Firm Frequency Response

Market Information for Tenders for FEBRUARY 2009

National Grid wishes to highlight to participants its overnight requirement for FFR. Participants are invited to note the inclusion of Figures 7 and 8 for this purpose, as well as the enhancement to the Price breakdown table on page 6.

Total Frequency Response Requirements

Our indicative daily Total Requirement for Frequency Response for the above month is shown on a Settlement Period basis for weekdays, in Figure 1 and for Saturdays, Sundays and Bank Holidays, in Figure 2. The graphs show the requirement at maximum frequency deviation: 0.8 Hz for Primary and 0.5 Hz for Secondary and High Response.

Figure 1

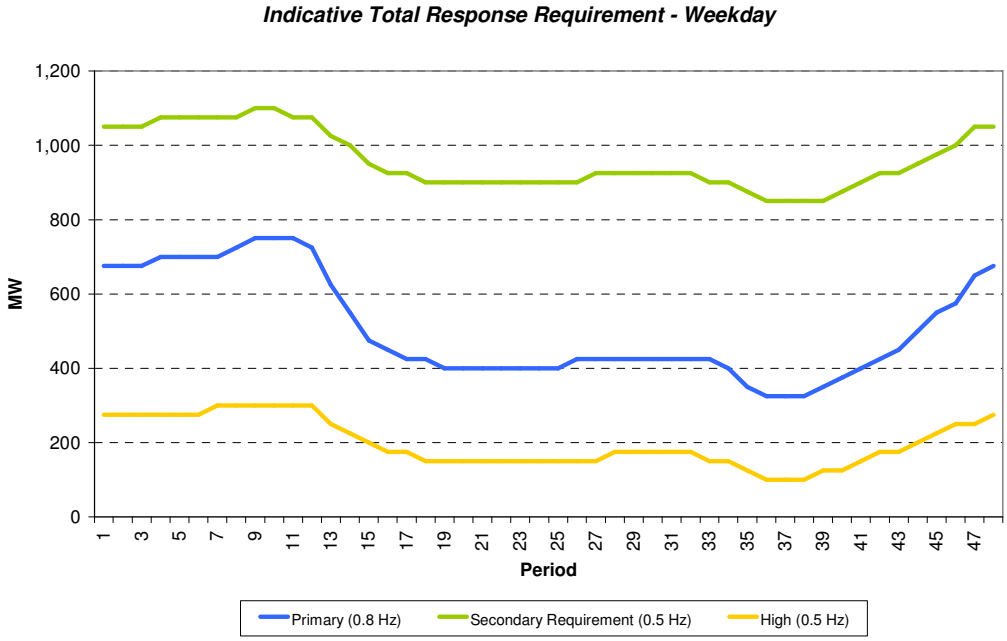
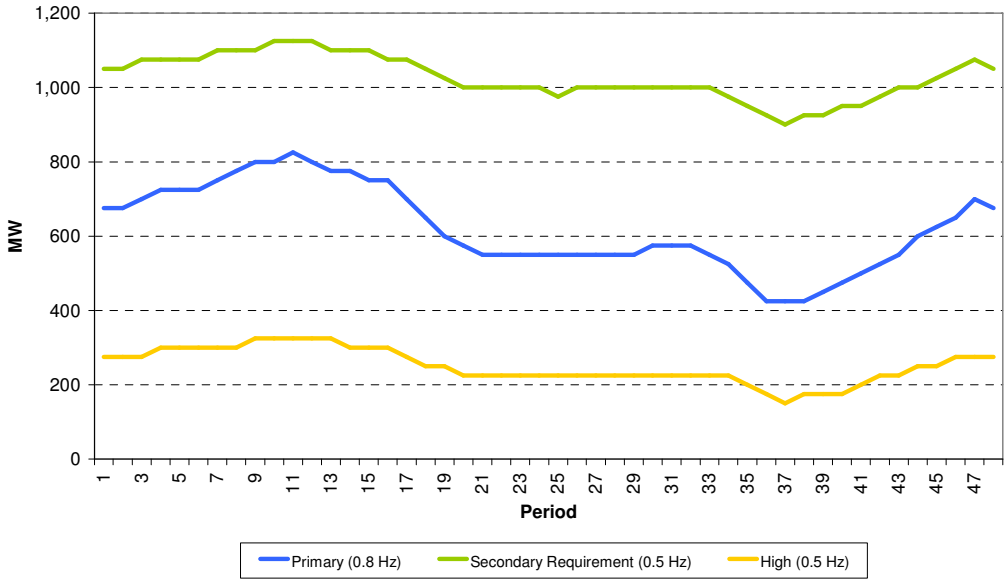


