

Procurement Guidelines Report

1 April 2005 to 31 March 2006

As required by Standard Condition C16
of National Grid's Electricity Transmission Licence

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Procurement Guidelines Report for The National Grid Company 1st April 2005 to 31st March 2006

1. Introduction

National Grid procures Balancing Services subject to the framework laid down in Condition C16 of the Transmission Licence. This framework obliges National Grid to “operate the transmission system in an efficient, economic and co-ordinated manner” and also requires a number of statements and reports on the procurement and use of Balancing Services to be established. The **Procurement Guidelines** is one of these statements, and sets out the principles used in our procurement of Balancing Services, the kinds of Balancing Services that we may be interested in purchasing and the mechanisms by which we do so. The Procurement guidelines is published on the National Grid Industry Information website and is subject to annual review and industry consultation. When a new Procurement Guidelines statement is published annually (covering the forthcoming relevant period), National Grid is required to produce a **Procurement Guidelines Report** (“Report”) covering the preceding relevant period, having previously agreed the ‘form’ of the Report with The Authority.

1.1 Purpose of Procurement Guidelines Report

The purpose of the Report is to provide information in respect of the relevant¹ Balancing Services that National Grid has procured in the defined reporting period.

1.2 Form of Procurement Guidelines Report

The proposed form of the Report was approved by the Authority on 25th April 2006. The report follows a similar form to the 2004/2005 Informal Procurement Guidelines Report. The opportunity still remains for Participants to submit comments and suggestions to the Authority on the scope and content of any subsequent Procurement Guidelines Reports.

1.3 Reporting Period

In accordance with Condition C16 of the Transmission Licence, the Report will be produced within one month after the publication date of the revised Procurement Guidelines Statement. Version 6.0 of the Procurement Guidelines became effective on 1st April 2006, therefore the period covered by this Report is 1st April 2005 – 31st March 2006.

¹ Other than balancing services acquired by the acceptance of an offer or bid in the Balancing Mechanism, provided such offer or bid was not made pursuant to any other previously agreed Balancing Service. (refer to section 1.6)

The information utilised in this report is the best available at the time of publication and may be subject to minor changes as a result of final reconciliation.

1.4 Balancing Services

The Balancing Services National Grid has procured, either via market arrangements or bilateral contracts, throughout the period covered by the Report, are:

- Frequency Response
- Reactive Power
- Fast Start
- Black Start
- Reserve Services - Fast Reserve, Standing Reserve, Warming and Hot Standby
- Inter-trips
- All Other Services
- System to System Services
- Energy Related Products (including PGBT's)

It is important to note that Balancing Services are procured from both Balancing Mechanism and Non Balancing Mechanism Parties.

For further information regarding the type of providers of Balancing Services please consult the [Procurement Guidelines](#)

1.5 Structure of Report

This report presents the Balancing Services under three main titles –

- Services Procured via Market Arrangements
- Services Procured via Non-Tendered Bilateral Contracts
- A summary section providing the high level information for all services for the financial year 2005-06.

1.6 Services not included in the report

The scope of the Procurement Guidelines and, consequentially, this report do not include the acceptance of Bids or Offers in the Balancing Mechanism. Further information on Bid and Offer acceptances is contained within the [Balancing Principles Statement Report](#). All Bid and Offer information is available by clicking the following link to the NETA web site - [Balancing Mechanism Reporting System \(BMRS\)](#).

