

**Proposed Revisions to the Procurement Guidelines,  
Balancing Principles Statement and  
Balancing Services Adjustment Data Methodology Statement**

**Incorporation of BM Start-up Service**

**Consultation by National Grid  
August 2006**

**Overview**

As a result of conducting an industry wide reserve review, National Grid is progressing the replacement of the Warming and Hot Standby Service with a new Balancing Mechanism Start-up Service "BM Start-up Service". National Grid believes that the new service will have significant benefits in terms of the efficient and economic operation of the transmission system, promotion of competition, and transparency. Industry views gained from the reserve review process indicated support for the development of these proposals.

This consultation is required to replace the Warming and Hot Standby Service with the BM Start-up Service in the Procurement Guidelines and Balancing Principles Statement. Changes are also required to the BSAD Methodology Statement as a consequence of this new service.

National Grid believes there is benefit in establishing the BM Start-up Service ahead of winter 2006. Therefore, following the publication of this consultation, National Grid intends to approach existing Warming and Hot Standby providers with the new BM Start-up terms, and we welcome approaches from potential new providers. Subject to Ofgem's approval of the changes in this consultation, the contracting process will then be initiated for service provision from the go-live date. It is National Grid's intention for the BM Start-up Service to go-live (and the Warming and Hot Standby Service to cease) on 1<sup>st</sup> November 2006.

**Consultation Process**

This consultation seeks views on proposed amendments to the Procurement Guidelines (PGs), Balancing Principles Statement (BPS) and the Balancing Services Adjustment Data (BSAD) Methodology Statement. It is being carried out in accordance with the provisions contained within Standard Condition 16 of National Grid's Transmission Licence.

The proposed changes replace the commercial Balancing Service of Warming and Hot Standby with a new commercial service called the BM Start-up Service. This document contains the background to the changes, and the proposed amendments to the current versions of both documents.

Copies of the PGs, the BPS and BSAD Methodology Statement containing the proposed changes, are attached to this consultation as Appendices A1 and A2 (PGs – 2 options) Appendix B (BPS) and Appendix C (BSAD). Following receipt of responses to this consultation, National Grid will prepare and submit a report (in accordance with Transmission Licence Standard Condition C16 paragraph 8) to the Authority. The consultation document, consultation report, and all responses, will be published on National Grid's website:

<http://www.nationalgrid.com/uk/Electricity/Balancing/consultations/>

The current versions of the documents that are the subject of this consultation can be found at the following link:

<http://www.nationalgrid.com/uk/Electricity/Balancing/transmissionlicensestatements/>

### **Consultation Timescales**

In accordance with the provisions of Standard Condition C16 of National Grid's Transmission Licence, the consultation period will be 28 days. Therefore the consultation timetable is as follows:

Consultation published	1 August 2006
Closing date for responses	5pm, 29 August 2006
Consultation Report to the Authority	5 September 2006

### **Document Structure**

The remainder of this document is structured as follows:

- National Grid's Reserve Review
- Description of Current Warming and Hot Standby Arrangements
- Description of proposed BM Start-up Service
- Proposed BM Start-up Information Provision
- Proposed treatment of BM Start-up Service in the calculation of BSAD
- Proposed Implementation date
- Summary of changes
- Consultation Questions
- Appendices

## **National Grid's Reserve Review**

National Grid's role as residual balancer of the GB electricity system gives it responsibility for short term security of supply. In discharging this role National Grid establishes a reserve requirement (to an accepted security standard) and secures reserve up to that requirement from a variety of sources, in differing timescales. Following industry feedback on a number of reserve procurement issues, National Grid launched a holistic review of its reserve procurement framework in 2005. The focus of the review was on reserve products, procurement mechanisms and information provision to assess whether the current suite of arrangements continue to be the most appropriate. National Grid undertook to involve Market Participants in this review in order to gain the views of the wider industry on potential developments.

The objectives of the review were:

- to ensure that National Grid has an appropriate suite of Balancing Services which it can use to meet its operational reserve requirements;
- to ensure these Services are procured in an efficient and economic manner, via market based mechanisms where competition exists;
- to ensure parties are given equal opportunity to participate;
- to ensure that these Services are procured and used in a way which complements the energy market; and
- to ensure Market Participants understand when and how these Services will be required, procured and used.

The review was conducted throughout 2005. In February 2005 an industry workshop was held to explore issues associated with securing reserve "within-day". The workshop was well attended and was followed by a number of bilateral meetings with a variety of parties to discuss these issues and ideas in more detail, and also to consider the procurement of reserve in different timescales.

In parallel with National Grid's reserve review, Ofgem established and facilitated a cross-industry Cashout Review Working Group (CORWG) to consider the general cashout arrangements in the wholesale Gas and Electricity markets. The treatment of reserve costs in cashout was the subject of discussions at the CORWG and therefore there was an interaction between the two review processes. The discussions at the CORWG were fed into the reserve review considerations, and National Grid presented thinking from the reserve review to the CORWG.

National Grid kept the industry informed about its thinking, and sought feedback on proposals, via its Operational Fora during the year, and through attendance at the CORWG.