Figure 2



Minimum Dynamic Response Requirement

The indicative minimum required levels for Dynamic response are shown for Weekdays, Figure 3, and Saturdays, Sundays and Bank Holidays, Figure 4. The levels are shown for delivery at 0.5 Hz deviation, although 0.2 Hz is the largest frequency deviation within normal operational range. The total amount of response delivered by Dynamic providers contributes to meeting the Total Response Requirement, Figures 1 and 2, above.

Indicative Minimum Dynamic Response Requirement - Weekday

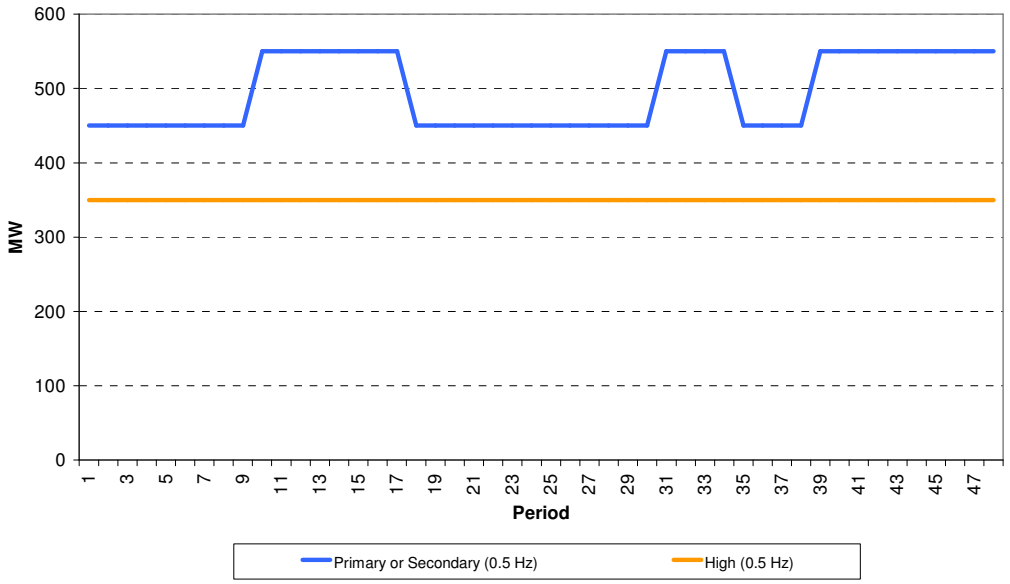


Figure 3

Indicative Minimum Dynamic Response Requirement - Weekend

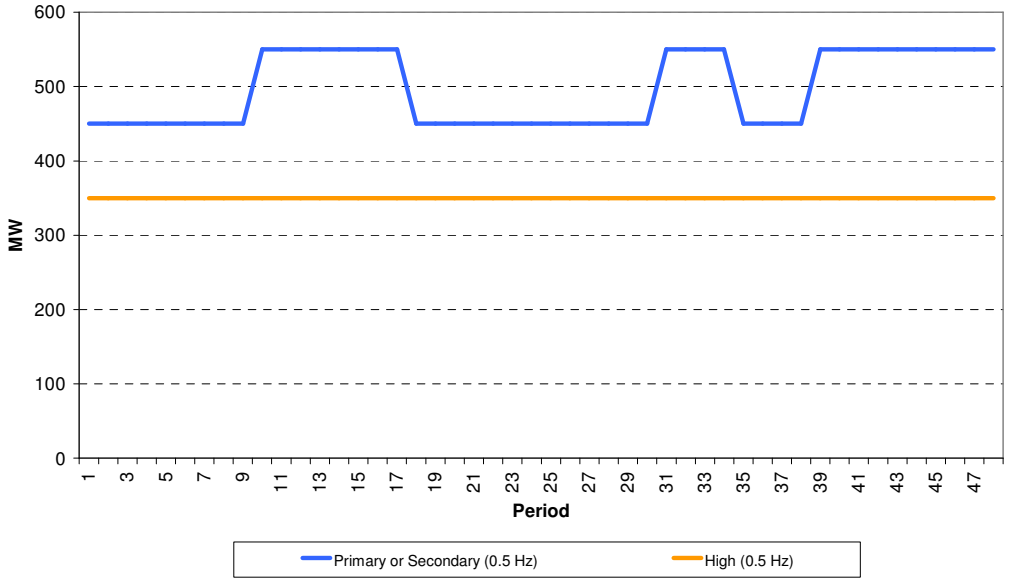


Figure 4

Maximum Non-Dynamic Response Level

The expected maximum level of Non-Dynamic Response is shown below for Weekdays, Figure 5, and for Saturdays, Sundays and Bank Holidays, Figure 6.