2. Services Procured Via Market Arrangements

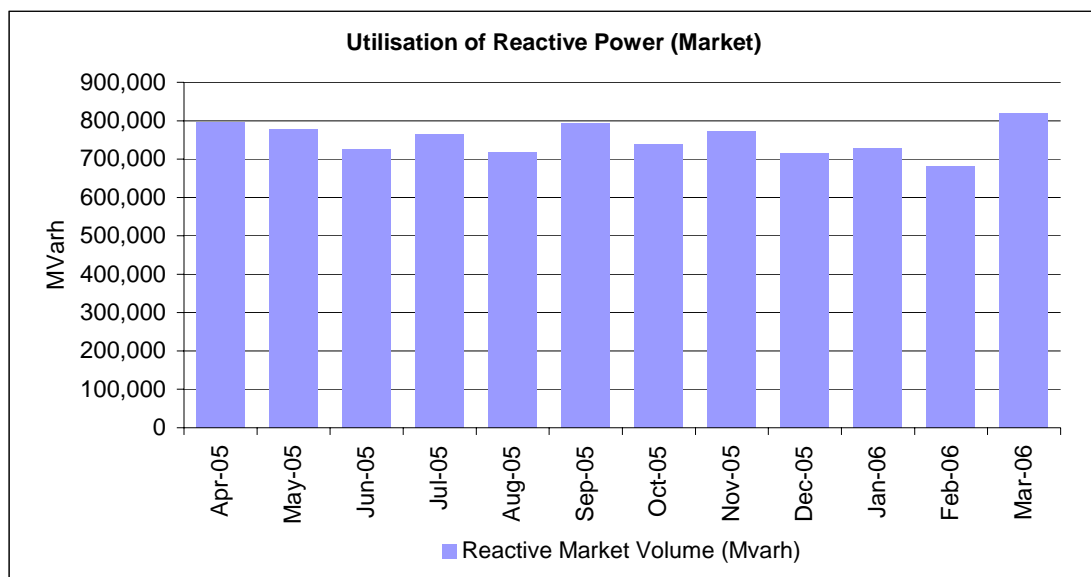
2.1 Reactive Power

National Grid manages voltage on the transmission system within statutory limits to ensure quality of supply. In doing this we ensure that reactive power resources are provided on a localised basis to meet the constantly varying needs of the system, and that there is sufficient reactive power reserve available to meet contingencies.

Market Arrangements for Reactive Power

All contracts awarded via tender round 15 (TR15) commenced on the 1st April 2005 and tender round 16 (TR16) commenced on the 1st October 2005. Further information regarding the nature of these contracts can be found in the [Reactive Market Report TR15](#). & [Reactive Market Report TR16](#).

Utilisation of Reactive Power under market arrangements over the relevant period is detailed in the chart below.



Over this period, the total spend relating to the capability and utilisation costs of reactive power procured via market arrangements was **£17.0m**.

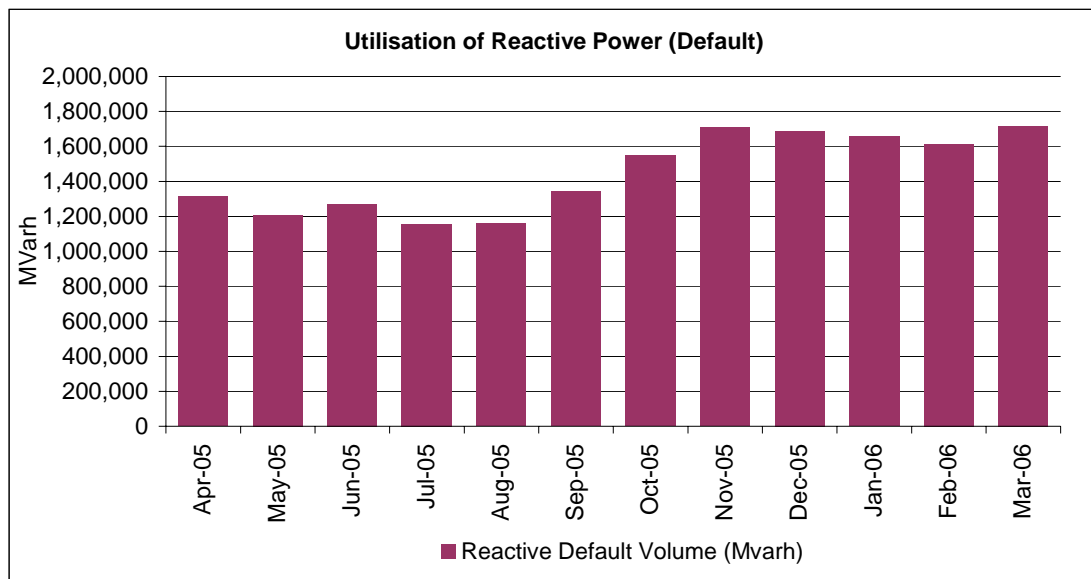
Further information is contained on the National Grid Industry information Web Site, please click on the following link to be re-directed to the relevant information on the [Reactive Power Market](#).