The reserve review concluded with the publication of a document detailing the conclusions of the review, and an informal consultation seeking views on a set of proposed developments which had been informed and developed in conjunction with the industry through the review process. A link to this document is provided here:

[http://www.nationalgrid.com/NR/rdonlyres/F66EE1F1-3CEB-4095-98AB-4E650EFC6811/1287/0905\\_ReserveReviewConclusions.pdf](http://www.nationalgrid.com/NR/rdonlyres/F66EE1F1-3CEB-4095-98AB-4E650EFC6811/1287/0905_ReserveReviewConclusions.pdf)

In particular, section 3.1 set out initial proposals for the development of the Warming and Hot Standby Service, establishment in the calculation of BSAD, and information provision.

National Grid stated in the conclusions document that if there was broad support for the proposals, it would take those proposals forward through the formal consultation process associated with amending the documents required by C16 of its Transmission Licence.

National Grid received 11 responses to the October consultation with the majority indicating support for the proposals relating to within-day reserve procurement and seasonal reserve procurement. National Grid has therefore developed detailed proposals in these two areas over the past few months, keeping the industry updated on progress via its Operational Fora.

The proposals relating to within-day procurement affect the current Warming and Hot Standby service and therefore this formal consultation is required to give effect to the proposals. A description of the current arrangements and proposed changes is contained in subsequent sections of this document.

Further proposals arising from the reserve review which relate to seasonal reserve procurement (currently Standing Reserve and Supplemental Standing Reserve) will be the subject of a future Licence Condition C16 consultation, although it is envisaged that the changes required to the relevant documents to accommodate the proposals are minor in nature.

## **Current Warming and Hot Standby Arrangements**

The Warming and Hot Standby (WHSB) Service is a Commercial Ancillary Service which was developed in the lead up to NETA. The purpose of the service is to give the System Operator on-the-day access to additional oil and coal fired generating units that would not otherwise have run, and which could not be made available in Balancing Mechanism timescales (originally 3.5 hours ahead, now 1 hour ahead) due to their technical characteristics and associated lead-times.

National Grid continually assesses generation availability against demand forecast plus reserve requirement during the operational day based on the indicative data provided by Market Participants. Where National Grid identifies that the market is not planning to run sufficient generation, (accounting for all PNs, feasible BM Offers and pre-contracted reserves), to meet demand plus the reserve requirement, it may use the Warming and Hot Standby Service to instruct a unit to begin preparations for running which will eventually result in a reduction of its Notice to Deviate from Zero (NDZ) to a level which will allow it to be synchronised in shorter timescales.

As the uncertainty between generation availability, demand and reserve requirements changes continually through the day, the WHSB Service allows National Grid to cancel a unit if it is no longer required to run. This flexibility prevents inefficiencies associated with synchronising and running generation units when they are not required. As market participants would incur costs in preparing a unit to run, remuneration (on a £/h basis) under the WHSB Service terms applies in situations where the unit has begun preparatory warming but has been cancelled before synchronisation. In circumstances where a unit is required to run, the full costs of preparing and running the unit are factored into the Balancing Mechanism Offer Price, and no warming payments are made.

The Hot Standby element of the WHSB Service allows National Grid to hold a unit in a state of readiness to synchronise for a period of time. Additional remuneration is available under the WSHB terms if this occurs and this is paid regardless of whether the unit eventually synchronises or is cancelled.

As a result of the reserve review, near real time information relating to when units are instructed to warm is now published on National Grid's System Operator Notification and Reporting (SONAR) system. This provides the market with a within-day signal that there is a need for additional generation to be brought on to the system.

Due to the non-firm nature of the WHSB payment structure, the costs associated with the WHSB Service do not feature in the calculation of BSAD, and therefore are not included in the calculation of imbalance prices. Should a unit proceed to synchronisation, the costs of starting and synchronising the unit are likely to be reflected in the BM Offer Price. The energy required to synchronise the unit at a minimum of its Stable Export Limit (and any additional energy despatched above this level) will therefore feature in the

calculation of imbalance prices. Whether the cost of this reserve influences the resulting price depends on a number of factors, including market length and the NIV tagging mechanism.

### Reserve Review Conclusions

The reserve review concluded that there was scope to develop the Warming and Hot Standby Service in the following areas:

**Participation** – the WHSB Service is currently limited to Oil and Coal fired generating units. Whilst acknowledging the ideal scenario is that all units would be available for start-up and despatch within the BM, this is not the case in reality and therefore this type of service should be open to all BMUs with lead-times that prevent them from starting-up within BM timescales, regardless of fuel type.

**Payment Structure** – the majority view expressed at Ofgem’s cashout review working group was that the payment structure of the WHSB Service meant that the costs of reserve were not being reflected in cashout in a consistent way. The discussions suggested that if the costs of ‘availability’ could be explicit from ‘energy’ costs (as is the case with Standing Reserve) this would enable a more consistent treatment of reserve in cashout. This was echoed in the responses to the reserve review consultation and therefore the conclusion was to move toward a payment structure that separately remunerated the start-up costs from the energy costs.

**Pricing** – It is recognised that depending on the status of a BMU (perhaps in relation to a previous run), there may be different lead times and different costs associated with starting it up again. It was therefore concluded that BMUs should be able to reflect different states of readiness in their prices. Additionally, to facilitate competition in the pricing of the service, providers should be able to change prices more frequently.

