decisions were received after 3 April 2008 for the November 2008 Release, or after 23 October 2008 for the June 2009 Release, these cost savings would be lost. The Group agreed that, in practice, the Authority would therefore need to make simultaneous decisions on both modifications if it wished to achieve the savings. The interaction between the proposed P219 and P220 Implementation Dates is shown in more detail in Table 6 below.

Table 6 – Interaction between P219 and P220 Implementation Dates

Authority decision cut-off date for:	P220 in isolation	P219 in isolation	P220 and P219 in parallel (to achieve cost savings)
November 2008 implementation:	3 April 2008	29 May 2008	3 April 2008
June 2009 implementation:	23 October 2008	15 January 2009	23 October 2008

The Group noted that, to achieve the cost savings, simultaneous decisions on both modifications should be issued either:

- By 3 April 2008; or
- After 29 May 2008 but before 23 October 2008,

in order to ensure that both P219 and P220 were implemented in parallel in the same release.

4 LEGAL TEXT

Indicative legal drafting for Section Q and Annex X-2 of the Code was provided by the Proposer within the Modification Proposal. This drafting covered respectively the submission of the new P220 data by the Transmission Company to the BMRA, and the definitions of each proposed new data item. The Proposer's original drafting was subsequently amended by BSCCo to reflect the Group's refined solution for the Proposed Modification, and to include additional drafting for Annex V-1 (to codify the BMRA's publication requirements) and Annex X-1 (to include additional new defined terms). Legal drafting was also produced for the Alternative Modification developed by the Group. For an explanation of the changes made to the Proposer's original indicative text, please refer to Section 6 of the P220 Assessment Report in Appendix 3.

The Group reviewed the draft legal text by correspondence. Responses were received from all but one member. These members (which included the Proposer) confirmed that the draft text delivered the Group's intended solution.

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5 RATIONALE FOR MODIFICATION GROUP'S RECOMMENDATION TO THE PANEL

This section details the views expressed by Assessment Procedure consultation respondents and Modification Group members regarding the potential benefits of P220, and identifies the Applicable BSC Objectives which respondents and the Group believed to be relevant to these potential benefits. In addition, it provides an explanation of the Group's rationale in arriving at its recommendation to the Panel.

5.1 Summary of overall views of Assessment Consultation respondents

Table 7 below shows the number of Assessment Procedure consultation respondents who supported P220.

Table 7 – Number of Assessment Procedure consultation respondents in support of P220

Consultation question	Yes	No	Other
Do you believe that Proposed Modification P220 would better facilitate the achievement of the Applicable BSC Objectives when compared with the current Code baseline?	8	2	1
Do you believe that Alternative Modification P220 would better facilitate the achievement of the Applicable BSC Objectives when compared with the Proposed Modification?	10	0	1
Do you believe that Alternative Modification P220 would better facilitate the achievement of the Applicable BSC Objectives when compared with the current Code baseline?	8	2	1

Table 8 provides a high-level summary of the overall potential benefits and disadvantages of P220 as cited by respondents to the P220 Assessment Procedure consultation. These have been summarised thematically in order to avoid duplication, and have been grouped in relation to the Applicable BSC Objective(s) most frequently referenced by respondents in these areas (not all consultation respondents referred to specific Applicable BSC Objectives).

Note that not all of the views shown were necessarily shared by all respondents.

Table 8 – Summary of Assessment Consultation respondents' overall views on merits of P220

Area of discussion as raised in consultation responses	Benefits identified by respondents	Disadvantages identified by respondents
Information transparency and accessibility of data *Applicable BSC Objective (c)*	P220 would improve the transparency and accessibility of data by publishing it in a single Summary Page location – promoting competition. This would have particular benefit to small participants, customers and other occasional BMRS users who do not have the resource to derive this data through other existing sources.	The proposed P220 data can already be obtained or derived from other existing sources – and P220 would have no benefit for those participants who have already invested the resources to do so. The provision of the proposed data could potentially undermine other commercial providers of such data.

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Area of discussion as raised in consultation responses	Benefits identified by respondents	Disadvantages identified by respondents
Barriers to entry *Applicable BSC Objective (c)*	By improving accessibility of key data, P220 would reduce the information asymmetry whereby only larger participants have the resources to access the data through existing sources – helping to create a 'level playing field' and promoting competition.	It has not been sufficiently demonstrated that the benefits in this area outweigh the costs. The benefits are likely to be realised by only a very limited number of participants, and therefore would be very small.
Market signals and understanding *Applicable BSC Objective (c)*	P220 would improve participants' understanding of market trends and signals by drawing these out in the Summary Page data – promoting competition.	The proposed P220 data is a 'nice to have' but not imperative – it has not been sufficiently demonstrated that the benefits in this area outweigh the costs.
Market behaviour *Applicable BSC Objective (b)*	Through improved understanding of market fundamentals, P220 would lead participants to make more informed commercial decisions – potentially improving their self-balancing and thereby the efficient operation of the Transmission System. P220 would allow participants to more effectively manage electricity market costs, risks and opportunities.	The benefits of improved market behaviour have not been quantified, but are unlikely to outweigh the costs. It is unlikely that P220 would deliver material financial benefits to the Transmission Company.
Cost-benefit *Applicable BSC Objective (d)*	Although it is difficult to quantify the benefits of the above, they are likely to outweigh the one-off cost of implementation in the longer term. The Transmission Company implementation costs would be covered by its Price Control – therefore question whether these should be considered as an additional cost.	In the absence of detailed and/or quantified benefits, it cannot be demonstrated that these outweigh the high implementation costs.

The above summary table does not distinguish between the Proposed Modification and Alternative Modification, but represents an overall summary of respondents' views regarding P220 as a whole. All respondents who expressed a view believed that the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives when compared with the Proposed Modification. However, those respondents who did not believe that P220 would better facilitate the achievement of the Applicable BSC Objectives when compared with the existing baseline gave consistent arguments against both the Proposed Modification and Alternative Modification.

For further details regarding the views of respondents, and the Group's discussion of these views, please refer to Sections 5.3 - 5.4 below. Copies of the full responses received to the P220 Assessment Procedure consultation can be found in Attachment 3 to the P220 Assessment Report.

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5.2 Detailed views of Assessment Consultation respondents regarding potential benefits

Table 9 below summarises the views of respondents to the P220 Assessment Procedure consultation regarding the specific potential benefits of each of the proposed P220 data items. No respondents referred to any of the Applicable BSC Objectives in support of these views. Note that not all respondents provided views in this area.

Table 9 – Summary of Assessment Consultation respondents' views regarding specific benefits of P220 data

P220 data item(s)	Benefit?	
	Yes	No
Outturn and reference temperatures *(Proposed and Alternative Modification)*	• Could be useful for participants who do not have the resources to gather this data from other existing sources; • Will benefit consumers as information to input into their assessment of likely peak electricity demand levels; • Publishing recent temperature trends may assist in any demand-management decisions for costs such as Triads; • Over time, would be able to build picture of how temperature affects generation and demand; • This information is already frequently used in the gas market.	• Already have access to ample meteorological information (e.g. through www.metcheck.com); • Existing public availability of data makes it difficult to justify the cost.
Wind generation forecast *(Proposed and Alternative Modification)*	• Would be used in forecasting demand and generation; • Would be used in day-ahead trading to help form expectations of market length and other participants' positions; • Will become increasingly important to the industry as wind capacity increases and becomes a larger part of generation mix; • Allows participants to see risk of wind generation not occurring as forecasted; • Would provide signals for reserve / helps market know when reserve likely to be needed; • Wind generation may in future affect prices – making data valuable; • Gives view of accuracy of Transmission Company's wind forecasting (and whether unpredictability of wind leads to inefficient balancing actions) – knowing peak less useful than knowing profile; • Would promote understanding of likely System Operator balancing actions due to relationship between temperature and demand.	• Already have access to ample meteorological information (e.g. through www.metcheck.com); • Existing public availability of data makes it difficult to justify the cost.

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P220 data item(s)	Benefit?	
	Yes	No
Instantaneous and half-hourly generation by fuel type, including 'real-time' total demand out-turn and half-hourly Interconnector flows *(Proposed and Alternative Modifications)*	• Instantaneous data would further analysis of within-day market – enabling better understanding of market fundamentals/dynamics; • In longer term, may help market to understand trends and signals; • Would allow participants to carry out more accurate and close-to-real-time analysis (e.g. of plant availability); • Would aid understanding of impact of fuel utilisation on market prices; • Would assist environmental impact analysis; • Would highlight relative prices of input fuels and performance of generation types (more interesting than of specific business use); • Would allow participants to make judgements about own commercial positions and make more informed commercial decisions; • Only large parties currently have resources to derive this data from other existing sources.	• Half-hourly generation data is already on BMRS, and can be aggregated by fuel-type post-event; • Instantaneous data is a 'nice to have' but not imperative.
Daily energy volumes based on Transmission System Demand *(Proposed Modification only)*	• Taken with other data, will be helpful in forecasting required generation; • Forecast data is key to making an assessment of how supply may be achieved in the market.	• Of limited usefulness, since operationally-metered data would not match actual Settlement volumes.
Daily energy volumes based on INDO *(Alternative Modification only)*	• Could help understand market conditions – e.g. a small niche Supplier with a view of their market share could perform a cross-check of their contracted energy against their fraction of the contracted energy transported; • Knowing the trends increases the value of the data as will help market prepare for changes in demand.	• Of limited usefulness, since operationally-metered data would not match actual Settlement volumes.
Non-BM STOR Instructed Volumes *(Proposed and Alternative Modifications)*	• May be used in demand forecasting; • Promotes understanding and transparency of demand-side actions.	• Would only use if feed into BMRS and Balancing Services Adjustment Data was instantaneous.
'Real-time' Transmission System Frequency *(Alternative Modification only)*	• May allow participants in short-term market to act on trips before the redeclaration of Maximum Export Limit values; • Helps to tell participants about state of Transmission System; • Placing Frequency data fully on the BMRS is more robust than the existing 'framed link', and will ensure its high availability.	• Already available on National Grid's website – inclusion on BMRS provides little advantage.