Indicative Maximum Non-Dynamic Response Level - Weekday

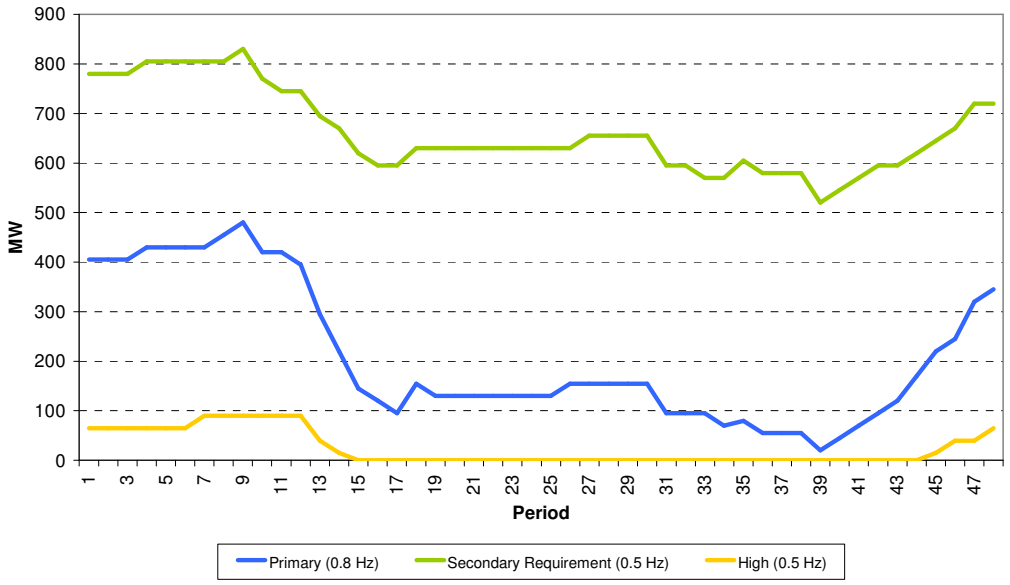


Figure 5

Indicative Maximum Non-Dynamic Response Level - Weekend

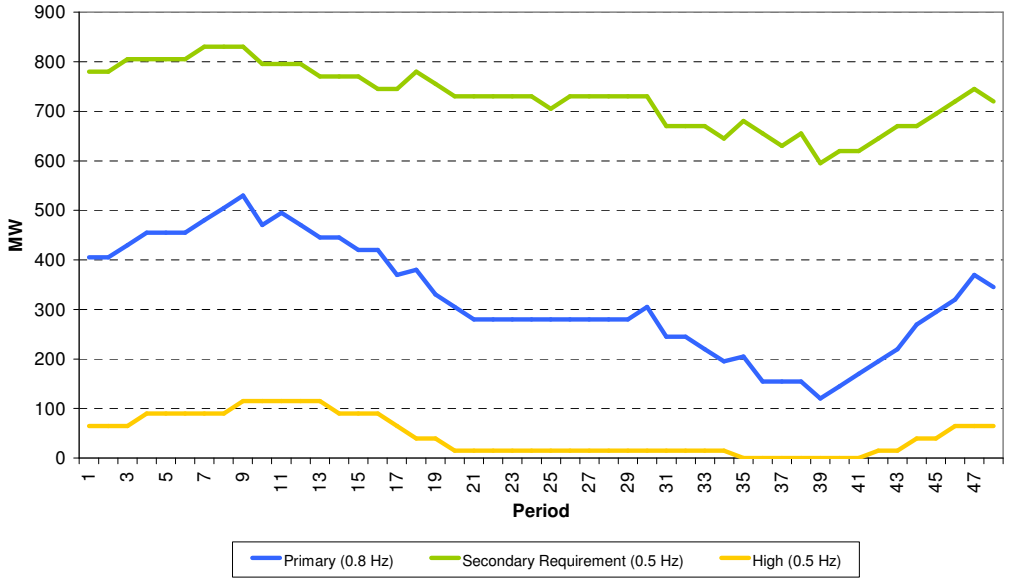


Figure 6

The maximum level of Non-Dynamic Response achievable is the Total Response Requirement (at 0.5 and 0.8Hz) less the Minimum Dynamic Response Requirement delivery (at 0.5 and 0.8Hz as appropriate).

Balancing Mechanism instructions on Frequency Responsive plant

Figure 7, below, shows a post-event analysis of the volume of Bid Offer Acceptances instructed on Balancing Mechanism Units that were, in conjunction with the delivery of the BOA energy, also providing Frequency Response. This analysis covers **November 2008 and December 2008** on a daily basis. This data gives an indication of periods during which National Grid takes balancing actions which also contribute to the optimisation of the response holding across the system. However, readers should be aware that this is only indicative and actions may have been required for other reasons apart from (or as well as) Frequency Response optimisation (such as resolving energy imbalance or transmission system constraints).

Response BOA Summary for December 08

Total Response Bid Cost	= £ 2,941,841
Total Response Bid Volume	= -292,955GWh
Total Response Offer Cost	= £ 565,624
Total Response Offer Volume	= 20,151 GWh

Where

Response Offer Cost = Volume_Offers x (Offer_Price – Energy Reference Price)
Response Bid Cost = Volume_Bid x (Bid_Price – Energy Reference Price)

Energy Reference Price

The Energy Reference Price is the volume weighted average of the submitted bids or offers available to resolve NIV ignoring plant dynamics. This also does not include non-BM standing reserve prices, trades, PGBTS or SO-SO trades. The Energy reference Price is calculated for each settlement period individually as follows:

Short Market: All submitted Offers up to the value of NIV, Capped by MEL, unconstrained by dynamic parameters

Long Market: All submitted Bids on synchronised plant down to zero, includes Demand Side Bidders and unsynchronised units (e.g. DINO/FFES pumps), unconstrained by dynamic parameters