**Information Provision** – There was a general desire for this service to be as transparent as possible, to promote competition in the provision of the service, and to allow all market participants to understand when a service is being used, what the costs are, and how those costs may influence cashout prices in advance in order that they may react appropriately.

In light of these conclusions, National Grid is proposing to replace the WHSB Service with a BM Start-up Service. The BM Start-up Service is based upon the WHSB Service, retaining some of its inherent advantages, but taking account of the issues highlighted above. The arrangements for BM Start-up are described below.

## Proposed BM Start-up Service

The proposed BM Start-up Service is a Commercial Ancillary Service. The purpose of the service is to give the System Operator on-the-day access to additional generation BMUs that would not otherwise have run, and which could not be made available in Balancing Mechanism timescales due to their technical characteristics and associated lead-times.

The proposed service will be used by National Grid in carrying out this residual balancing role in the same way as the current WHSB Service i.e. to assist in ensuring sufficient plant availability on-the-day to meet demand plus reserve requirements. Where National Grid identifies that the market is not planning to run sufficient generation<sup>1</sup> to meet demand plus the reserve requirement, it may use the BM Start-up Service to instruct a BMU to begin preparations for running which will eventually result in a reduction of its Notice to Deviate from Zero (NDZ) to a level which will allow it to be synchronised via the Balancing Mechanism.

As BM Start-up will operate in pre-gate closure timescales, the energy market is in operation and the uncertainty between generation availability, demand and reserve requirements will vary. It is therefore efficient for the proposed BM Start-up Service to retain the flexibility inherent in the WHSB Service. National Grid may cancel BM Start-up if a unit it is no longer required to run (which avoids National Grid inefficiently synchronising and running BM units that are no longer required). Providers may also continue to offer their plant into the market, and choose to not provide the BM Start-up Service to National Grid, at any time ahead of Gate Closure.

Provision of BM Start-up will be remunerated on a £/h basis, with up to three payments rates applicable at different start-up lead times to reflect the potentially different costs associated with starting up at those lead times. Providers will be able to change their BM Start-up prices on a weekly basis, and there will be a common price change “gate closure” for all providers. The BM Start-up rates are intended to remunerate the preparatory costs associated with making a unit available for despatch by National Grid in BM timescales. The BM Start-up service payment will be made regardless of whether the unit proceeds to synchronisation or not, and the start and cease instructions will define the period over which start-up payments will be made. It is assumed that whilst providing BM Start-up, providers will then be able to reflect the incremental cost of energy into their BM Offer Prices, rather than recovering the full start-up costs of the unit through the BM.

Following a BM Start-up instruction, non-delivery rules will apply in cases where providers opt not to provide the service, or fail to provide the service in accordance with the terms.

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<sup>1</sup> accounting for all indicative PNs, feasible BM Offers and National Grid’s pre-contracted reserves

The Hot Standby element of the WSHB Service allows National Grid to hold a unit in a state of readiness to synchronise for a period of time. Additional remuneration for this is available under the WSHB terms. It is proposed that the provision of Hot Standby is retained to form an additional element to the BM Start-up Service for those participants who are capable of providing it.

An overview of how the proposed BM Start-up Service will operate is given below:

- A BMU may be instructed, by National Grid, to provide the BM Start-up Service where the prevailing NDZ of the unit on the day prevents it from being synchronised via a Balancing Mechanism Offer.
- The instruction will be issued via EDL (same as currently used for WSHB Service), and will specify a target time.
- The Generator must make preparations such that by the target time it will be in a position to synchronise within a further period ( $t_{nts}$ ) which will be agreed contractually and in any case will be less than or equal to 85 minutes.
- Following the issue of a BM Start-up instruction, the generator will be paid the relevant £/h rate to cover the costs associated with the preparation required to deliver availability in the BM.
- The service can be ceased by National Grid at any time through the issue of a 'Cease BM Start-up' instruction via EDL (same as current WSHB service).
- To give National Grid a degree of certainty regarding eventual running costs, the set of parameters that define the amount of reserve being created (including the synchronisation energy) will form part of the service. The MEL prevailing for the period in question and the SEL, MNZT and the Offer Price (relating only to the synchronising energy) prevailing at the time the BM Start-Up instruction is issued will be required to continue to apply through the period in question.
- Once the BMU has reached the Target Time it will be required to have submitted the relevant Grid Code parameters described above to enable it to be synchronised in accordance with the terms of the service, or provide Hot Standby (if applicable).

NDZ (Notice to Deviate from Zero)

EDL (Electronic Despatch and Logging)

MEL (Maximum Export Limit)

SEL (Stable Export Limit)

MNZT (Minimum Non-Zero Time)

## Proposed BM Start-up Information Provision

During 2005, National Grid launched a new System Operator Notification and Reporting website “SONAR” to provide near to real time information in respect of certain balancing related activities. The purpose was to provide a mechanism for publishing additional information to market to help the efficiency of market participants balancing decisions within-day. A link to SONAR is provided here: <https://www.nationalgrid.com/sonar/>

SONAR currently publishes information relating to the use of the Warming & Hot Standby Service. Information published includes the instruction time, earliest potential synchronisation time, MW capacity of instruction and cancellation time if applicable. Currently these initial notifications are not automatically generated and rely on manual processes for publication.