For details of the Group's discussion of these views, please refer to Sections 5.3 - 5.4 below. Copies of the full responses received to the P220 Assessment Procedure consultation can be found in Attachment 3 to the P220 Assessment Report.

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5.3 Group's discussion of potential benefits (qualitative and quantitative)

5.3.1 Information transparency and accessibility of data

The Group noted the view of a large majority of Assessment Procedure consultation respondents that P220 would improve the transparency and accessibility of electricity market data, and that this would promote competition. The Group noted the view of some respondents that information transparency represented a fundamental requirement of an open and effective competitive market. The Group noted that these respondents included representative organisations of large users and customers, whom the Proposer identified as the main potential beneficiaries of P220.

All members of the Group supported the general principle of data transparency in furtherance of competition. However, the Group agreed that enhanced transparency and/or accessibility in itself was not a sufficient case for change, since it needed to be demonstrated that the benefit of the new P220 data to the industry outweighed the costs of its provision. For further details regarding the Group's consideration of the cost-benefit of P220, please refer to Section 5.3.4 below.

The Group agreed with the view of consultation respondents that, by providing key operational data in a single location (the BMRS Summary Page), P220 would provide an accessibility benefit to those participants who did not currently derive the data from other sources. The Group agreed that the primary beneficiaries of P220 were likely to include:

- Smaller Parties;
- New entrants;
- Demand-side participants;
- Customers; and
- Other occasional BMRS users (e.g. energy consultancies or areas of the industry such as those operating in management, finance or risk) who might use the BMRS as a general information tool.

The Group noted the view of one consultation respondent that P220 would provide a small positive benefit to Parties (mainly small Parties), in allowing them to simplify their data-gathering processes and thereby to operate more efficiently. Another respondent considered that new entrants to the electricity market would benefit greatly from the increased availability of data on an accessible public platform under P220. Both respondents cited improvements to competition in support of these views.

BSCCo noted that some consultation respondents (generally representing larger Parties) had indicated that there would be little benefit for their organisations in the areas of transparency or accessibility, since they had already invested in obtaining this data from other existing sources. BSCCo therefore sought the views of the Group as to whether P220 would deliver benefits to larger participants. Members noted that the majority of the P220 data could already been derived elsewhere. For example:

- Temperature and wind forecast data can already be obtained from sources such as the Met Office;
- Half-hourly generation values are already published post-event on the BMRS, and participants can therefore choose to undertake their own aggregation of this data into different fuel-types (including wind) using BM Unit details;
- Although instantaneous generation by fuel-type data is not currently published, similar information can be derived from changes in Maximum Export Limit (MEL) or Final Physical Notification (FPN) values which are already published on the BMRS; and
- 'Real-time' demand and Transmission System Frequency are already published on the BMRS as 'framed' links to this data on National Grid's own website.

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A majority of members considered that the proposed P220 data would therefore be of limited usefulness to those participants who had already invested resources in obtaining similar information through other existing sources. BSCCo questioned whether this was the case, and suggested that publishing the P220 data could remove the need for these Parties to continue to expend such resource in the future. For example BSCCo queried whether, if participants currently entered into paid contractual arrangements with third parties for the provision of the existing data, P220 would deliver cost savings to these participants by providing them with this information at zero cost and removing the need for such contracts. However, a majority of members believed that P220 would not alter participants' existing data-pulling processes, but would simply provide additional data to compare with what they already had. These members believed that it would therefore not be accurate to describe P220 as delivering data-accessibility savings for these participants.

The Proposer suggested that if some participants already invested resource in obtaining similar data, this data must be of value to these organisations – and BSCCo queried whether it was possible to quantify this value. However, other members of the Group believed that such quantification was not possible, since the resource involved comprised part of these participants' day-to-day activities and/or part of wider contracts for data services which they held with third party providers. For the same reason, these members did not believe that it was possible to quantify the risk to these Parties of not having the P220 data – since, if P220 was rejected, such Parties would continue to rely on their existing information sources.

The Proposer noted that the existing data, whilst similar to that which would be published under P220, was not exactly comparable. In addition, the Proposer advised that Non-BM STOR Instructed Volumes are not currently published at a half-hourly level as would be delivered by P220. BSCCo noted that the Transmission Company, in its consultation response, had stated that replacing the existing 'framed' links to real-time demand and Transmission System Frequency on the BMRS with full copies of this data would improve the robustness of this data, thereby better facilitating its transparency and accessibility. BSCCo also noted that some consultation respondents representing larger Parties, who already derived similar data elsewhere, had identified benefits to their organisations which they believed would arise from certain P220 data items. The Group agreed that some of the P220 data items (in particular, the proposed wind generation forecast and instantaneous generation by fuel type data) could be of benefit to larger Parties. However, a majority of members believed that these benefits would be limited. Further detail regarding the Group's discussion of the perceived benefits of P220 can be found in Sections 5.3.3 and 5.3.4 below.

BSCCo noted the comment of one consultation respondent that the publication of the proposed P220 data could undermine other commercial providers of data. Some members were not convinced that this was the case, noting that only very aggregated GB data would be provided by P220. In addition, the Group considered that any impact on such third-party providers was not directly relevant to competition in the generation, supply, sale or purchase of electricity – and agreed that this was therefore not a relevant consideration in its assessment of P220 against the Applicable BSC Objectives.

Ultimately, the Group was divided regarding the likely extent of transparency and accessibility benefits under P220. In addition, there were mixed views within the Group as to whether P220 could be said to reduce barriers to entry for any participants (see Section 5.3.2 below).

5.3.2 Barriers to entry

The Group considered the view of several Assessment Procedure consultation respondents that P220 would reduce barriers to entry. It noted that one respondent believed there to be an existing 'information asymmetry' in the market, which discriminated against those participants who did not have the knowledge or resource to locate, derive and use the proposed P220 data through other existing sources. This respondent considered that this effectively allowed those participants with access to existing data to create an 'information barrier to entry' which hindered competition. Another respondent considered that providing the P220 data would promote a 'level playing field' within the market, and would therefore reduce existing barriers to entry.

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The Group discussed the views expressed by respondents in this area. Some members disagreed that P220 would reduce barriers to entry. These respondents noted that the existing data was publicly or commercially available to any participant who wished to invest the resource to obtain it, and disputed the implication of one respondent that some participants were being deliberately excluded from receiving this data. Similarly, these members noted that the proposed P220 data would be made available equally to all participants. The Proposer noted that it was typically the larger participants who had the knowledge and resources to obtain similar data from existing sources. However, other members noted that larger Parties paid the majority of the costs of funding the provision of this existing data in the market.

The Proposer queried whether there was a barrier to entry in the sense that the costs of obtaining data from existing sources would form part of a new entrant's start-up costs. An attendee noted that a credible investment case was necessary to participants wishing to enter the market, and suggested that provision of the P220 data would be a helpful tool in forming this case. The Proposer suggested that, if the P220 data was provided at zero cost at the point of entry, then start-up costs would be lowered. Other members disagreed and argued that the costs of obtaining market data were likely to be insignificant against other market-entry costs such as the requirements of the BSC's registration processes. These members also noted that all market participants would pay towards the cost of providing the P220 data as part of BSC or BSUoS charges. However, the Proposer commented that, for smaller participants, these 'smeared' costs were likely to be far smaller than those which such participants would incur in directly obtaining existing data from a variety of sources or through a third-party provider.

BSCCo queried whether the barriers to entry identified by consultation respondents were financial, and suggested that they appeared to relate more to market information, knowledge and understanding. An attendee agreed, and believed that respondents were alluding to the transparency and parity of information across the market. It was noted that, during the DSWG's meetings, some DSWG members had commented that they found opportunities for further involvement in the electricity market to be limited by its opaqueness. BSCCo noted that there were a variety of types of market within the electricity industry (for example, generation, supply and distribution), but that P220 had been informed in part by DSWG members' stated difficulties in locating data to help them participate in the demand-side market and be sufficiently empowered and informed customers.

The Proposer stated that they believed the consultation responses had highlighted a perception that there was a lack of transparency of data, with views expressed that it was beyond the resources of smaller participants to utilise existing data when this was spread across a variety of platforms. The Proposer believed that this could be considered to represent a barrier to full involvement in the market (and potentially a barrier to entry), and argued that any incremental improvement in this area could give a benefit. The Proposer advised that National Grid had made efforts to publicise existing sources of data through the DSWG meetings, its Operational Forums and web meetings – but that the view received from participants at these forums was that this data was too difficult to locate, was not user-friendly, or did not provide the precise information which they required. The Proposer reiterated that the P220 Summary Page data was aimed largely at marginal BMRS users.