Default Arrangements for Reactive Power

The total amount spent on Reactive Power under the default arrangements during this reporting period was **£37.5m**.

Utilisation of Reactive Power under Default arrangements over the relevant period is detailed in the chart below.

For further information regarding the default payment arrangements please click on the following the link - [Obligatory Reactive Power Service \(ORPS\) Default Payment Arrangements](#)



Over this period, the combined total spend on reactive power was **£54.5m**

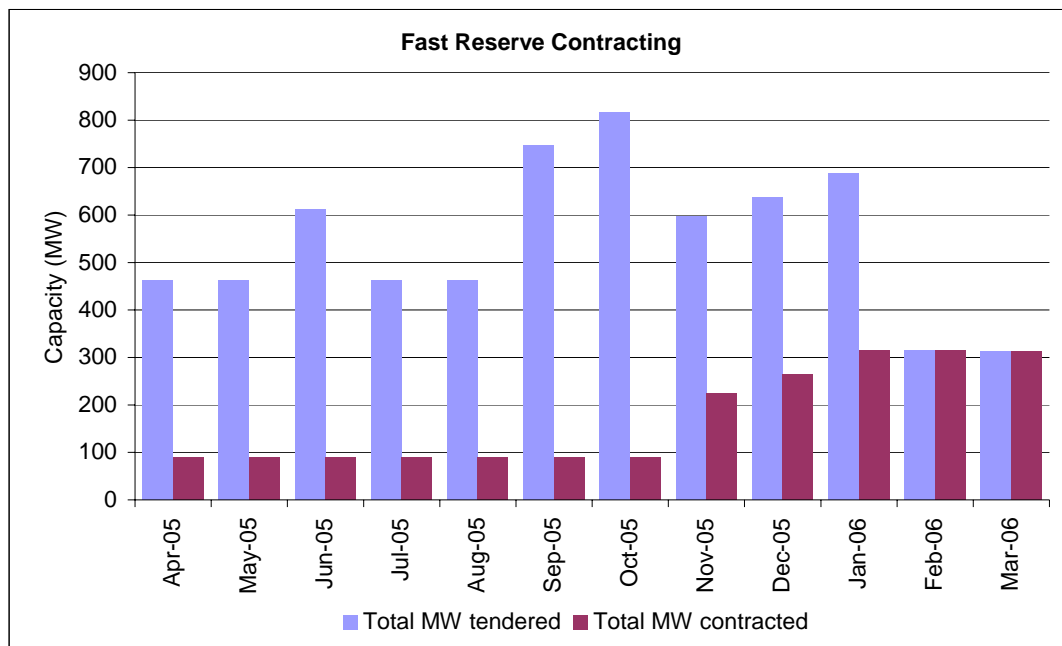
2.2 Fast Reserve (Tendered)

Further information explaining the service and assessment criteria of tenders for this Balancing Service can be found by clicking the following link for [assessment principles for firm fast reserve](#).

The table detailed below lists the tender details for the relevant month.

Tender Round	Eligible companies	Eligible units	Units tendered	Units accepted	Total MW tendered	Total MW contracted	Max GWh tendered	Max GWh contracted
Apr-05	6	18	3	1	463	90	152.88	42.48
May-05	6	18	2	1	463	90	156.86	43.38
Jun-05	6	18	4	1	613	90	210.48	42.48
Jul-05	6	18	3	1	463	90	157.66	43.74
Aug-05	6	18	3	1	463	90	157.66	43.74
Sep-05	6	18	4	1	746	90	222.98	42.48
Oct-05	6	18	5	1	816	90	253.72	43.74
Nov-05	6	18	4	2	597	224	191.07	80.67
Dec-05	6	18	4	2	638	265	208.84	95.10
Jan-06	6	18	4	2	688	315	223.56	109.82
Feb-06	6	18	2	2	316	316	99.72	99.72
Mar-06	6	18	2	2	314	314	99.72	109.89

The following graph shows the variation in Fast Reserve capacity contracting by month.