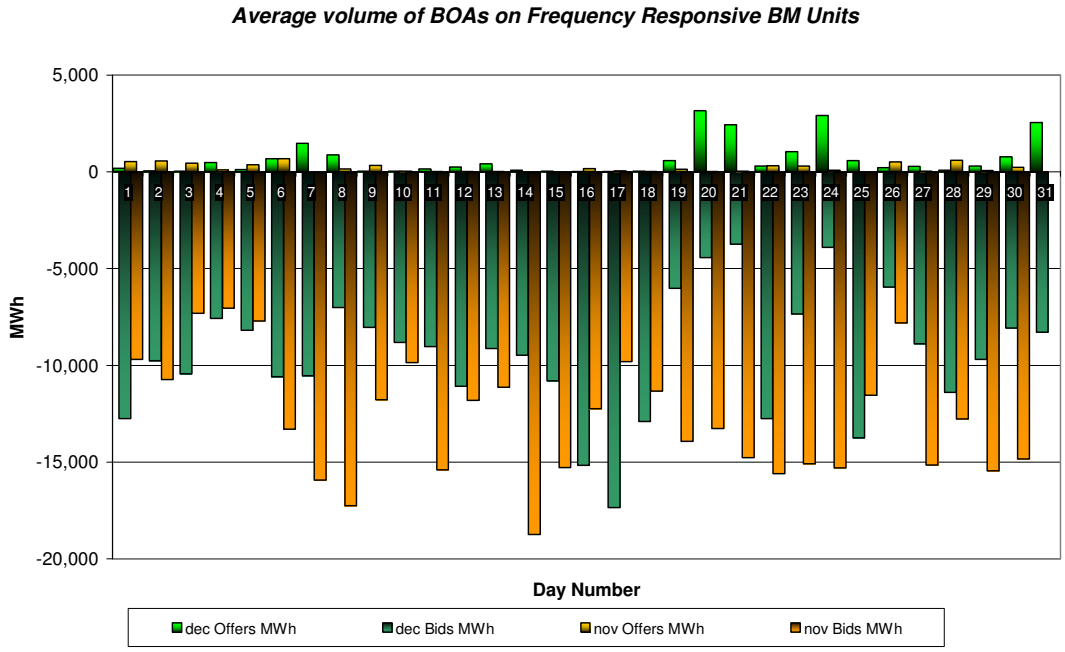


Figure 7

Figure 8 represents this data on a settlement period basis.