As the proposed BM Start-up Service replaces the WHSB Service, National Grid proposes to develop and use SONAR for the provision of information relating to the BM Start-up Service. The proposed developments are in two key areas:

- Reliability and timeliness of publication
- Data items to be published

With the inclusion of BM Start-Up payments within the calculation of BSAD, the need for reliable and accurate information relating to the requirement for the service is of even greater importance. As such, BM start-up information will be transferred to SONAR automatically<sup>2</sup>, removing the potential for error or delay associated with a manual process.

It is proposed that the current data items applicable for WHSB Service are also published for the BM Start-up Service, supplemented by additional information. The additional information will assist market participants in assessing the potential impact of the use of the service on imbalance prices. It is therefore proposed that the information provided for each BM Start-up instruction is:

- Agreement Date:	(DD/MM/YYYY)
- Agreement Time:	(HH: MM)
- Estimated Capacity:	(MEL at instruction)
- Instruction issued:	(‘BM Start-Up or ‘Cancelled’)
- Earliest Synch Date:	(DD/MM/YYYY)
- Earliest Synch Time:	(HH: MM)
- Requirement Periods:	(DD/MM/YYYY, Periods)
- Energy/System flag:	(E or S)
- BM Start-up price	(£/h) – Rate Applicable at time of instruction
- Indicative Cost	(£) – if BM start-Up proceeds through to Target Time

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<sup>2</sup> Note that instructions will be retrospectively transferred if initial publication is prevented as a result of any NETA system outages.

When establishing the existing information relating to the WHSB Service, providers expressed concerns regarding the publication of price related information, as they believed that the arrangements for changing prices were not consistent with increased level of transparency that would be available. National Grid has considered these concerns and attempted to mitigate them with the design of the pricing arrangements for BM Start-up:

- Providers will be able to change prices on a weekly basis. This could be reviewed following experience of how often providers use the price change mechanism.
- A price submission 'gate closure' will be introduced to provide a level playing field for all providers. Providers will be required to submit changes by 12:00 Thursday, to apply from 05:00 the following Monday.

This consultation explicitly seeks views on the appropriateness of publishing price related information via SONAR at the time BM Start-up instructions are issued, and two versions of the PGs will be provided to the Authority (one including the price related information and one excluding it).

## **Proposed treatment of BM Start-up Service in the calculation of BSAD**

### Buy Price Price Adjuster

The basis of the payment structure of the BM Start-up Service is to remunerate the preparatory start-up costs associated with providing the availability of additional reserve to the system via BM Start-up payments, and to remunerate the incremental costs of energy through the BM Offer Price(s). Therefore to ensure the full costs of reserve are reflected in cashout, National Grid proposes that BM Start-up costs that create additional reserve availability<sup>3</sup> should feature in the calculation of the Buy Price Price Adjustment (BPA) variable within BSAD. This is consistent with the treatment of Standing Reserve availability fees.

National Grid believes that the use of the BM Start-up Service to create additional reserve availability during periods of shortfall is an important within-day signal, as these are the periods where the market is not providing sufficient plant availability to meet demand plus the residual reserve requirement, but is still in a position to be able to react. In order to target costs appropriately, National Grid believes that BM start-up availability costs should be explicitly allocated across the settlement periods that have driven the requirement for BM Start-up on the day. In order to give market participants an indication of what periods drive the requirement for additional plant availability (based on historic experience), a table has been included in Appendix 1, Part 1.

There are a number of factors which vary through the day which drive the requirement for the use of the BM Start-up Service. This may result in BM Start-up instructions being issued at different times ahead of a period of requirement, and/or may result in the cancelling of BM Start-up instructions. As a result, the volume associated with individual BM Start-up instructions does not necessarily sum to the overall reserve volume requirement. An example of this is given in Appendix 1, Part 2. As a consequence the methodology for inclusion of the BM Start-up Service in the calculation of BPA must reflect this.

Therefore, National Grid proposes to calculate the volume weighted average cost of BM Start-up at all lead-times (by performing the interim calculation of total cost divided by total volume of reserve being created at each point in time) which when summed will give a volume weighted average cost of reserve created by BM Start-up in the periods of requirement. As the instruction and settlement of the BM Start-up Service is at minute resolution, this is the resolution to which the interim calculation will be performed to avoid distortion. Algebraically, the BM Start-up component of BPA can be represented as:

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<sup>3</sup> This does not include the costs of Hot Standby as these costs relate to maintaining the unit in a state where it can be synchronised after the original target time and not to the creation of additional reserve. Additionally, if the BM Start-up Service is used to access a BMU for system reasons, these costs will not go into the calculation of BPA.

$$\sum_{t \in \{\text{BMStartUp time}\}} \frac{\text{BMStartUp Cost}}{\text{BMStartUp Volume}}$$