A total of **2,064MW** of capacity was contracted during the period 1 April 2005 to 31 March 06. The total spend on availability and utilisation excluding bids and offers was **£4.5m**.

For more information on [Fast Reserve](#) please click the link. Fast Reserve Contracts placed through non-tendered bilateral agreements are detailed in section 3.6 of this report.

2.3 Standing Reserve and Supplemental Standing Reserve

Standing Reserve

The following tables illustrate the tendering and contracting activity for 2005/2006.

Tender Round	NUMBER TENDERED				
	Tenders Received	BM	Non-BM	Committed	Flexible
2005/06	160	54	106	77	83

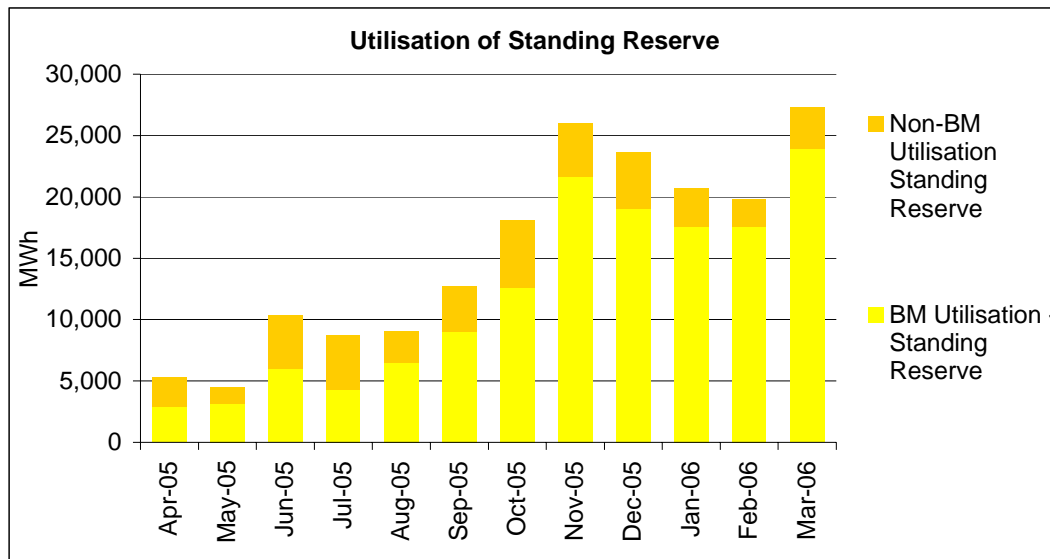
Tender Round	NUMBER CONTRACTED				
	Tenders Contracted	BM	Non-BM	Committed	Flexible
2005/06	132	48	84	67	65

Tender Round	VOLUME TENDERED (MW)*				
	Volume Received	BM	Non-BM	Committed	Flexible
2005/06	2911	2011	900	2337	574

Tender Round	VOLUME CONTRACTED (MW)*				
	Volume Contracted	BM	Non-BM	Committed	Flexible
2005/06	2175	1472	703	1762	413

*Volume received values are based on maximum number received in any one tender round.

The following graph shows the utilisation of Standing Reserve.



The average availability payment for Standing Reserve during this period was **£4.65/MW/h** for non-working days, and **£4.65/MW/h** for working days. The total spend on availability payments, plus utilisation payments to NBM providers, in the period was **£41.2m**.

