

Firm Frequency Response

Market Information for Tenders for December 2005

National Grid publishes this information, in order to inform potential participants for the Firm Frequency Response tender round for December 2005.

Total Frequency Response Requirements

Our indicative daily Total Requirement for Frequency Response in December 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.

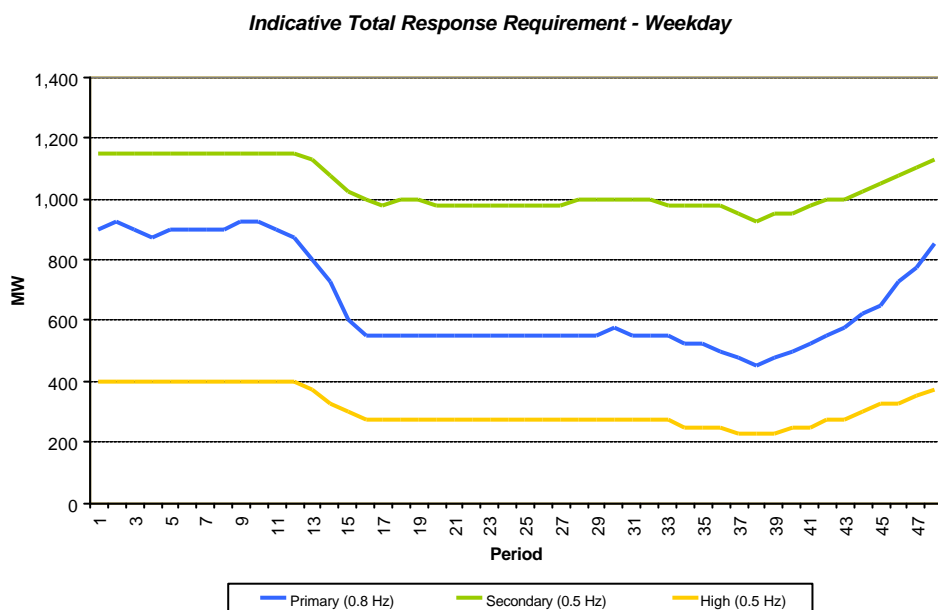


Figure 1

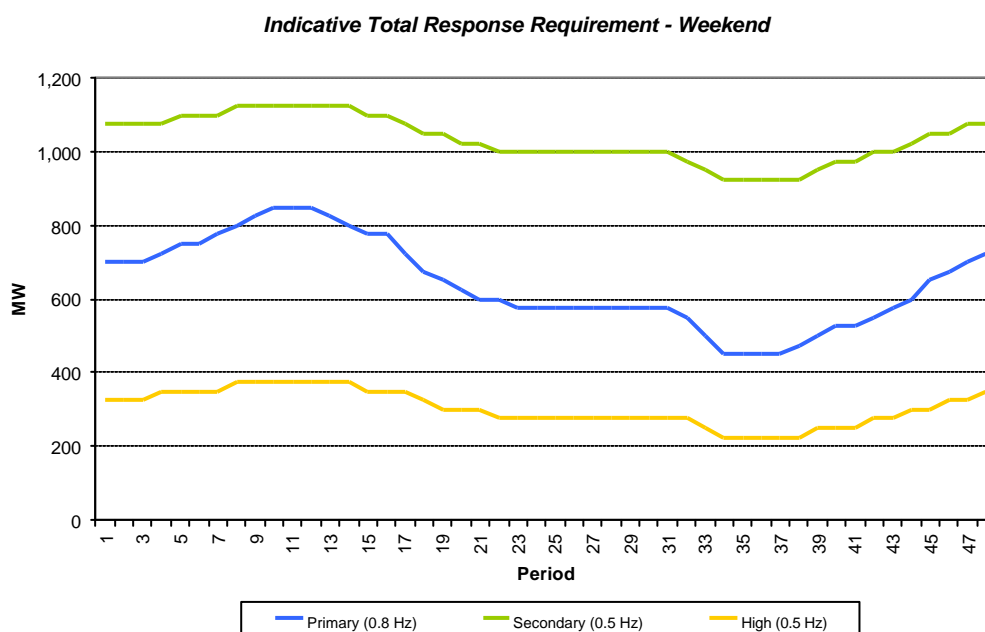


Figure 2

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

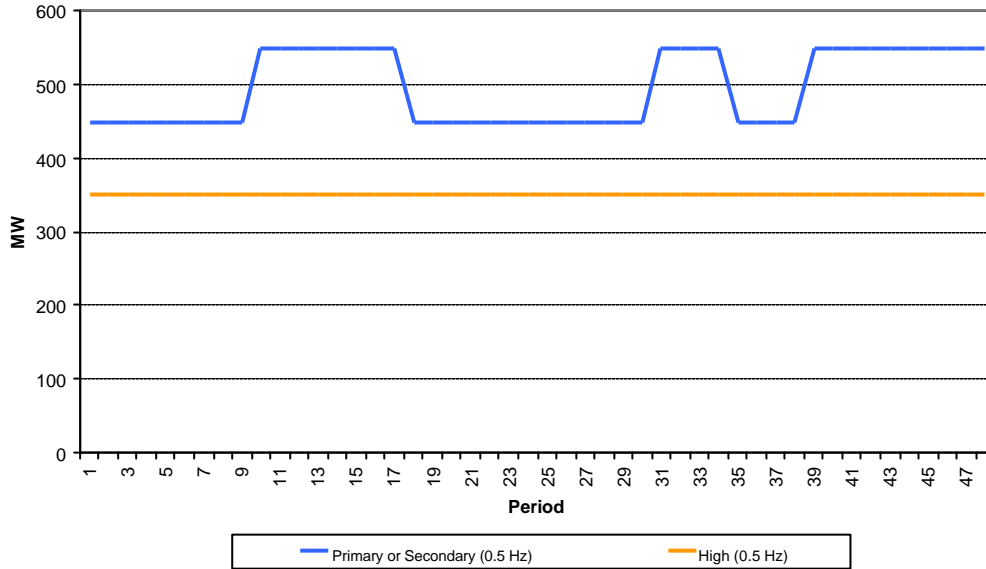


Figure 3

Indicative Minimum Dynamic Response Requirement - Weekend

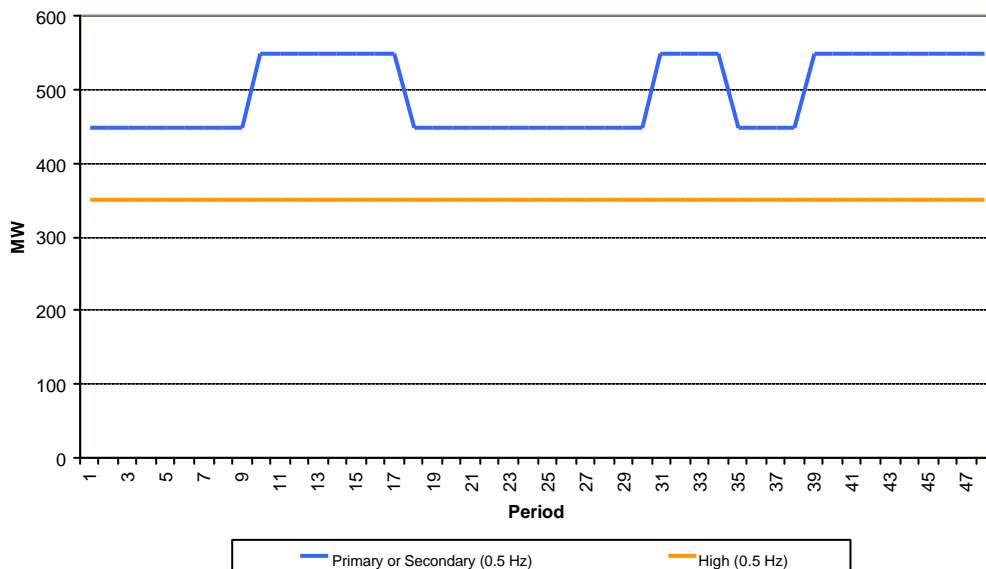


Figure 4

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.

