

Firm Frequency Response

Market Information for Tenders for August 2006

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 in August 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.

Indicative Total Response Requirement - Weekday

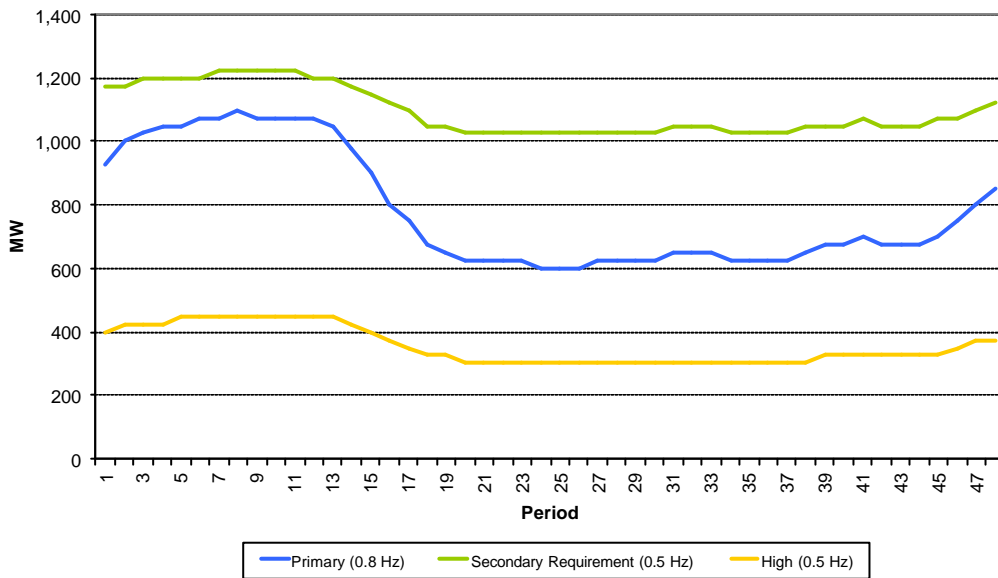


Figure 1

Indicative Total Response Requirement - Weekend