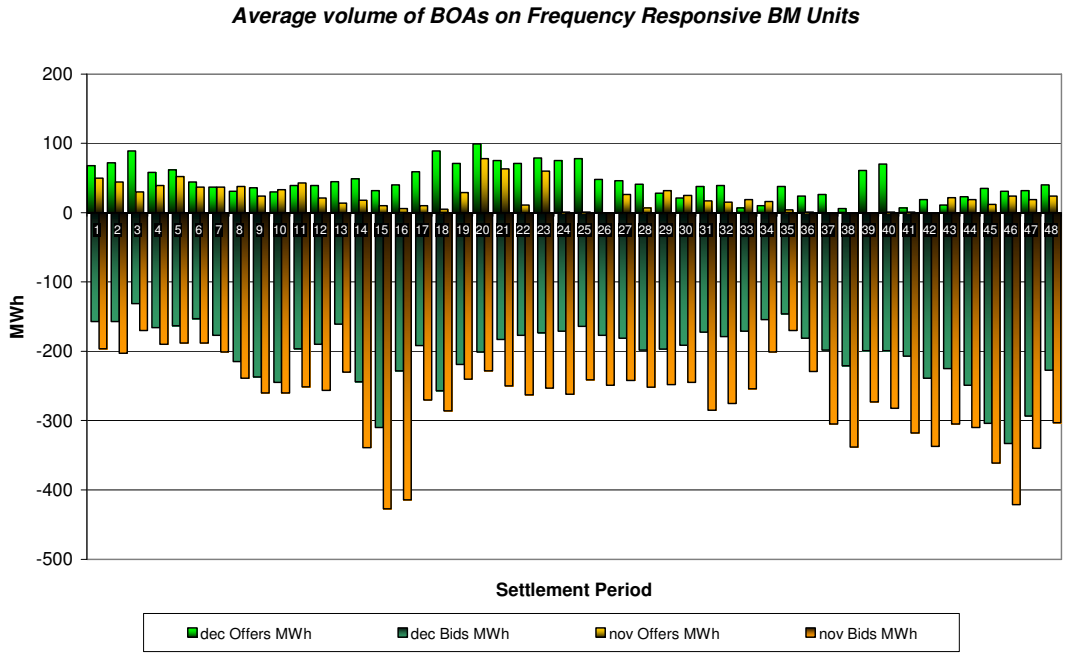


Figure 8

Indication of Firm Contract Position

Figure 9 below shows the aggregated firm position that National Grid has already procured for weekdays through a combination of non-dynamic and dynamic providers.

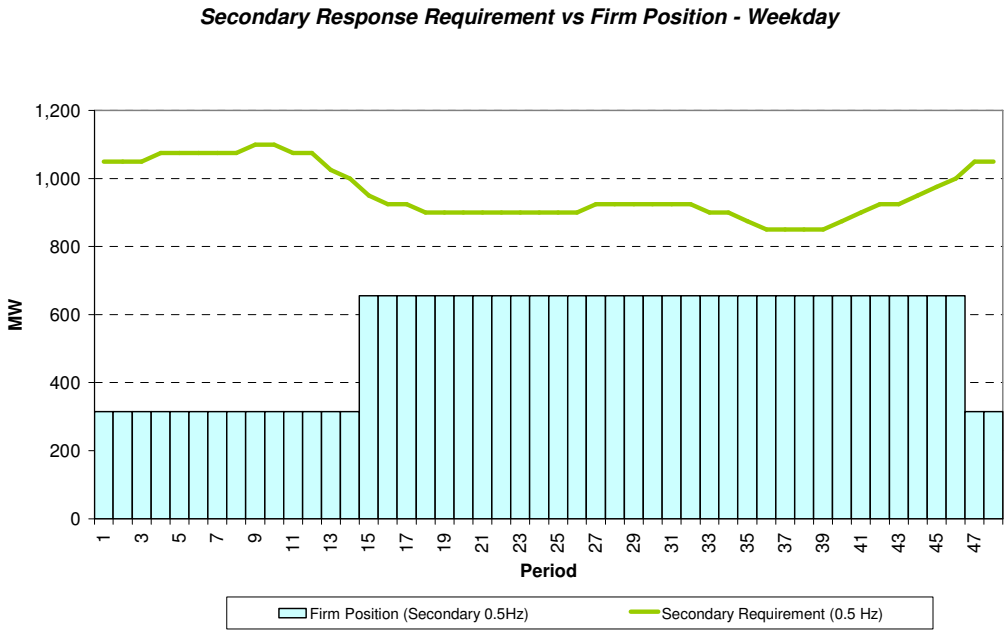


Figure 9

Figure 10 below shows the aggregated firm position that National Grid has already procured for weekend through a combination of non-dynamic and dynamic providers.