The Group remained split as to whether P220 might lower barriers to entry. Those members who believed that there would be no effect in this area stated that they were not necessarily disputing the potential for P220 to give rise to benefits for participants, but that they did not believe that these would affect the ease of entry to the market.

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5.3.3 Market understanding and behaviour

The Group noted the view of a majority of consultation respondents that publication of the intended P220 data would deliver greater understanding of market fundamentals by participants, and that this would promote competition. Generally, the Group agreed that there would be a benefit in this area, but was divided as to whether the extent of this benefit would be sufficient to outweigh the P220 implementation costs.

The Group unanimously agreed that P220 would only deliver a net benefit if it altered participants' behaviour in ways which delivered efficiencies to the market, and if the resulting efficiencies (for example, improved self-balancing) were greater than the costs of providing the data. The Group therefore considered the specific benefits identified by consultation respondents in respect of the individual P220 data items, as summarised in Table 9 above. This section outlines the additional arguments made by the Group in relation to respondents' perceived benefits.

A majority of members considered that, whilst arguments had been put forward by respondents that the proposed data would be useful and a 'nice to have', it had not been sufficiently demonstrated that use of the data would alter participants' commercial decisions and market behaviour. These members considered that, whilst many respondents had argued that P220 would lead to improved self-balancing, their responses had not demonstrated how this would be achieved in practice through using the data – making it difficult to establish the extent of any potential improvement.

The Proposer argued that the proposed wind generation data would be useful in demand-forecasting, by highlighting the potential intermittency of wind generation as well as when reserve requirements would be high. The Proposer considered that this data would therefore allow participants to more efficiently plan (and price) opportunities for reserve participation, leading to a more efficient market outcome. Similarly, the Proposer considered that publication of Non-BM STOR Instructed Volumes could encourage greater demand-side participation, by delivering greater transparency regarding the Transmission Company's utilisation of reserve. The Proposer noted that the Transmission Company undertakes three reserve tenders a year, and suggested that the publication of the Non-BM STOR data would create greater opportunities for participants to bid for reserve provision and to submit more reflective prices – since the data would highlight when the reserve of other participants was being used. The Proposer believed that this could ultimately lead to increased participation in reserve services.

The Proposer also considered that the day-ahead wind generation forecast data could allow participants to take an improved view of cash-out risk, by helping them establish the likely market length and total imbalance position. The Proposer believed that this would enable participants to better manage the risk of imbalance. The Proposer also noted that the Non-BM STOR actions taken by the Transmission Company could reduce demand, and suggested that providing information regarding these actions would therefore be useful to participants in undertaking demand forecasting and understanding overall market length. It was suggested by the Proposer that the instantaneous generation by fuel-type data would allow participants to understand, identify and act upon Plant trips and other step-changes in generation (especially when used in conjunction with existing MEL and FPN data). For the other data items, such as the proposed temperature data or daily energy volumes, the Proposer considered that this would allow participants to undertake more accurate demand-forecasting by demonstrating the link between past and future events.

Taken together as a whole, the Proposer therefore believed that P220 would lead to practical opportunities for participants to act on the proposed data in ways which might lead to more efficient market operation. The Proposer considered that use of the data could enable improved commercial decisions and self-balancing by participants – potentially helping to reduce the overall level of imbalance in the market. The Proposer believed that the fact that some participants were already prepared to derive similar data from other existing sources demonstrated that these participants believed this type of data to be of practical use.

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Another member of the Group stated that they believed there would be no single P220 data item which would change market behaviour. This member believed that P220 would provide additional data which would form part of a portfolio of information used by participants when making commercial decisions. However, this respondent agreed with the view of the Proposer that P220 would deliver benefits in the areas outlined above. In addition to the above arguments (which primarily related to the efficient operation of the Transmission System), an attendee stated that they also believed that the new P220 data would allow consumers to take a more informed view of the market – and thereby of the potential for savings through changing Suppliers and tariffs. The attendee believed that this would promote competition in the sale and purchase of electricity. The attendee also advised that two large UK electricity customers had expressed an interest to them regarding use of the P220 data. Another attendee suggested that the P220 data could benefit Parties by enabling them to develop more innovative contracts, noting the view of one consultation respondent that this would be the case.

However, other members of the Group remained unconvinced that any of the proposed new P220 data items would lead to changes in market behaviour and/or improved self-balancing by participants. One of these members stated that they found it difficult to see how the data could lead to improved within-day trading. An attendee commented that the existing summary page in the gas market enabled participants to take a 5-minute view at the beginning of each day regarding the position of the market and prices, to inform their decisions for the day. The attendee clarified that, whilst they were aware of a variety of existing sources of electricity market data, they found such data difficult to locate and use. However, a member noted that gas represented a within-day market. This member considered that a single 'snapshot' of electricity market data at a given point in time would not be representative of the likely changes throughout the remainder of that day. Another member supported this view. The member also believed that most small Suppliers were unlikely to have the 24-hour resources required to trade close to real time, and that the P220 data would therefore be of limited usefulness to such Parties. This member argued that commercial decisions for the majority of electricity market participants related to their ability to forecast market imbalance and the likely resulting cash-out prices. Other members agreed, and believed that it had not been proven that P220 would improve Parties' trading strategies.

One member noted that, with the exception of the wind generation forecast, the majority of the P220 data would be post-event. This member stated that it was therefore difficult to see how this could affect decisions and help Parties to trade out imbalances in real time, and believed that ex-ante data would be required if this was to be achieved. This member also argued that the wind forecast data would be of very limited benefit, since aggregated GB figures were unlikely to be meaningful given the variability of wind. This member believed that local forecast data would be needed if such data was to form part of participants' trading strategies.

The Proposer advised that the Department for Environment, Food and Rural Affairs (DEFRA) had expressed an interest in the proposed generation by fuel type data, as being helpful to its consideration of potentially publishing daily emissions figures. However, other members were unconvinced that this was relevant to their consideration of P220 against the Applicable BSC Objectives.

In summary, the Group remained divided over the extent of any benefits which would accrue to participants as a result of P220. Details of the Group's consideration of whether the potential benefits were sufficient to outweigh the implementation costs can be found below.

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5.3.4 Cost-benefit

All members of the Group agreed that they supported provision of transparent information at a reasonable cost, providing that the provision of such data could be demonstrated as delivering a net overall benefit to the industry.

The Proposer believed that the case for change had been made through the detailed qualitative arguments expressed by respondents to the industry consultation. The Proposer believed that, in the long-term, these benefits would be sufficient to outweigh the one-off implementation costs of P220. Another member of the Group supported this view. This member believed that it was difficult to identify specific benefits until the data was made available and began to be used by participants. However, they considered that the absence of further detail in this area should not be construed as representing the absence of an overall benefit. The member considered that even small information benefits (in terms of man hours saved and better understanding) were likely to outweigh the implementation costs when applied to large numbers of participants throughout the industry.

However, a majority of members believed that the case for change had not been sufficiently proven, since they believed that it had not been demonstrated how the benefits identified by respondents would be realised. These members argued that, whilst they were prepared to accept the views of a majority of respondents that there could be benefits to their organisations, many of the benefits which had been identified were based on assumptions of changes in market behaviour which they believed had not been quantified or proven.

5.3.4.1 Parallels with UNC006 and potential benefits to consumers

BSCCo noted that several smaller participants, who did not normally respond to consultations on Modification Proposals, had taken the time to provide detailed arguments in support of P220. It was noted that several respondents had referred to Uniform Network Code (UNC) Modification Proposal 006, which had sought to introduce increased transparency of information regarding gas terminal flows.[9] One of these respondents argued that UNC006 had provided similar market fundamentals reporting, and had proved to be highly useful and an example of where participants had benefited significantly from such information dissemination. The Transmission Company, in its P220 Assessment Procedure consultation response, noted that Ofgem's Regulatory Impact Assessment (RIA) in relation to UNC006 had estimated the net benefit of the gas information as being in the range of £82.87m to £122.46m (taking into account IT costs of £1.4m). This response therefore considered that the benefits ascribed to information provision were often larger than initially thought. Another respondent considered that Ofgem's RIA and decision letter in relation to UNC006 had highlighted real benefits from improved information transparency in the areas of more efficient system operation, sharper economic signals to participants, and increased long-term liquidity.

One respondent to the P220 Assessment Procedure consultation noted that smaller players, new entrants and end-users had been asked to provide a cost-benefit analysis. The respondent considered that it was very difficult to assess this, as they had previously noted in the context of UNC006. However, the respondent argued that lack of a cost-benefit analysis should not be a reason to oppose the implementation of P220. The respondent noted that views had been expressed by large users that the implementation costs of UNC006 outweighed its benefits, but that Ofgem had ultimately approved that proposal believing that it would increase the efficiency of the market. The respondent believed that this decision had been justified, with large numbers of participants using the gas information daily.

[9] UNC006 'Publication of Near Real Time Data at UK Sub-Terminals'. Documentation relating to UNC006 can be found at: http://www.gasgovernance.com/Code/Modifications/ClosedMods/CM001_010/.

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Finally, the respondent considered that – although it was difficult to make a cost-based assessment – they believed fundamentally that improved information would lead to a more efficient market, which would establish real quantitative benefits in due course. The respondent believed that consumers would benefit through lower prices from reductions in costs of system operation and increased competition. The respondent argued that an assumed saving of only £0.5/MWh through the implementation of P220 would lead to savings of approximately £7.5m for the chemical sector alone.