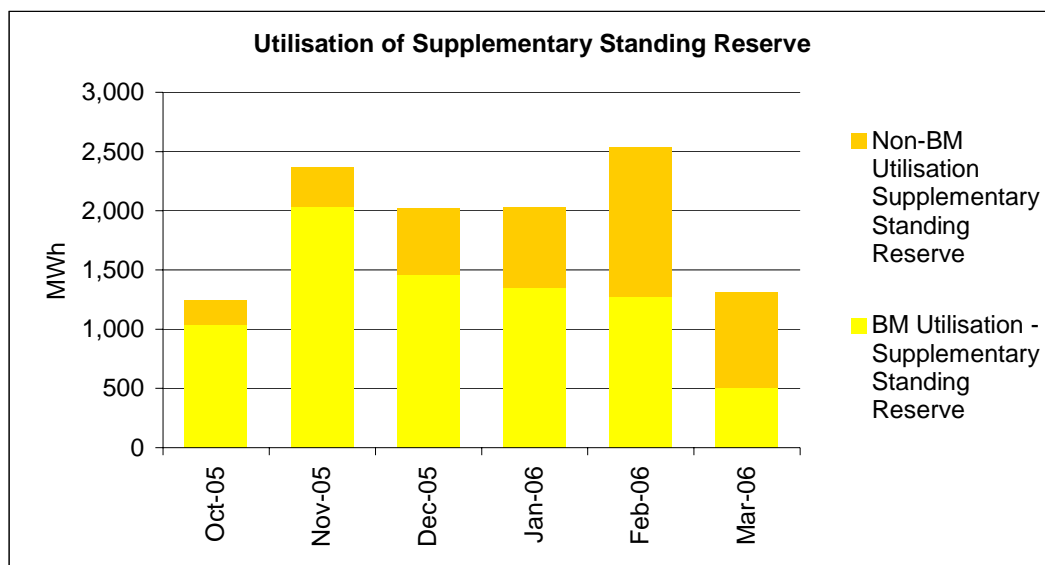
For further information on the nature of this service please see the [Standing Reserve Introduction document](#) or the [Standing Reserve Market Report](#)

Supplemental Standing Reserve

Supplemental Standing Reserve (SSR) is an optional service that National Grid may tender for with-in year to complement the annual Standing Reserve tender process.

The decision to issue an invitation to the industry to tender for SSR may be for economic purposes or as part of National Grid's wider reserve obligations.

National Grid did initiate a tender process for SSR in order to enable the economic procurement of an increased level of firm ex-ante reserve above that previously procured via the annual Standing Reserve tender for winter 2005/06.



National Grid procured SSR for working days only in this tender round.

The average availability payment for Supplemental Standing Reserve during this period was **£6.31/MW/h**. The total spend on availability payments, plus utilisation payments to NBM providers, in the period was **£1.6m**.

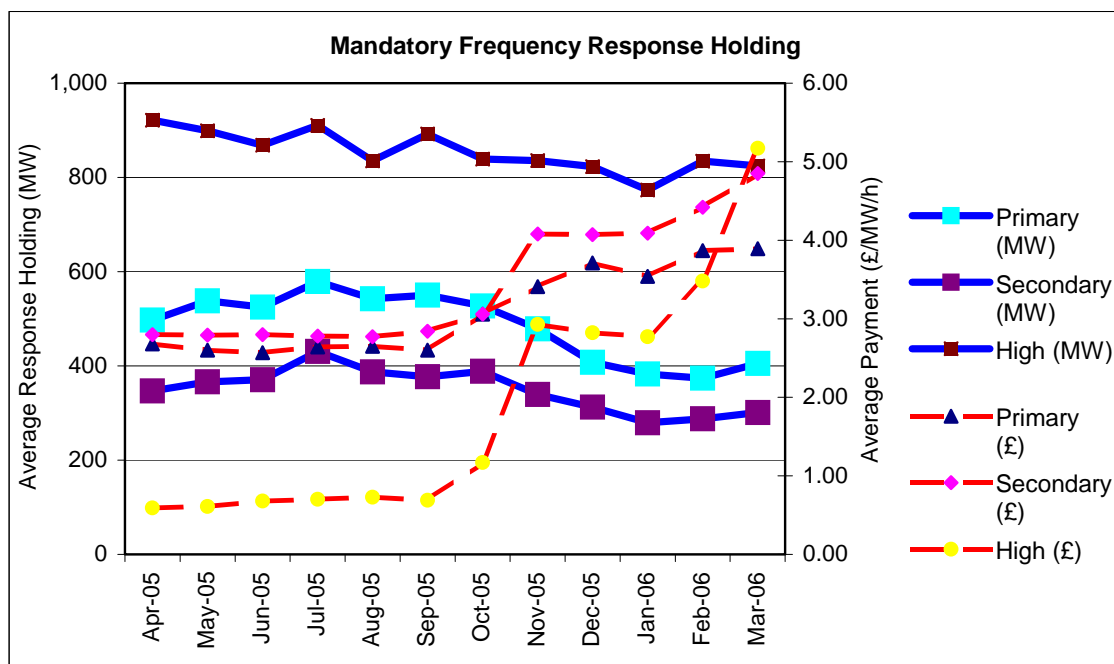
For more information regarding the Supplemental Standing Reserve service please click on the following link – [Supplemental Standing Reserve Market Report Winter 2005/06](#).