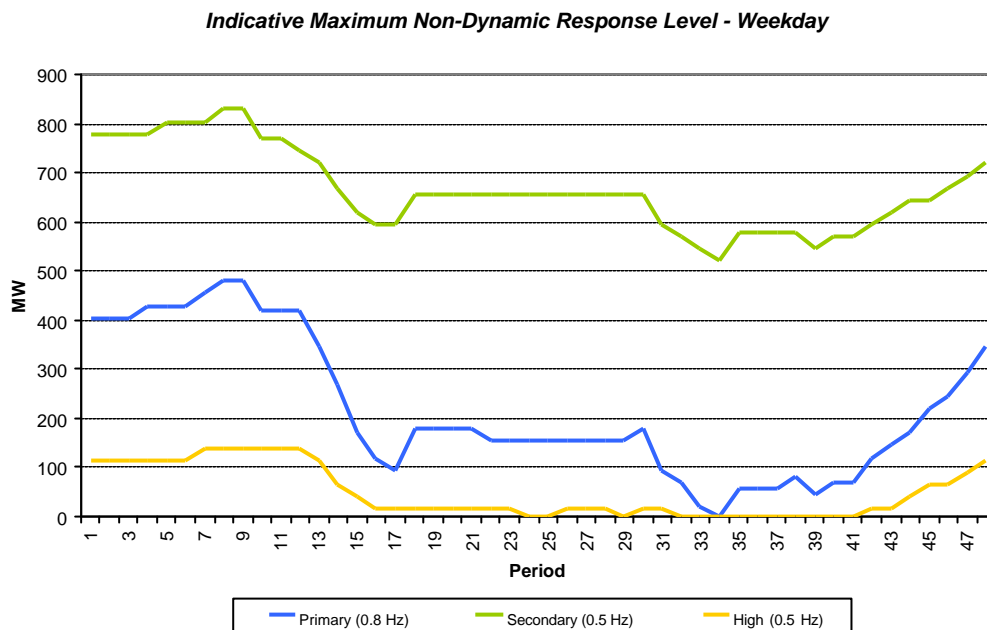


Figure 5

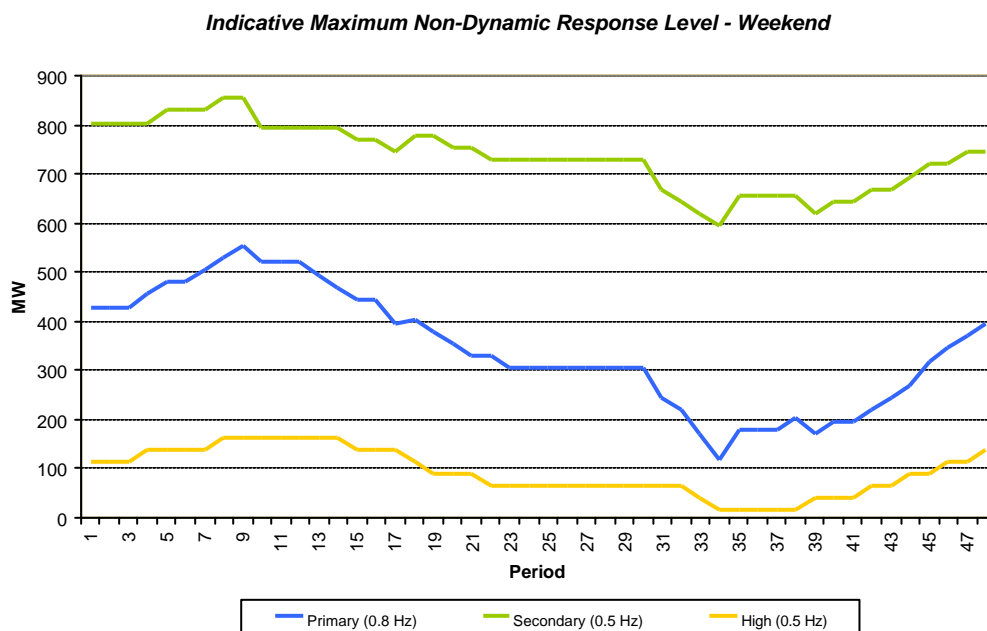


Figure 6

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 August 2005 (1st to 31st) and September 2005 (1st to 30th) 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).

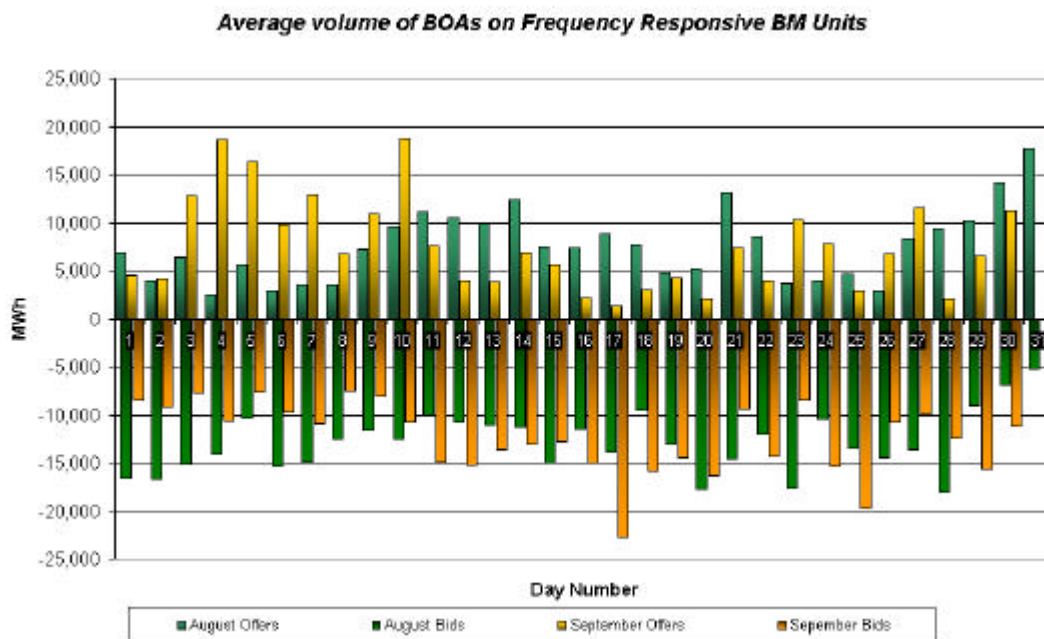


Figure 7

Figure 8 represents this data on a settlement period basis.