The Group noted that parallels drawn by respondents between P220 and UNC006. Some members considered that the UNC006 changes had been more radical than what they perceived to be the 'incremental' changes proposed by P220, and believed that any benefits of P220 were therefore likely to be substantially less. One member commented that UNC006 had been intended to increase transparency of gas data such that it matched the level of information provided in the electricity market – suggesting that there was already significant transparency of electricity data. The Proposer agreed that the benefits of P220 were likely to be lower than UNC006, but believed that even a small proportion of the cost-benefit quoted by Ofgem for UNC006 would be a significant figure for the electricity industry. The Proposer noted that they did not expect any material financial benefits to accrue to the Transmission Company as a result of P220. However, they noted that the value of the electricity market was around £30bn per annum, and therefore believed that even small changes to improve market function leveraged against such a large overall cost could have a positive effect.

The Group noted the view of one respondent to the Assessment Procedure consultation that a fundamental requirement of an open competitive market was the provision of information which would allow energy buyers to make more informed decisions. This respondent considered that, increasingly, changes in the market mean that buyers are expected to fix their prices far more frequently than annually. In order to do this, the respondent believed that it was imperative for buyers to have access to the basic information regarding market drivers. The respondent suggested that, without such information, the market was opaque. The respondent acknowledged the concerns over the P220 implementation costs, and believed that the financial benefit to consumers was impossible to quantify. However, they believed that this benefit would be substantial – arguing that only fractional savings in the cost of energy would be needed to outweigh the costs of providing the data. This view was reiterated by an attendee at the Group.

5.3.4.2 Quantification of benefits

Overall, the Group concluded that it was unable to quantify the extent of the P220 benefits to the market and remained divided over whether these benefits would outweigh the implementation costs. Some members believed that the case for change had been demonstrated by the qualitative arguments of consultation respondents. However, a majority of members believed that the benefit figures quoted by respondents had been based on assumptions of savings or changes in behaviour which had not been proven. One of these members argued that, for them, the key question was whether P220 would lead to a change in the level of overall market imbalance through changes in Parties' trading strategies. This member believed that it remained unproven that such a change would occur.

Despite these views, the Group agreed that (whilst it might not be able to quantify the net benefit of P220) it could be useful to attempt to quantify the materiality of the 'burden of proof' faced by those participants who supported the modification. The following three examples were suggested by individual Group members, attendees and/or BSCCo as potential ways of quantifying the changes in market behaviour which would be needed in order to outweigh the P220 implementation costs. No particular weight was given to one approach over another. The Group noted that all of these approaches were ultimately based on unproven assumptions.

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Example 1 – % reduction in imbalance charges required to outweigh P220 implementation cost

What Percentage Reduction in Imbalance Charges is Required to Recover the Cost of P220 Within Five Years?

Note that this model is based on the following highly conservative assumptions:
- that the total imbalance charge will remain constant (implying it's reducing in real terms); and
- that the first imbalance savings will materialise a year after the investment is made

Total imbalance cost in first year (£m):	158
Discount rate:	5%
Net present value of imbalance savings (£m):	£684.06

	P220
Cost (£k)	750
%age:	0.11%

In this example, a 0.11% reduction in imbalance charges would be required over 5 years in order to offset the P220 implementation costs over that period.

Example 2 – Reduction in cost of I&C spend required to outweigh P220 implementation cost

What Percentage Reduction in Cost of Industrial & Commerical Energy Spend is Required to Recover the Cost of P220 Within One Year?

Note that this model is based on the assumption of an average price of £40/MWh

Total annual demand (TWh):	100
Total annual value of Industrial & Commercial market (£m):	4000
P220 implementation cost (£m):	0.75
% Saving required on I&C energy spend to recover P220 cost in 1 year:	0.02
£/MWh Saving required on I&C energy spend to recover P220 cost in 1 year:	0.80

In this example, a saving of 0.02% or £0.80/MWh would be required over one year in order to offset the P220 implementation costs.

Example 3 – Attempt to quantify benefit of greater participation in Non-BM STOR provision

Financial benefit of the potential for the P220 Non-BM STOR data to encourage more participation in this service

Improved transparency about how the Non-BM STOR service is used will contribute to giving the service a higher level of awareness, and allow service providers to better understand their opportunity to provide the service.

It is subjective on just how much this effect could lead to more service providers taking part in the Non-BM STOR service provision. However, if it is assumed that another 5 MW of provision was encouraged into service at the margin, then the benefit to consumers based on National Grid's latest market report gives a benefit of about £70,000 a year.

This is based on a price differential in the last tender round of approximately £3/MWh over 3861.5 hours (the amount of hours National Grid expect to use the service for), multiplied up for the 5 MW's worth.

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5.4 Group's recommendation to the Panel

This section outlines the overall views of the Group regarding the merits of P220 against the Applicable BSC Objectives.

A majority of members believed that neither the Proposed Modification nor the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives overall when compared with the existing Code baseline. **The MAJORITY view of the Group was therefore that both the Proposed Modification and the Alternative Modification SHOULD NOT be made.**

The arguments of members in respect of the Alternative Modification were identical to those for the Proposed Modification, though on balance the Group unanimously believed that the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives when compared with the Proposed Modification.

A summary of the Group's views can be found in Table 10 below.

Table 10 – Summary of Group's overall views of P220 against Applicable BSC Objectives

View as to whether P220 better facilitates:	Yes	No	Neutral
Applicable BSC Objective (a):	-	-	**Unanimous**
Applicable BSC Objective (b):	**Majority**	-	Minority
Applicable BSC Objective (c):	**Majority**	-	Minority
Applicable BSC Objective (d):	-	**Majority**	Minority
Proposed Modification overall compared with existing baseline:	Minority	Minority	**Majority**
Alternative Modification compared with Proposed Modification:	**Unanimous**	-	-
Alternative Modification compared with existing baseline:	Minority	Minority	**Majority**

A **MINORITY** of members believed that P220 **WOULD** better facilitate the achievement of the Applicable BSC Objectives overall. These members believed that the benefits which would accrue under Objectives (b) and (c) had been proven by the qualitative arguments put forward by consultation respondents, and that these benefits would be sufficient to outweigh the P220 implementation costs. These members did not believe that the implementation costs were so large that they would have a negative impact on Objective (d), and were therefore neutral regarding this Objective.

A **MAJORITY** of members believed that P220 **WOULD NOT** better facilitate the achievement of the Applicable BSC Objectives overall. Of these, one member believed that there would actually be an overall negative impact on the Objectives. This member argued that any benefits under Objectives (b) and (c) would be limited, and would be outweighed by the detrimental effect of the implementation costs on Objective (d) such that P220 would be worse than the existing baseline.

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The remaining members considered that P220 would have a neutral effect on the Applicable BSC Objectives overall. These members clarified that this was not due to any deficiencies in the Group's assessment of P220, but simply that they were unable to state that the benefits would outweigh the costs. These members acknowledged the strong arguments of some consultation respondents in favour of P220, but considered that these remained based on unproven assumptions. These members concluded that, whilst they did not believe that P220 would be worse than the existing arrangements, they were unable to demonstrate that it would better facilitate the achievement of the Applicable BSC Objectives. On this basis, these members noted that a 'neutral' vote in this context counted as a recommendation in favour of retaining the status quo.

All members believed that Applicable BSC Objective (a) was not relevant to its consideration of P220, since they believed that publication of the proposed data would have no impact on the ability of the Transmission Company to discharge its licence obligations.

6 RATIONALE FOR PANEL'S RECOMMENDATIONS TO THE AUTHORITY

6.1 Panel's consideration of Assessment Report

The Panel considered the P220 Assessment Report at its meeting on 14 February 2008. This section summarises the Panel's discussions in formulating its provisional recommendation for inclusion in the draft Modification Report. Details of the Report Phase consultation responses, the Panel's discussion of the responses and its final recommendation to the Authority can be found in Sections 6.2, 6.3 and 6.4 respectively.

6.1.1 Assessment Procedure consultation responses

The Panel noted the responses received to the P220 Assessment Procedure consultation, including the support of a large majority of respondents for P220. The Panel also noted that certain DSWG members and customer organisations, some of whom did not usually respond to Modification Proposal consultations, had provided responses in support of P220.

The Panel did not comment specifically on any individual consultation responses. Panel Members' overall initial views regarding P220 can be found in Section 6.1.2 below.

6.1.2 Applicable BSC Objectives

The Panel considered the arguments expressed by consultation respondents and Modification Group members/attendees regarding the merits of P220. The Panel noted the comments of respondents and the Group that it was difficult to quantify the benefits of the proposed new P220 data to the market. However, the Panel believed that sufficiently-detailed qualitative evidence had been presented to support the view that P220 would better facilitate the achievement of the Applicable BSC Objectives.

In addition, some Panel Members believed that the efforts of the Group in attempting to quantify the potential benefits had been helpful in drawing out the level of change in participant behaviour (in terms of delivering financial savings to the market) which would be required in order to offset the one-off implementation costs of P220. A majority of Panel Members believed that this level of benefit would be realised under P220, whilst some Panel Members believed that the benefits would actually exceed the figures given in the Assessment Report and reproduced in Section 5.3.4.2 of this report. The bullets below list the arguments expressed by individual Panel Members in relation to the benefits of P220:

- A Panel Member believed that P220 had the potential to reduce imbalance charges by a significant amount through a small percentage reduction in the level of total market imbalance. This Panel Member believed that the improved data transparency which would be delivered by P220 should improve participants' self-balancing. The Panel Member believed that the benefits in this area would exceed the numbers given in the Assessment Report.