Where

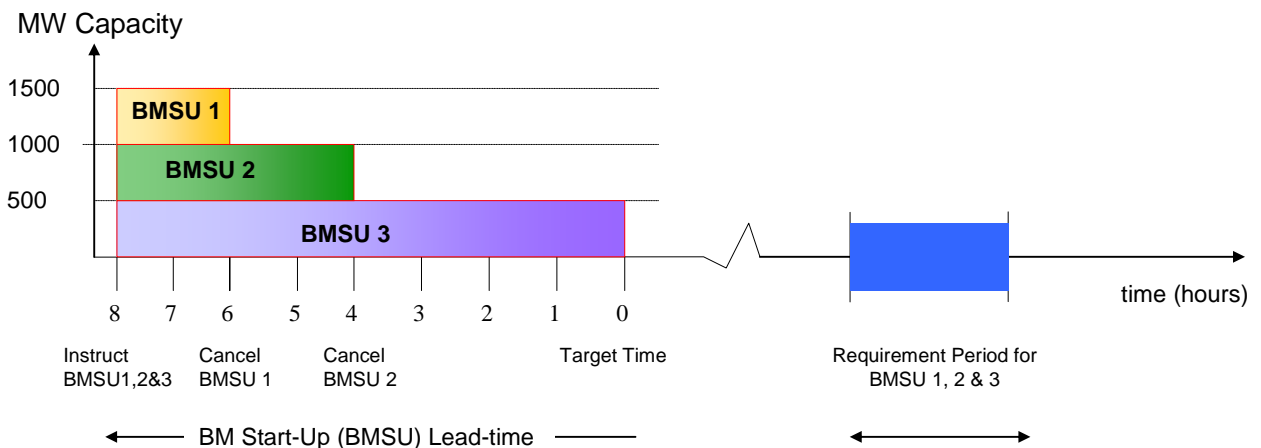
BM StartUp time = all minutes associated with BM Start-Ups instructed for this BPA period  
 BM StartUp Cost (£) = Total cost of applicable BM Start-ups instructed for this BPA period during minute t associated with a requirement defined by National Grid  
 BM StartUp volume (MWh) = Total capacity (MW) of applicable BM Start-ups instructed for this BPA period during minute t multiplied by the number of hours associated with a requirement defined by National Grid;

To demonstrate and to explain this further, the following example sets out the BM Start-up component of the BPA calculation in numeric form and applies it to a practical example where the requirement for BM Start-up Service changes during the lead time:

Example

National Grid concurrently instructs three BM Start-ups at an 8hr lead-time to meet a perceived additional plant requirement of 1500MW for a requirement period of 2 hours, at some point in the future. Two hours from the initial instruction National Grid cancels one BM Start-up instruction and then subsequently another as the overall requirement for additional plant reduces to 500MW<sup>4</sup>.

In this scenario all three instructions create an additional 500MW of reserve and have an associated BM start-up payment rate of £2000/hr.



<sup>4</sup> Perhaps due to additional plant declarations or a decaying reserve requirement.

Applying the proposed methodology, the BPA calculation for this scenario could be numerically represented as follows based on this example's hourly resolution of instruction / cancellation:

BM Start Up Leadtime Period (Hours)	T-8 to T-7	T-7 to T-6	T-6 to T-5	T-5 to T-4	T-4 to T-3	T-3 to T-2	T-2 to T-1	T-1 to Target Time
Total BSU Cost incurred over this lead-time (£)	6000	6000	4000	4000	2000	2000	2000	2000
Total BSU Volume for requirement period (MWh)	3000	3000	2000	2000	1000	1000	1000	1000
Cost / Volume	2	2	2	2	2	2	2	2

$$\text{BSU BPA} = (2 + 2 + 2 + 2 + 2 + 2 + 2 + 2) = \text{£}16 / \text{MWh}$$

Over each requirement settlement period

Further examples are provided in Appendix 1 Part 3.

#### Submission of BSAD

The within-day nature of the BM Start-up Service means that the BPA for the settlement periods associated with the requirement will be updated at the Gate Closure submission of BSAD to central systems. This will allow the costs associated with BM Start-up to feature in the calculation of prompt prices by the BMRA. National Grid will provide information (as set out in the previous section) ahead of these timescales to assist market participants in understanding the likely effect of BM Start-up instructions on imbalance prices.

In circumstances where provision of the BM Start-up Service is ceased by the Provider, the contract terms will engage a set of non-delivery rules. In order to be consistent with the principles behind prompt pricing, and the treatment of other Balancing Services in the calculation of imbalance prices, it is not proposed to recalculate BSAD post event to account for the effects of non-delivery charges associated with the service.

## Summary of Changes

The changes proposed for the PGs, BPS and BSAD Methodology Statement are summarised in the section below:

<b>Proposed Procurement Guidelines changes – Option 1</b>		
<b>(See Appendix A1)</b>		
<b>Section</b>	<b>Change</b>	<b>Comment</b>
Page 1	Effective from “1 November 2006”	Commencement of the BM Start-up service
Page 3	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Page 11  Part B General Principles Section 4, Taking Actions Outside the Balance Mechanism	Deletion of following paragraph  “An exception to this typical approach to payment for Ancillary Services Agreements can be seen with “Warming Contracts”. Where an Ancillary Service Agreement results in a BMU being warmed, that unit may be stood down prior to BM timescales. In such circumstances the BMU will be paid for the period they have been warmed prior to being stood down and will receive no associated payment in the BM. If a BMU is warmed via an Ancillary Service Agreement, is not stood down and is subsequently instructed within the BM the BMU will only receive payment for the accepted instruction within the BM and will receive no payment for being warmed.”	Replacement of Warming with BM Start Up service whose payment characteristics do not follow those described in this paragraph but are now in line with other actions taken outside the balancing mechanism.
Page 13  Part C Section 1 Ancillary Services	Delete existing bullet point referring to “Warming” and replace with “BM Start-up”	
Page 17  Part C Section 2.1 Ancillary Services	paragraph headed Warming is deleted and replaced with the following paragraph  BM Start-up - Which is a service that allows National Grid to access MW from BM Units that would not otherwise have run, and are unable to start-up within BM timescales on the day. Firm payments for this service are made on a £/h basis, to remunerate the costs of preparing a BMU to start up and synchronise within BM timescales	A description of the characteristics of the New BM Start Up Service