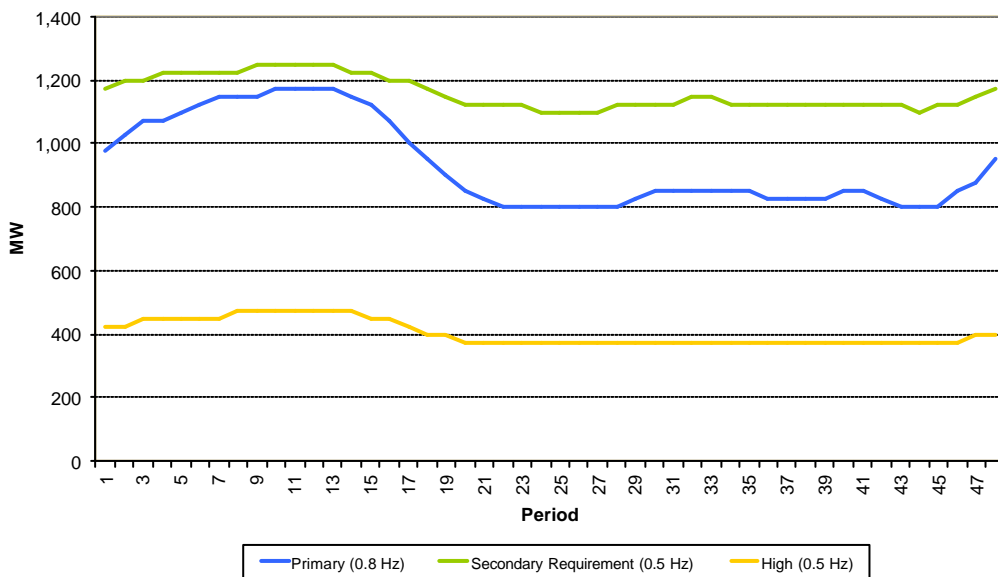


Figure 2

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

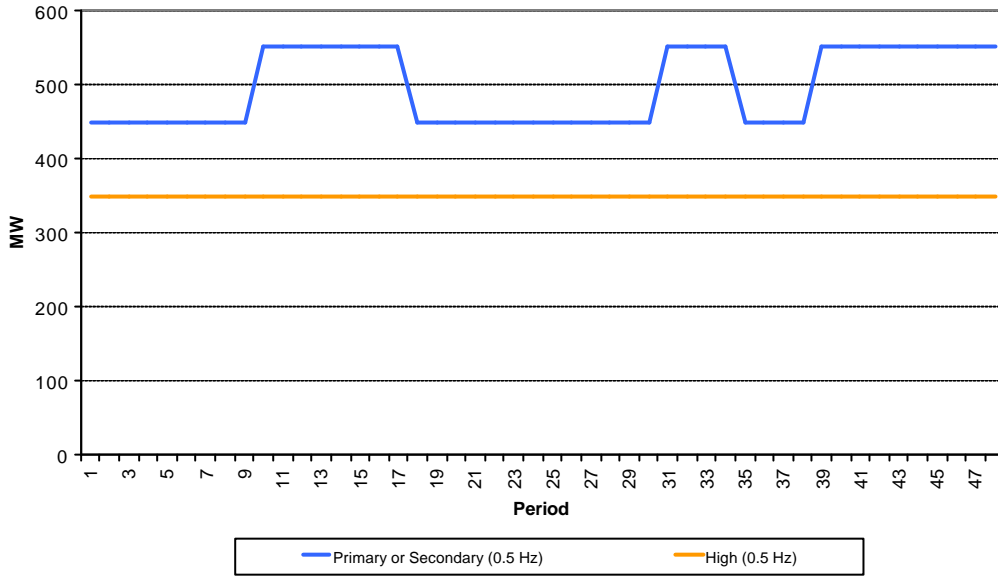


Figure 3

Indicative Minimum Dynamic Response Requirement - Weekend

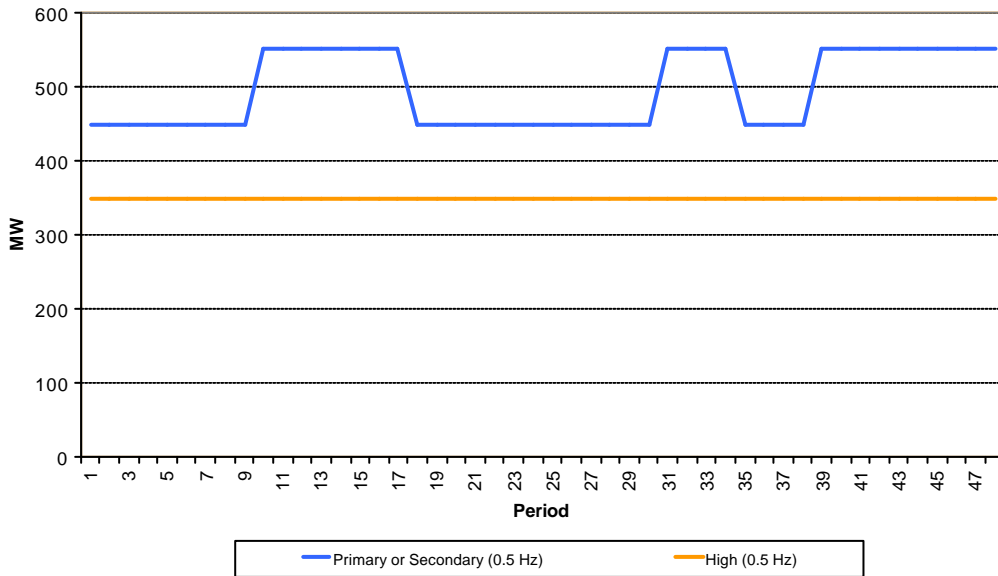


Figure 4

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.