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- A Panel Member believed that P220 would lead to a more efficient market by providing better information to participants. In support of this view, the Panel Member commented that the proposed P220 temperature data was clearly linked to the level of demand in the market and would therefore be useful in participants' demand-forecasting. Similarly, they believed that the proposed wind data would promote better market understanding of the variable output of this category of generation. The Panel Member was optimistic that P220 would therefore facilitate an improvement in participants' trading positions, and believed that the qualitative arguments put forward by consultation respondents and Modification Group members/attendees demonstrated that real savings in self-balancing were not implausible. The Panel Member noted that the summary page in the gas market had been introduced against some initial opposition from larger participants on the basis of its implementation costs, but that the gas summary web page had subsequently received thousands of 'hits' from participants. The Panel Member commended the efforts made by the Modification Group in refining the straw man solution for P220.
- A Panel Member believed that the gas summary page had increased participants' confidence in that market, and considered that P220 would deliver benefits by making it quicker to locate key electricity market data.
- A Panel Member acknowledged the concerns of some consultation respondents and Modification Group members regarding the P220 implementation costs. However, they considered that the potential competition benefits under P220 were significant, and that the enhanced data transparency delivered by the modification would reduce barriers to entry. The Panel Member referenced recent remarks by the Energy Minister that the passive majority had a vested interest in maintaining complex arrangements.
- A Panel Member advised that they found it difficult to weigh the P220 implementation costs against the possible benefits, as they did not give weight to the quantitative benefits put forward in the Assessment Report. However, this Panel Member believed on balance that the weight of qualitative evidence was sufficient to justify the implementation of P220.
- The Panel noted the benefits which the Authority had identified as resulting from information transparency under UNC006, and noted the Group's discussions regarding the potential parallels between the UNC proposal and P220 (as documented in Section 5.3.4.1 of this report).

Panel Members unanimously agreed that both the Proposed and Alternative Modifications would better facilitate the achievement of the Applicable BSC Objectives when compared with the current Code baseline. However, the Panel was unanimous in agreeing that the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives when compared with the Proposed Modification.

Of those Panel Members who cited specific Applicable BSC Objectives in support of their views, all believed that both the Proposed and Alternative Modifications would better facilitate the achievement of Applicable BSC Objectives (c) and (d). A majority of Panel Members also believed that Applicable BSC Objective (b) would be better facilitated, and that the primary benefits of P220 would be delivered against this Objective. All members agreed that the benefits under Applicable BSC Objective (c) would be greater than those delivered against Objective (d).

The Panel noted that consultation respondents and Modification Group members had generally not identified any potential benefits under Applicable BSC Objective (d). However, Panel Members clarified that they believed P220 would deliver benefits in this area by reducing the existing fragmentation in the location of key market data, thereby enabling more efficient administration of the market.

The Panel therefore unanimously agreed a provisional recommendation to the Authority that:

- The Proposed Modification should not be made; and that
- The Alternative Modification should be made.

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6.1.3 Implementation Date

The Panel unanimously agreed with the Implementation Dates proposed by the Modification Group.

Whilst the Panel's assessment of P220 against the Applicable BSC Objectives was conducted in isolation of P219 and in comparison with the existing arrangements, all Panel Members agreed that their preference would be for P220 to be implemented in parallel with P219 in order to achieve the resulting cost savings. It was noted that this would require the Authority to make simultaneous decisions on both modifications.

6.1.4 Legal text

The Panel unanimously agreed with the draft legal text for the Proposed and Alternative Modifications, noting that this had been reviewed by the Modification Group.

6.2 Results of Report Phase consultation

[This section to be completed following the Report Phase consultation.]

6.3 Panel's consideration of draft Modification Report

[This section to be completed following the Panel meeting on 13 March 2008.]

6.4 Panel's final recommendation to the Authority

[This section to be completed following the Panel meeting on 13 March 2008.]

7 TERMS USED IN THIS DOCUMENT

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

Acronym/Term	Definition
BSUoS	Balancing Service Use of System.
DSWG	Demand Side Working Group.
Frequency	Has the meaning as defined in the Grid Code.
IWA	Initial Written Assessment.
Non-BM STOR Instructed Volume	Volume of Short Term Operating Reserve instructed outside of the Balancing Mechanism in order to increase generation or reduce demand.
P219	Modification Proposal P219 'Consistency between forecast and out-turn demand'.
Short Term Operating Reserve (STOR)	A balancing service procured by the Transmission Company and which has the meaning as defined in National Grid's Procurement Guidelines (Reference 6).
Transmission System Demand	Has the meaning given to the term GB Transmission System Demand in the Grid Code.
UNC	Uniform Network Code.

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8 DOCUMENT CONTROL

8.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	11/02/08	Kathryn Coffin	Richard Clarke	For technical review
0.2	15/02/08	Kathryn Coffin	Richard Clarke	For technical review
0.3	19/02/08	Change Delivery	BSC Parties and other interested parties	For consultation
0.4	Tbc			For technical review
0.5	Tbc			For quality review
0.6	Tbc	Change Delivery	BSC Panel	For Panel decision
1.0	Tbc	BSC Panel		For Authority decision

8.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	Electricity Market Information: Consultation on Potential Developments http://www.nationalgrid.com/uk/Electricity/Data/electricitymarketinfo/	National Grid	01/08/07	N/A
2	Electricity Daily Summary Page Strawman development http://www.nationalgrid.com/uk/Electricity/Data/electricitymarketinfo/	National Grid	N/A	N/A
3	National Grid Electricity Market Information Consultation: Conclusions Report http://www.nationalgrid.com/uk/Electricity/Data/electricitymarketinfo/	National Grid	15/10/07	N/A
4	Initial Written Assessment for Modification Proposal P220 'Provision of new data items for improving market information' http://www.elexon.co.uk/changeimplementation/ModificationProcess/ModificationDocumentation/modProposalView.aspx?propID=240	BSCCo	02/11/07	1.0
5	P219 Draft Modification Report http://www.elexon.co.uk/changeimplementation/ModificationProcess/ModificationDocumentation/modProposalView.aspx?propID=239	BSCCo	19/02/08	0.4
6	Procurement Guidelines http://www.nationalgrid.com/NR/rdonlyres/2643DEB7-377B-41F3-93C7-3AB85E729507/16053/PGsv80effectivefrom01apr07final.pdf	National Grid	01/04/07	8.0

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APPENDIX 1: LEGAL TEXT

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

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

APPENDIX 2: PROCESS FOLLOWED

Copies of all documents referred to in the table below can be found on the BSC Website at: ELEXON - Modification Proposal P220.

Date	Event
26/10/07	Modification Proposal raised by National Grid
09/11/07	IWA presented to the Panel
13/11/07	First Assessment Procedure Modification Group meeting held
20/11/07	Second Assessment Procedure Modification Group meeting held
28/11/07	Requirements Specification issued for BSC Agent impact assessment
29/11/07	Request for Party/Party Agent impact assessments request issued
29/11/07	Request for Transmission Company analysis issued
29/11/07	Request for BSCCo impact assessment issued
12/12/07	BSC Agent impact assessment response returned
12/12/07	Party/Party Agent impact assessment responses returned
12/12/07	BSCCo impact assessment returned
13/12/07	Transmission Company analysis returned
17/12/07	Third Assessment Procedure Modification Group meeting held
07/01/08	Assessment Procedure consultation issued
21/01/08	Assessment Procedure consultation responses returned
23/01/08	Fourth Assessment Procedure Modification Group meeting held
14/02/08	Assessment Report presented to the Panel
19/02/08	Draft Modification Report issued for industry consultation
03/03/08	Report Phase consultation responses returned
13/03/08	Draft Modification Report presented to the Panel
Tbc	Final Modification Report issued to the Authority for decision

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ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL[10]

Meeting Cost	£1,750
Legal/Expert Cost	Nil
Impact Assessment Cost	£12,000
ELEXON Resource	56 man days (equivalent to £16,170)

These costs are unchanged from those provided in the P220 Assessment Report.

APPENDIX 3: ASSESSMENT REPORT

The P220 Assessment Report is attached as a separate document, Attachment 3.

[For the purposes of the Report Phase consultation and the Panel's consideration of the draft Modification Report, the P220 Assessment Report can be found on the BSC Website at: ELEXON - Modification Proposal P220].

The Assessment Report includes:

- A detailed description of the P220 solution as developed by the Group;
- The conclusions of the Group regarding the areas set out in the P220 Terms of Reference;
- Details of the Group's membership;
- The full results of the Assessment Procedure impact assessment; and
- Full copies of all responses to the Assessment Procedure consultation.

APPENDIX 4: REPORT PHASE CONSULTATION RESPONSES

[To be attached following Report Phase consultation.]

APPENDIX 5: P220 BMRS SUMMARY PAGE 'STRAW MAN'

This appendix contains the Group's refined 'straw man' showing the graphs and tables which would be published on the BMRS Data Summary Page under P220. For a detailed explanation of the data shown in the straw man displays, please refer to Sections 4 and 5 of the P220 Assessment Report in Appendix 3.

Please note that all graphs and tables shown have been produced using hypothetical data, and are provided for illustrative purposes only.