Part D, Section 1 – Procurement Process, Market mechanism	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Part D, Procurement Mechanisms Table 1 Balancing Services Summary Table Section : Commercial Ancillary Services	<ol style="list-style-type: none"> <li>1. Replace <i>Warming</i> with <i>BM Start Up</i></li> <li>2. Replace Min Annual with Evergreen</li> </ol>	
Part E, Information Provision Contacts	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Part E, Information Provision Table 2 Balancing Services Information Provision Summary	<ol style="list-style-type: none"> <li>1. Balancing Service Column : change row headed “Warming” to “BM Start-up”</li> <li>2. Pricing Information Column: replace “N/A” with “Hourly BM Start-up payment rate”</li> <li>3. Timescale Column : replace the two occurrences of “warming” with “BM Start-up”</li> </ol>	
<b>Proposed Procurement Guidelines changes – Option 2</b>		
<b>(See Appendix A2)</b>		
<b>Section</b>	<b>Change</b>	<b>Comment</b>
Page 1	Effective from “1 November 2006”	Commencement of the BM Start-up service
Page 3	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Page 11  Part B General Principles Section 4, Taking Actions Outside the Balance Mechanism	<p>Deletion of following paragraph</p> <p>“An exception to this typical approach to payment for Ancillary Services Agreements can be seen with “Warming Contracts”. Where an Ancillary Service Agreement results in a BMU being warmed, that unit may be stood down prior to BM timescales. In such circumstances the BMU will be paid for the period they have been warmed prior to being stood down and will receive no associated payment in the BM. If a BMU is warmed via an Ancillary Service Agreement, is not stood down and is subsequently instructed within the BM the BMU will only receive payment for the accepted instruction within the BM and will receive no payment for being warmed.”</p>	Replacement of Warming with BM Start Up service whose payment characteristics do not follow those described in this paragraph but are now in line with other actions taken outside the balancing mechanism.

Page 13 Part C Section 1 Ancillary Services	Delete existing bullet point referring to “Warming” and replace with “BM Start-up”	
Page 17 Part C Section 2.1 Ancillary Services	paragraph headed Warming is deleted and replaced with the following paragraph  BM Start-up - Which is a service that allows National Grid to access MW from BM Units that would not otherwise have run, and are unable to start-up within BM timescales on the day. Firm payments for this service are made on a £/h basis, to remunerate the costs of preparing a BMU to start up and synchronise within BM timescales	A description of the characteristics of the New BM Start Up Service
Part D, Section 1 – Procurement Process, Market mechanism	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Part D, Procurement Mechanisms Table 1 Balancing Services Summary Table Section : Commercial Ancillary Services	1 Replace “Warming” with “BM Start-up”  2 Replace “Min Annual” with “Evergreen”	
Part E, Information Provision Contacts	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Part E, Information Provision Table 2 Balancing Services Information Provision Summary	1 Balancing Service Column : change row headed “Warming” to “BM Start-up”  2 Timescale Column : replace the two occurrences of “warming” with “BM Start-up”	

### **Proposed BPS changes**

**(See Appendix B)**

<b>Section</b>	<b>Change</b>	<b>Comment</b>
Page 1	Effective from “1 November 2006”	Commencement of the BM Start-up service
Page 3	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Page 29 – Step 4	Delete “warming contract” and replace with “BM Start-up service”	To reflect the introduction of the new BM Start-up service

Page 30 - Paragraph 2.3	Delete "warming contract" and replace with "BM Start-up service"	To reflect the introduction of the new BM Start-up service
Page33 – Paragraph 3.2	Delete "warming contract" and replace with "BM Start-up service"	To reflect the introduction of the new BM Start-up service

<b>Proposed BSAD Methodology Statement changes</b>		
<b>(See Appendix C)</b>		
<b>Section</b>	<b>Change</b>	<b>Comment</b>
Page 3	Replace Commercial Frameworks Manager with Regulatory Frameworks Manager	Change required to reflect internal reorganisation
Page 3, postal address	Amend "National Grid Transco" to read "National Grid and NGT House" to read National Grid House"	Changes required to reflect the name change for national Grid's electricity business in Great Britain.
Part A, Section 1, page 5	Replace "National Grid Company plc" with "National Grid Electricity Transmission plc"	Change required to implement the name change for National Grid's electricity business in Great Britain
Part A, Section 1, page 6, postal address	Amend "National Grid Transco" to read "National Grid and NGT House" to read National Grid House"	Changes required to reflect the name change for national Grid's electricity business in Great Britain.
Part B, Section 1.2	Insert description of BM Start-Up service	Change required for implementation of BM Start-up service
Part C, Section 1	Amend the BPA formula to incorporate BM Start-Up service	Change required for implementation of BM Start-up service
Part C, Section 2.4	Amend Example 4 to show the effect of BM Start-Up service on the BPA	Change required for implementation of BM Start-up service

## Consultation Questions

Please note the BM Start-up service will require a package of changes across the following C16 documents: PGs, BPS, and BSAD.