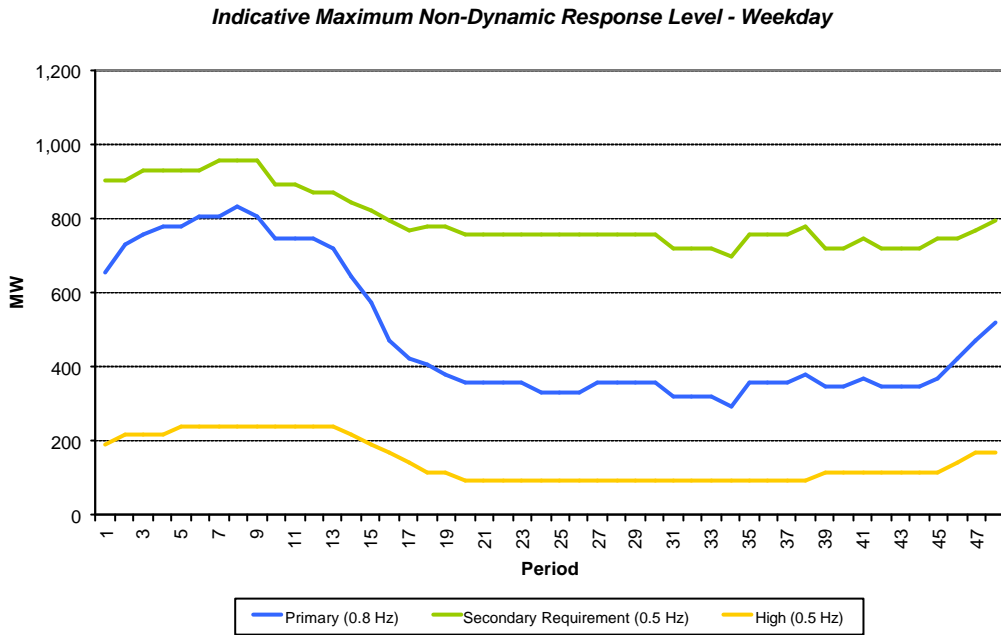


Figure 5

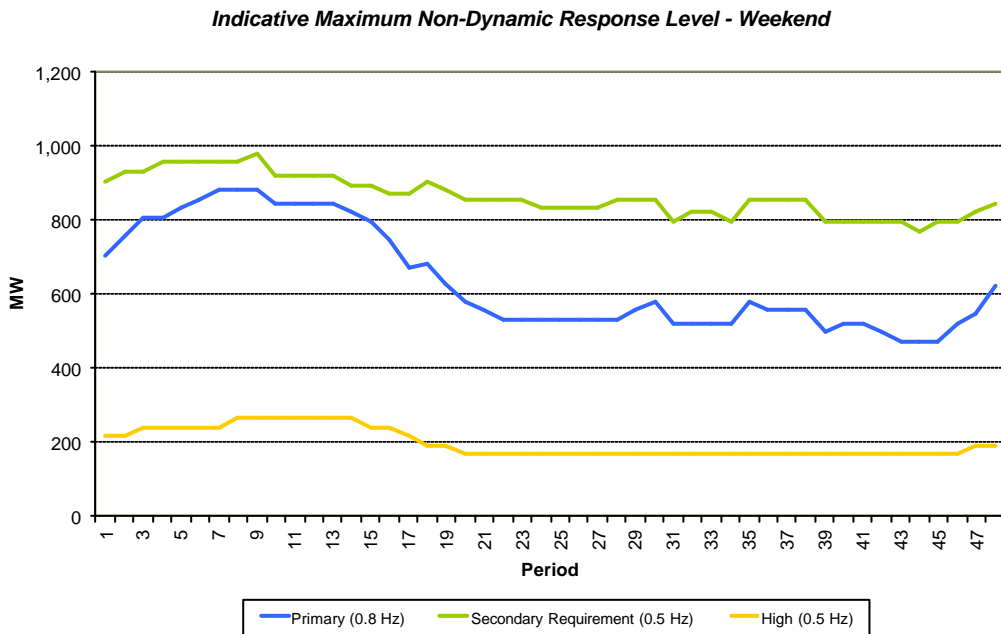


Figure 6

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 April 2006 (1st to 30th) and May (1st to 31st) 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).

Average volume of BOAs on Frequency Responsive BM Units

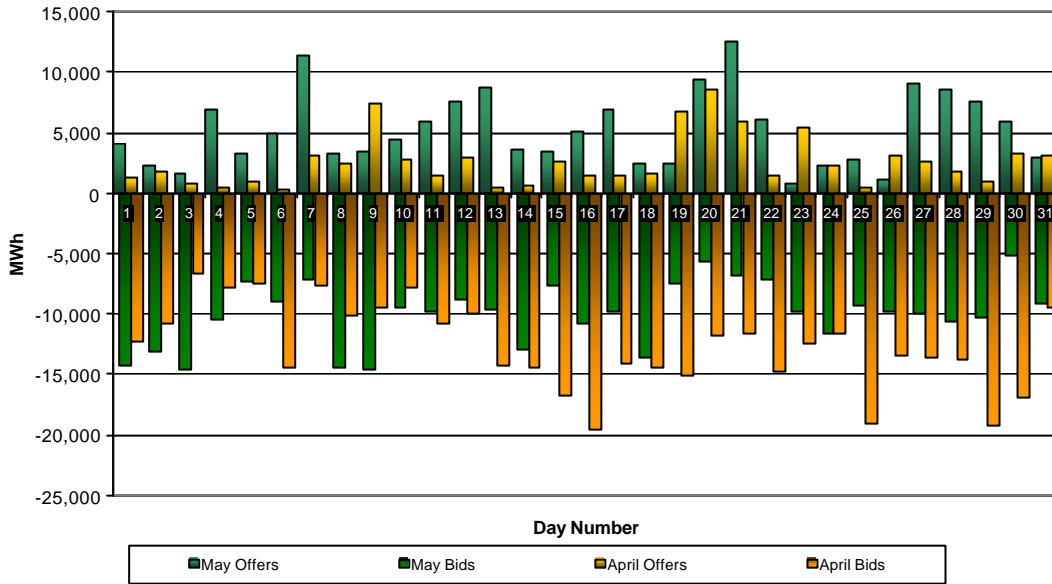


Figure 7

Figure 8 represents this data on a settlement period basis.