[10] 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

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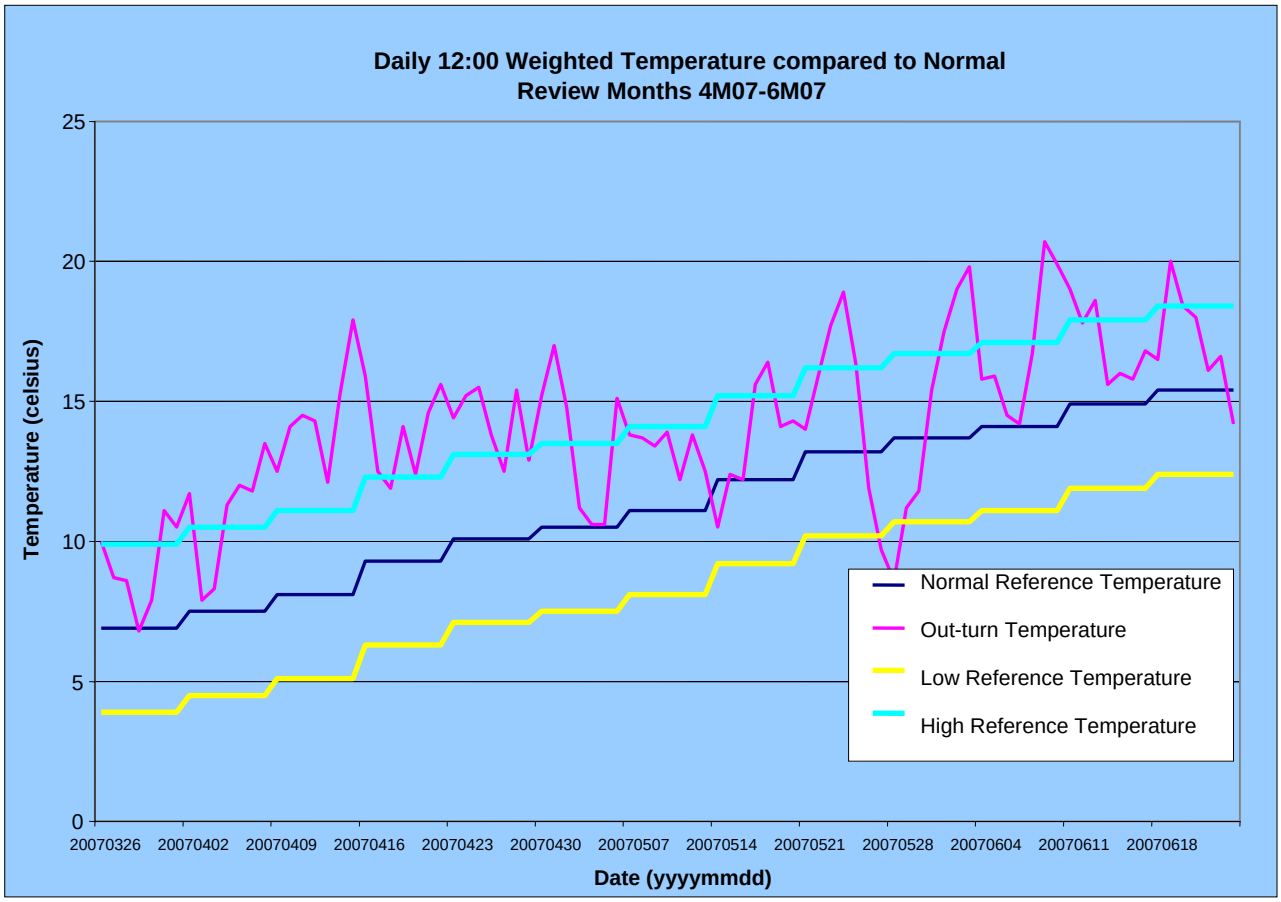
Proposed Modification 'straw man'

a) Out-turn and reference temperatures



b) Wind generation forecast

i) 'Peak' forecast

Thursday 19/07/2007	Forecast Today	Forecast Tomorrow
Time of Maximum Wind Generation:	12:00	17:00
Peak (Max) MW	**64**	**55**
Total Metered Capacity (MW)	870	870
Data last updated: 19-Jul-2007 17:29:48		

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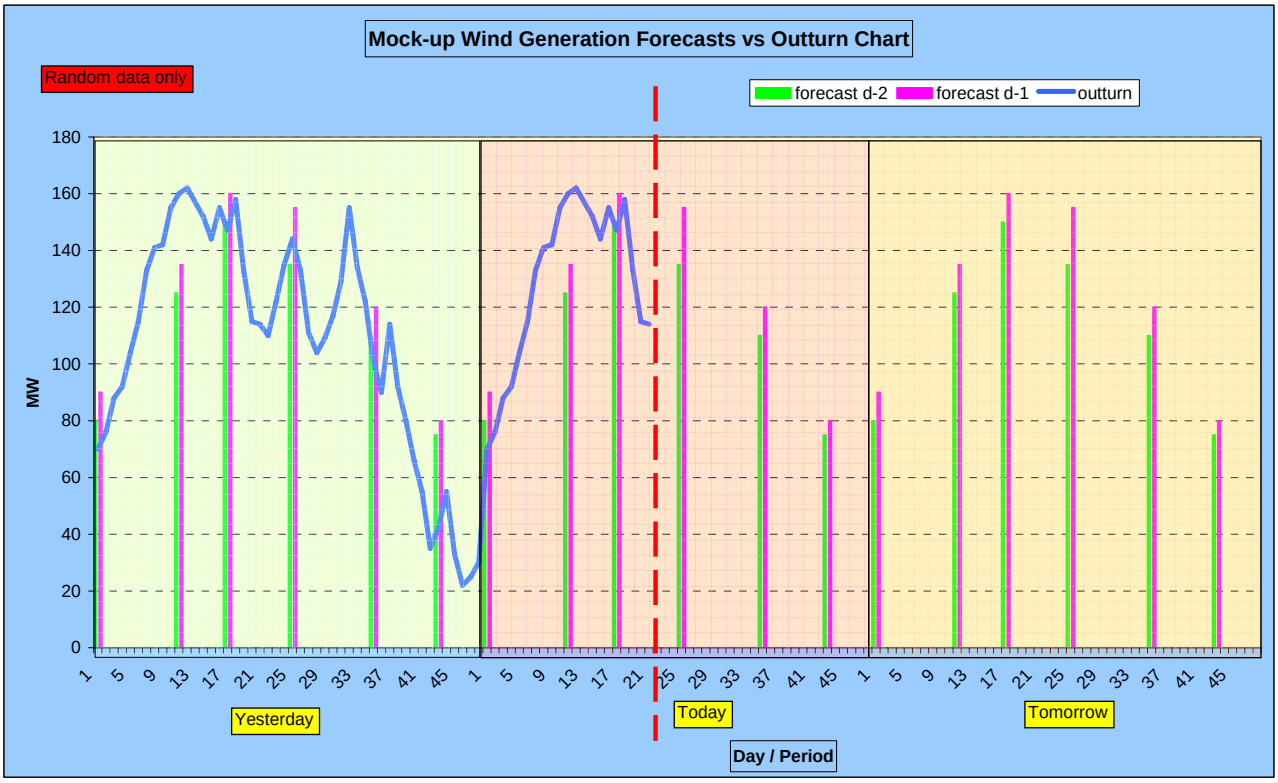
ii) Forecast versus actual out-turn



c) Out-turn generation by fuel type

i) 'Instantaneous' out-turn generation by fuel type

Generation By Fuel Type

GB Generating Plant	Current MW	Current %age	Last Half Hour (03:00-03:30) MW	Last Half Hour %age	Last 24 Hours (03:30-03:30) MWh	Last 24 Hours %age
CCGT	18137	42.1%	18274	42.4%	402038	41.4%
OCGT	1850	4.3%	1400	3.2%	37800	3.9%
Oil	0	0.0%	35	0.1%	385	0.0%
Coal	15315	35.6%	15625	36.3%	375321	38.6%
Nuclear	7308	17.0%	7155	16.6%	143128	14.7%
Power Park Modules (Wind)	189	0.4%	65	0.2%	2600	0.3%
Pumped Storage Plant	15	0.0%	145	0.3%	3423	0.4%
Non-PS Hydro Plant	15	0.0%	20	0.0%	488	0.1%
Other	0	0.0%	65	0.3%	1397	0.1%
Interconnectors						
French Interconnector	55	0.1%	125	0.3%	2250	0.2%
Irish Interconnector	152	0.4%	175	0.4%	2800	0.3%
TOTAL	**43036**	**100%**	**43084**	**100%**	**971630**	**100%**