<b>Q</b>	<b>Question</b>	<b>Response</b>	<b>Rationale</b>
All	1. Do you agree with the proposed changes to the relevant C16 documents incorporating the changes to the Procurement Guidelines as defined in Appendix A1. This version of the Procurement Guidelines would allow the publication of price related information as detailed in page 9 of this consultation "Proposed BM Start-up information provision".	Yes / No	
All	2. Do you agree with the proposed	Yes / No	

	changes to the relevant C16 documents incorporating the changes to the Procurement Guidelines as defined in Appendix A2. This version of the Procurement Guidelines would not include the publication of price related information as detailed in page 9 of this consultation "Proposed BM Start-up information provision".		
All	3. Do you have any other comments to make?	Yes / No	

### Consultation Responses

Consultation responses should be forwarded to the Balancing Services e-mail address [BalancingServices@uk.ngrid.com](mailto:BalancingServices@uk.ngrid.com) by **5.00pm on 29 August 2006**. Comments will be reviewed, and National Grid will then prepare a report to the Authority.

A full copy of all responses will be provided to the Authority and will be made publicly available on the Industry Information web site.

## APPENDIX 1

### Part 1 - Example Requirement

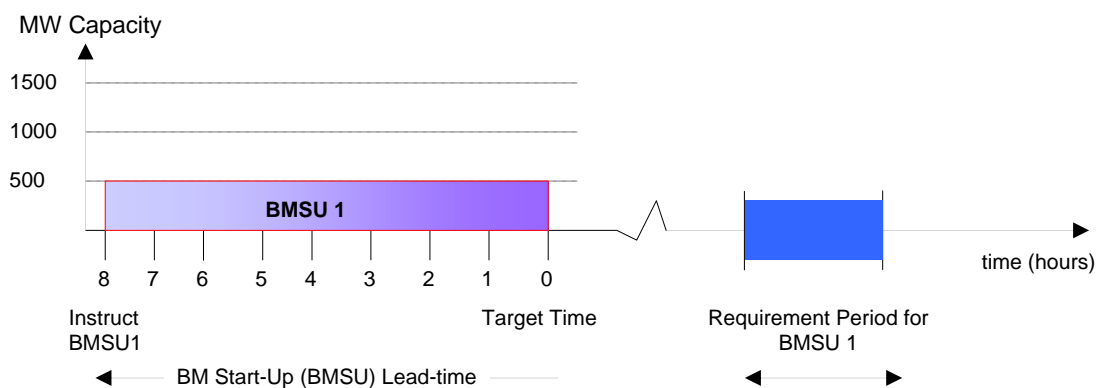
	Start Period	End Period		Start Period	End Period
<b>Typical Winter Working Day</b>			<b>Typical Winter Sunday</b>		
2F (Morning Ramp)	16	20	2F (Morning Ramp)	16	20
2A (Morning Peak)	20	29	2A (Morning Peak)	20	27
2B (Lunchtime Peak)	23	29	2B (Lunchtime Peak)	24	27
3C (Teatime/Darkness Peak)	34	39	3C (Teatime/Darkness Peak)	34	40
4B (evening)	40	44	4B (evening)	40	44
	Start Period	End Period		Start Period	End Period
<b>Typical Summer Working Day</b>			<b>Typical Summer Sunday</b>		
2F (Morning Ramp)	16	30	2F (Morning Ramp)	16	26
2A (Morning Peak)	19	30	2A (Morning Peak)	19	26
2B (Lunchtime Peak)	22	30	2B (Lunchtime Peak)	22	26
3C (Teatime Peak)	33	37	3C (Teatime Peak)	33	37
4B (Darkness Peak / evening)	39	44	4B (Darkness Peak / evening)	39	45

## Part 2 – Rationale for change in BPA calculation

The following example sets out two potential BM Start-up instructions scenarios, each to resolve an identical additional generation requirement of 500MW over a nominal future 4 settlement periods. In each case a simple £/MWh cost of creating the reserve created has been calculated. This is the basis of the current BPA calculation.

### Scenario 1a) Base Case

A single BM Start-up instruction is made to meet the requirement. The total cost of the instruction is £40,000, which has been accumulated through a 8hour start-up period at £5,000/hour.