Average volume of BOAs on Frequency Responsive BM Units

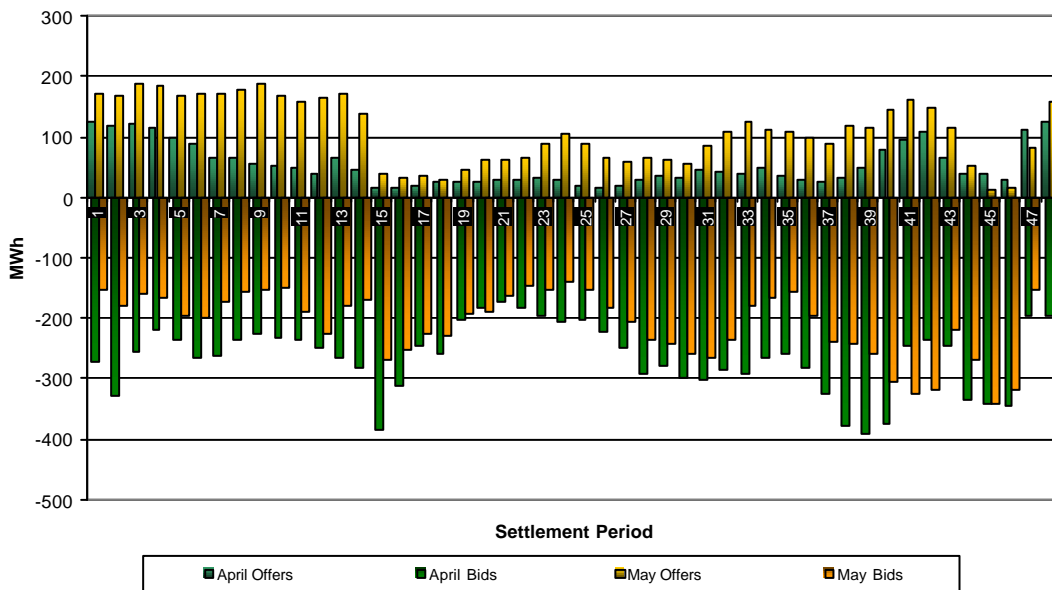


Figure 8

Indication of Firm Contract Position

Figure 7 below shows the aggregated firm position that National Grid has already procured for weekdays through a combination of non-dynamic and dynamic providers.