Data last updated: 19-Nov-2007 16:52:23

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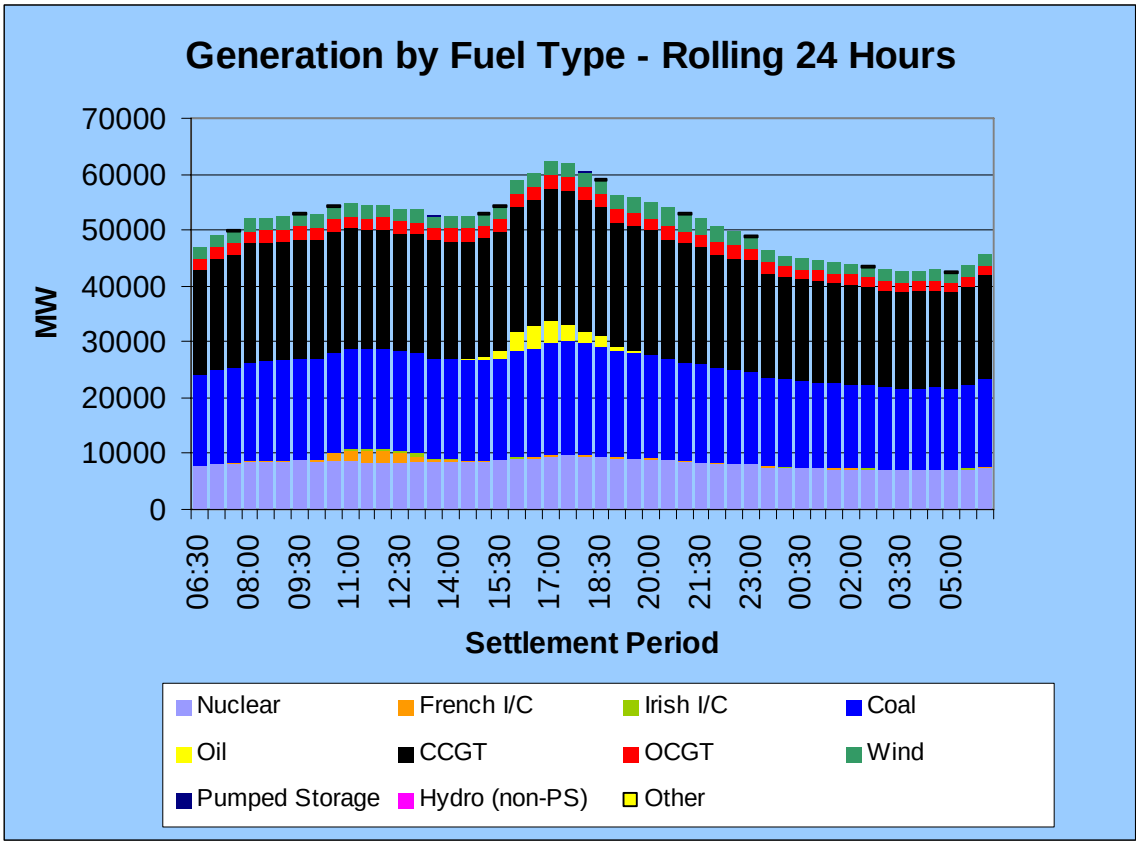
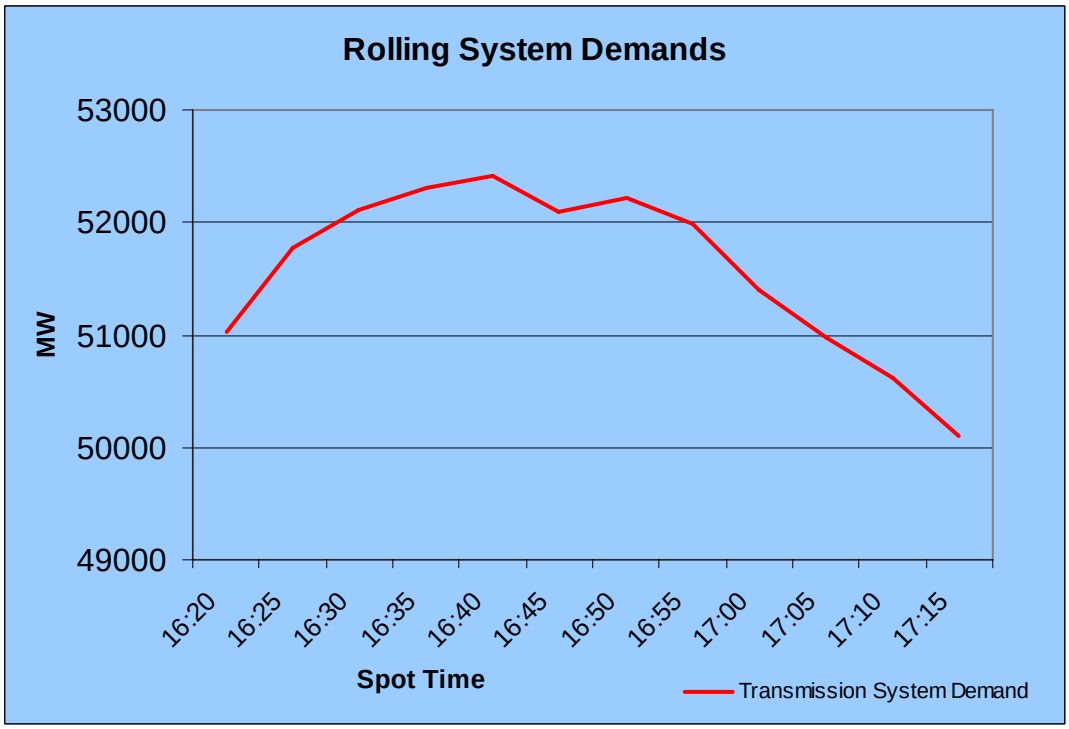
ii) Half-hourly out-turn generation by fuel type



iii) 'Real-time' total demand out-turn



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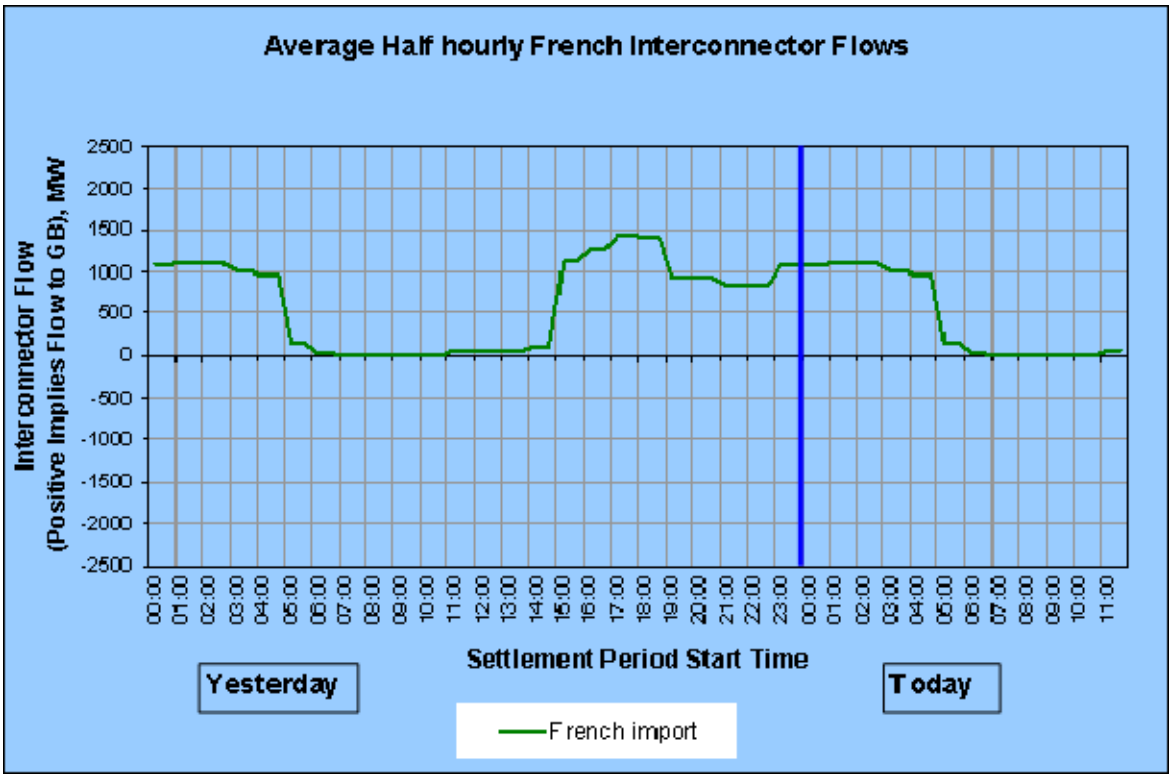
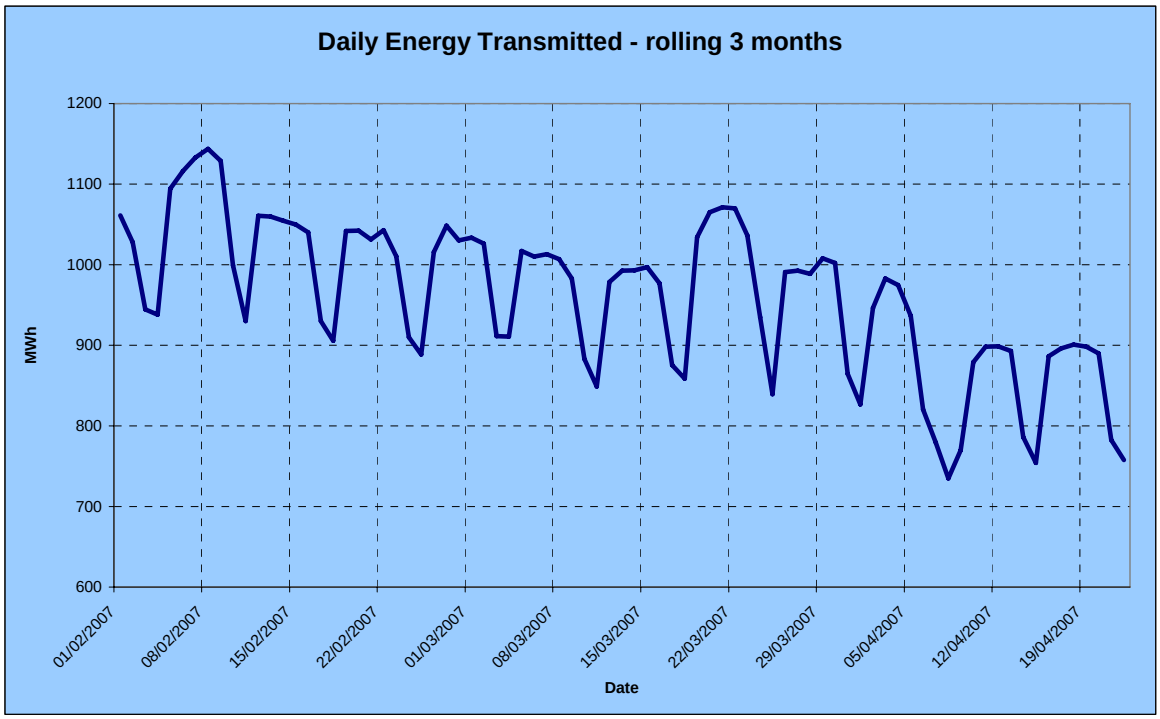
iv) French and Moyle Interconnector flows