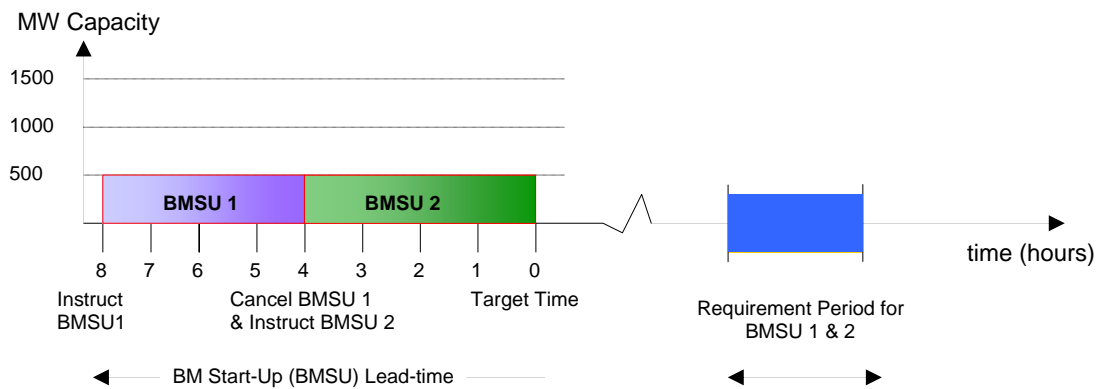
Applying the existing BPA methodology in this case gives a £/MWh figure creating the additional reserve of:

$$BSU\ BPA = \left( \frac{BSUCost}{BSUVolume} \right) = \left( \frac{40,000}{1000} \right) = £40 / MWh$$

(The BSU Volume = MW Capacity instructed \* Period of requirement in hours. I.e. In this example the BSU volume is 500MW \* 2hrs = 1000MWh)

### Scenario 1b) the instruction variant

The requirement remains unchanged, although in this theoretical example it has been met by two BMUs (with identical prices) instructions with the first instruction cancelled before its Target Time time, and replaced by the second (in reality the price of the second unit may be cheaper).



If the existing methodology is again applied, the effect would be to incorrectly halve the average cost of meeting the requirement as the total BM Start-up cost is now determined to have created an additional 1000MWh of reserve.

$$BSU\ BPA = \left( \frac{BSUCost}{BSUVolume} \right) = \left( \frac{(20,000 + 20,000)}{(1000 + 1000)} \right) = £20 / MWh$$

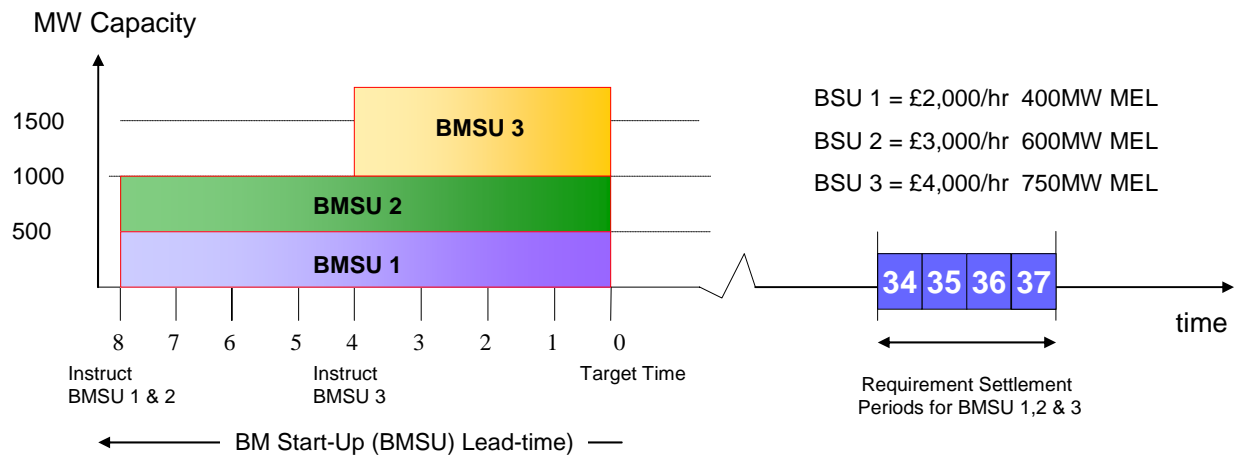
Unlike the existing firm reserve actions included within BPA, the BSU component of the BPA calculation therefore needs to recognise the volume<sup>5</sup> being created through the lead-time of the BM Start-up instructions for the requirement period. Moreover, as with the current methodology, the calculation needs to use the total volume being created to calculate volume weighted average price.

<sup>5</sup> As defined as the MW capacity instructed \* Length of requirement period in hours.

### Part 3 – Complete example of the proposed calculation of the BM Start-up component of BPA

National Grid concurrently instructs two BM Start-ups at an 8hr lead-time to meet a perceived additional plant requirement of 1000MW for a requirement period of 2 hours, at some point in the future. Two hours from the initial instruction National Grid instructs an additional BM Start-up instruction as the overall requirement is 1750MW.

In this scenario all three instructions create different volumes of reserve and have different payment rates.



BM Start Up Leadtime Period (Hours)	T-8 to T-7	T-7 to T-6	T-6 to T-5	T-5 to T-4	T-4 to T-3	T-3 to T-2	T-2 to T-1	T-1 to HSTT
Total BSU Cost incurred over this lead-time (£)	5,000	5,000	5,000	5,000	9,000	9,000	9,000	9,000
Total BSU Volume for requirement period (MWh)	2,000	2,000	2,000	2,000	3,500	3,500	3,500	3,500
Cost / Volume	2.5	2.5	2.5	2.5	2.57	2.57	2.57	2.57

$$\text{BSU BPA} = (2.5 + 2.5 + 2.5 + 2.5 + 2.57 + 2.57 + 2.57 + 2.57) = \text{£}20.28 / \text{MWh}$$

For Periods 34, 35, 36 and 37