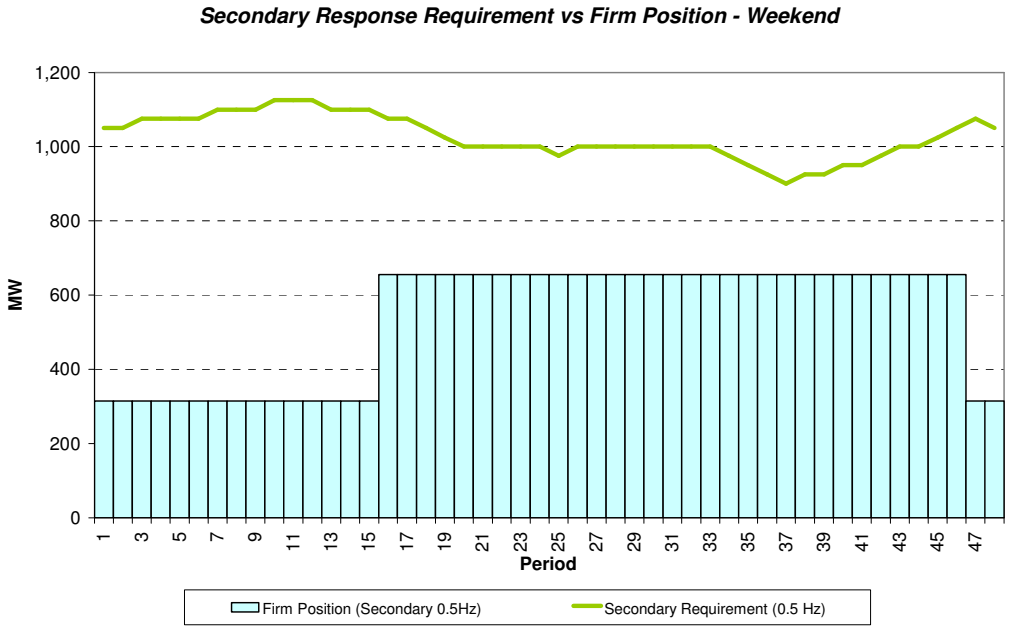


Figure 10

The total volumes for Frequency Response holding on Mandatory service providers are **1,093 GWh** for **November 2008** and **1,076 GWh** for **December 2008**, and break down into price bands as follows:

nov 2008	Primary	Secondary	High
Price band (£/MW/h range)	Volume (MWh)	Volume (MWh)	Volume (MWh)
Greater than 8	15,416	0	249,016
6 to 8	26,843	0	170,999
4 to 6	42,801	7,858	93,097
2 to 4	178,467	113,538	9,121
0 to 2	50,238	110,839	24,302
Totals	**313.8 GWh**	**232.2 GWh**	**546.5 GWh**
Costs	**£1.13 m**	**£0.47 m**	**£4.26 m**
Total Frequency Response Holding Volume			**1,093 GWh**
Total Frequency Response Holding Cost			**5.85 £m**

dec 2008	Primary	Secondary	High
Price band (£/MW/h range)	Volume (MWh)	Volume (MWh)	Volume (MWh)
Greater than 8	6,633	424	218,201
6 to 8	48,355	0	188,480
4 to 6	45,535	9,833	85,539
2 to 4	171,535	83,864	43,655
0 to 2	42,275	127,516	4,127
Totals	**314.3 GWh**	**221.6 GWh**	**540.0020 GWh**
Costs	**£1.27 m**	**£0.41 m**	**£4.06 m**
Total Frequency Response Holding Volume			**1,076 GWh**
Total Frequency Response Holding Cost			**5.75 £m**

Note: To produce the above numbers for publication on 1st December the last 3 days November have been calculated using estimates. The table will be updated retrospectively in next months report.

Please note that the MW/h units of payment are defined in the CUSC and do not relate to the units of 0.8Hz Primary and 0.5 Hz Secondary and High Response as quoted for the requirements, above.

For **February 2009**, Frequency Response Requirements are anticipated to be in line with the forecast Figures 1 – 6, above. The availability of response services on optional contracts and on part loaded units means that it is unlikely that National Grid will seek to procure the entirety of its forecast requirement through this tender round. However, National Grid will procure in line with the principles laid out in the Assessment Principles.

For the month of **February 2009,** tenders from eligible Service Providers for Firm Frequency Response should be submitted by **8th January 2009** (5th business day). National Grid will notify Service Providers of the outcome of the tender assessment by **19th January 2009** (12th business day). For successful tenders, National Grid will notify nominated windows, following assessment, by the **21st January 2009** (14th business day).

Tenders should be sent for the attention of:

Bea Ennim
Network Operations
National Grid plc
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Tenders can be sent by email to Bea.Ennim@uk.ngrid.com