NB: an additional graph would be provided for the Moyle Interconnector.

d) Daily energy volumes (based on Transmission System Demand)



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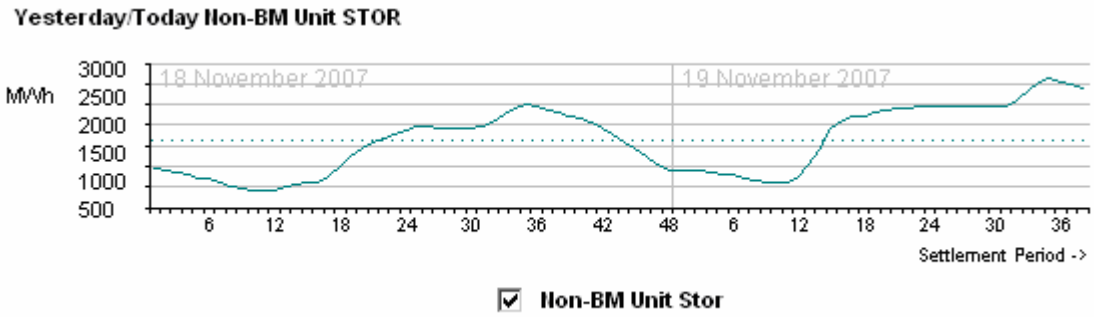
e) Non-BM STOR Instructed Volumes



Alternative Modification 'straw man'

a) Out-turn and reference temperatures

Identical to Proposed Modification.

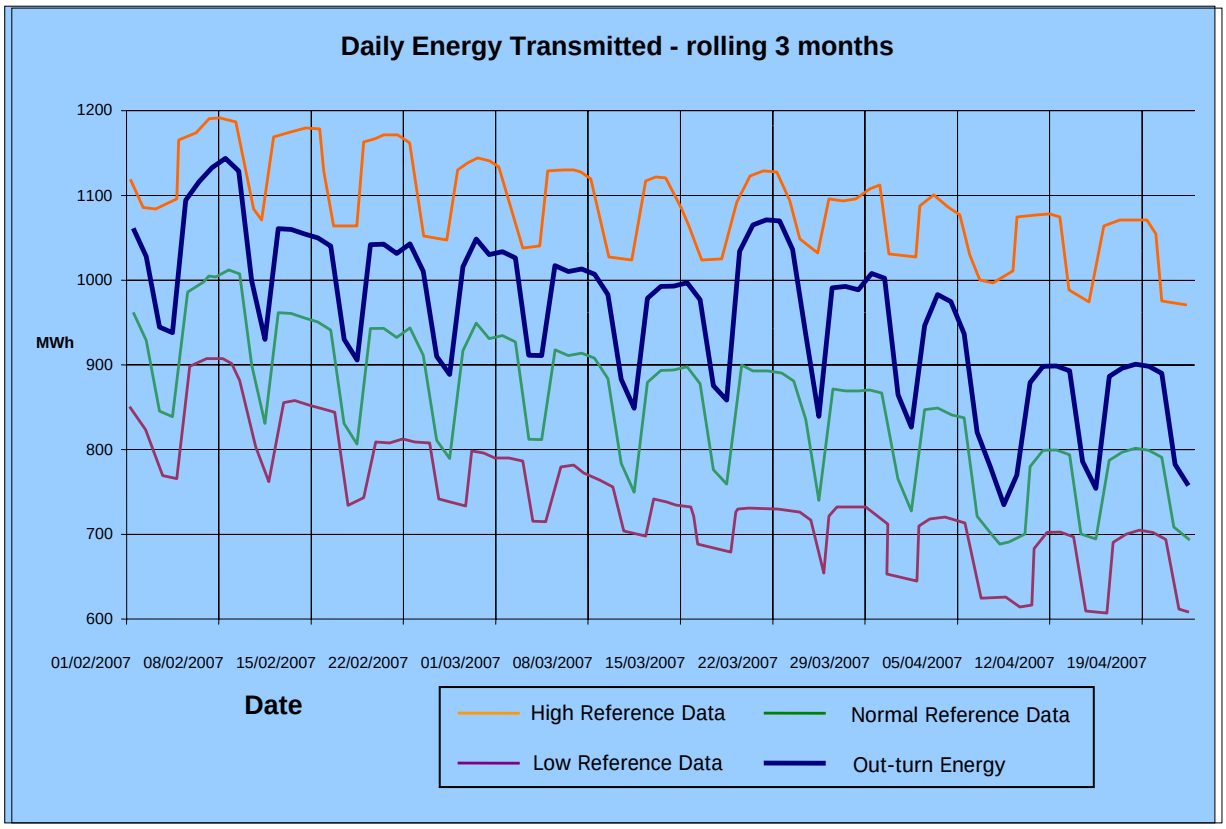
b) Wind generation forecast and out-turn

Identical to Proposed Modification.

c) Out-turn generation by fuel type

Identical to Proposed Modification.

d) Daily energy volumes (based on INDO)



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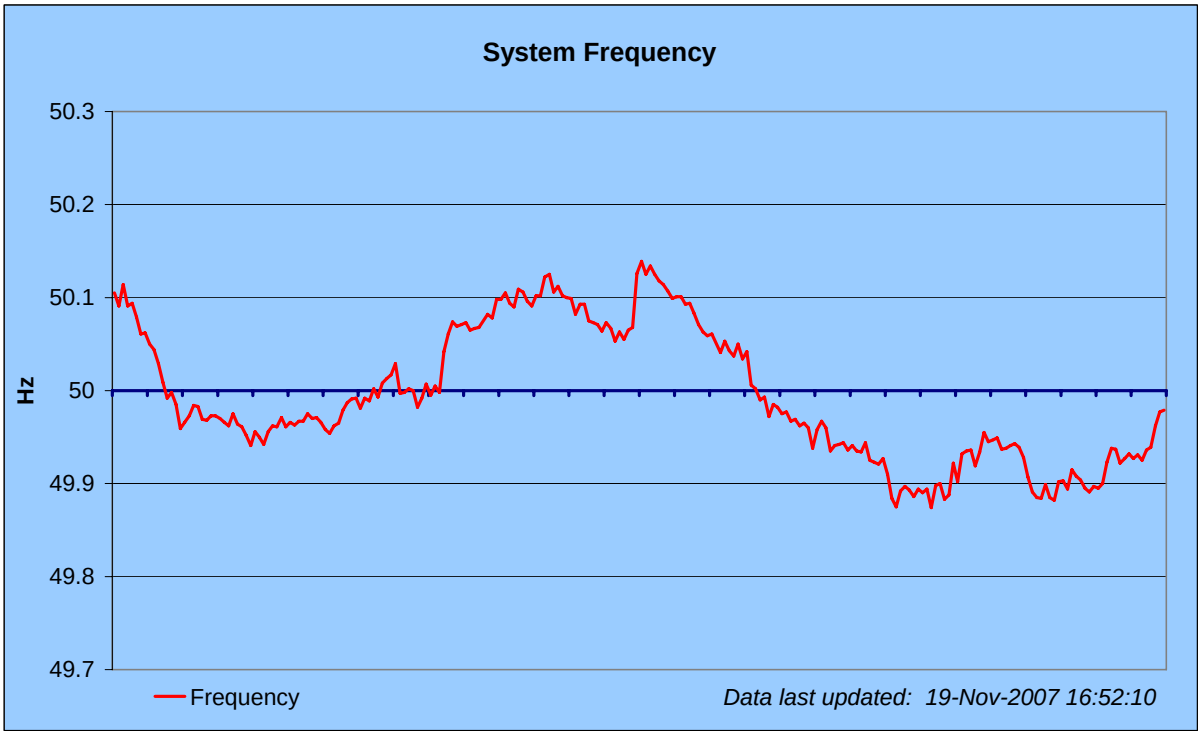
e) Non-BM STOR Instructed Volumes

Identical to Proposed Modification.

f) 'Real-time' Transmission System Frequency



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