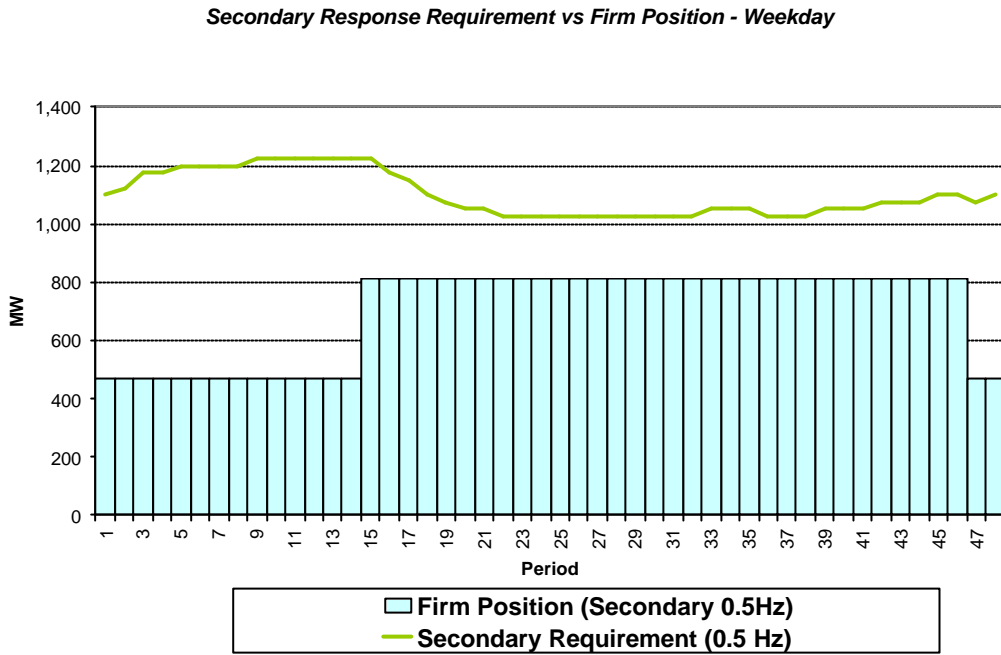


Figure 7

Figure 8 below shows the aggregated firm position that National Grid has already procured for weekend through a combination of non-dynamic and dynamic providers.

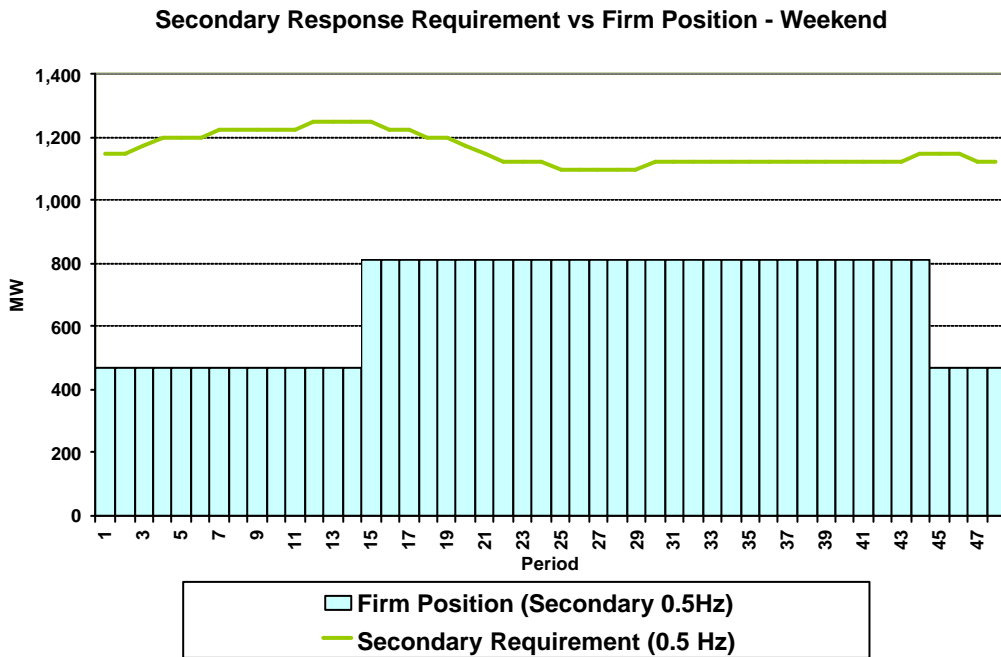


Figure 8

The total volumes for Frequency Response holding on Mandatory service providers are **1136 GWh** for April and **1120 GWh** for May, and break down into price bands as follows:

May	Primary	Secondary	High
Price band (£/MW/h range)	Volume (MWh)	Volume (MWh)	Volume (MWh)
Greater than 8	15,782	6,801	82,189
6 to 8	17,515	5,223	12,487
4 to 6	74,883	106,137	153,245
2 to 4	96,538	74,032	138,522
0 to 2	132,554	34,286	169,601
Totals	337.3 GWh	226.5 GWh	556.0 GWh
Costs	£1.27 m	£1.02 m	£2.57 m
Total Frequency Response Holding Volume			1,120 GWh
Total Frequency Response Holding Cost			4.87 £m
April	Primary	Secondary	High
Price band (£/MW/h range)	Volume (MWh)	Volume (MWh)	Volume (MWh)
Greater than 8	13,803	4,995	36,563
6 to 8	29,620	11,988	3,098
4 to 6	69,071	166,017	217,330
2 to 4	93,322	65,383	161,773
0 to 2	135,888	2,733	124,169
Totals	341.7 GWh	251.1 GWh	542.9 GWh
Costs	£1.11 m	£1.24 m	£2.47 m
Total Frequency Response Holding Volume			1,136 GWh
Total Frequency Response Holding Cost			4.82 £m

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 August 2006, 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 **August**, tenders from eligible Service Providers for Firm Frequency Response should be submitted by 7th July 2006. National Grid will notify Service Providers of the outcome of the tender assessment by 18th July 2006. For successful tenders, National Grid will notify nominated windows, following assessment, by the 20th July 2006.

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