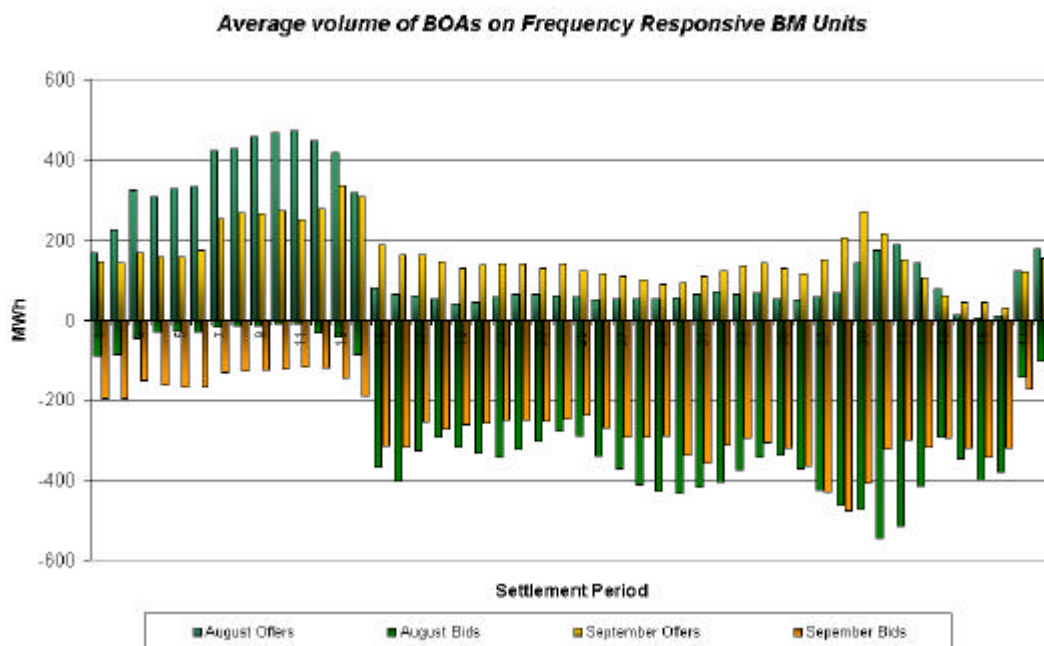


Figure 8

The total volumes for Frequency Response holding on Mandatory service providers of **1,352 GWh** for July and **1,310 GWh** for August break down into price bands as follows:

AUGUST	Primary	Secondary	High
Price band (£/MW/h range)	Volume (MWh)	Volume (MWh)	Volume (MWh)
Greater than 2	413,967	280,833	21,731
1.5 to 2	2,017	103	0
1 to 1.5	81	4,223	44,260
0.5 to 1	0	3,648	468,676
0 to 0.5	0	7,890	104,815
Totals	416.1 GWh	296.7 GWh	639.5 GWh
Costs	£1.10 m	£0.82 m	£0.47 m
Total Frequency Response Holding Volume			1,352 GWh
Total Frequency Response Holding Cost			2.39 £m

SEPTEMBER	Primary	Secondary	High
Price band (£/MW/h range)	Volume (MWh)	Volume (MWh)	Volume (MWh)
Greater than 2	393,891	259,209	18,553
1.5 to 2	2,313	237	0
1 to 1.5	12	2,324	31,908
0.5 to 1	0	3,450	441,881
0 to 0.5	0	6,186	149,766
Totals	396.2 GWh	271.4 GWh	642.1 GWh
Costs	£1.03 m	£0.77 m	£0.44 m
Total Frequency Response Holding Volume			1,310 GWh
Total Frequency Response Holding Cost			2.24 £m

The above charts and tables show that from August to September overall Frequency Response holding volumes decreases by ~3% leading to an decrease in costs of ~6%. 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 December 2005, 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 \[Hyperlink\]](#).

For the month of **December** tenders from eligible Service Providers for Firm Frequency Response should be submitted by 7th November 2005. National Grid will notify Service Providers of the outcome of the tender assessment by 16th November 2005. For successful tenders, National Grid will notify nominated windows, following assessment, by the 18th November 2005.

Tenders should be sent for the attention of:

Bea Ennim
Operations & Trading
National Grid plc
NG House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

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