3 Services Procured via Non-Tendered Bilateral Contracts

3.1 Mandatory Frequency Response

Mandatory Frequency Response is a mandatory service provided by large generators (>100MW) to automatically change their active power output in response to a change in system frequency. The Grid Code Connection Condition 6.3.7 and 8.1 describe the technical requirements for this service.

Payments for Mandatory Frequency Response comprised a Holding Payment (£/MW/h) and a [Response Energy Payment](#) (£/MWh). Details on frequency response holding are given below.



The CUSC change proposal CAP047 was implemented in October 2005 with users holding payment rate submissions becoming effective from November 1, 2005. This change allowed service providers to submit separate individual prices related to the cost of holding Primary, Secondary and High Response on a monthly basis.

The following table shows the cost of average holding prices of instructed providers pre and post CAP047 implementation.

	Average £/Mwhr (Holding Cost)		
	Primary (£)	Secondary (£)	High (£)
Pre Cap047	£2.69	£2.83	£0.74
Post Cap047	£3.68	£4.30	£3.43

The total spend on Mandatory Frequency Response holding for financial year 2005/6 was **£36.2m**.

The total spend on Response Energy Payments was **(£5.0m)²**. The methodology for calculating these payments is given in CUSC section [4.1.3.9 & 4.1.3.9A](#).

The total spend on Mandatory Frequency Response energy during the reporting period was **£31.2m**.

3.2 Commercial Frequency Response

Commercial Frequency Response is a service that can be provided by demand side participants and generation plant. The technical characteristics of this service are different to those required under mandatory service arrangements, and range from enhanced mandatory dynamic services through to non-dynamic services effected via LF relays. Part of the contract portfolio includes services provided by demand side participants through Frequency Control Demand Management (FCDM). This is an aggregated volume service procured from demand side participants via a single agent.

Firm Frequency Response

The Firm Frequency Response (FFR) tender process has been introduced to replace certain types of contracted, bespoke, bilateral firm response services with a competitive tender process. In doing so FFR has introduced a route to market for providers whose services may otherwise be inaccessible.

Commercial Frequency Response services procured through the FFR process commenced October 2005

Firm Frequency Reponse	
Month	Total Costs (£m)
Oct-05	2.0
Nov-05	2.2
Dec-05	3.7
Jan-06	3.7
Feb-06	3.4
Mar-06	3.9
FFR Total Costs (£m)	18.9

The cost of other Commercial Frequency Response services in 2005/06 was **£16.2m**

The total amount spent on Commercial Frequency Response holding during the reporting period was **£35.1m**.

Further information is available by clicking the [Commercial Frequency Response](#) link.

² The Response Energy Payment can be both a positive or negative payment, dependant upon the relative volumes of high and low frequency response dispatched during the course of the relevant month.

3.3 Fast Start

Fast Start is the ability of Open Cycle Gas Turbine (OCGT) plant to start rapidly from a standstill condition and to deliver its rated power output automatically within a defined time period. Fast Start details below;

Average Capability Payment Rate	£10.76/MWh
Total spent	£4.3m

Further information is available by clicking the [Fast Start](#) link.

3.4 Black Start

During the reporting period there were up to **23** stations with Black Start agreements in place. No new agreements were entered into during the period. The total amount paid during the relevant reporting for the availability of the Black Start service was **£14.5m**.

Further information is available by clicking the [Black Start](#) link.

3.5 Warming & Hot Standby

The table below contains information relating to the procurement of Warming and Hot Standby Balancing Services;

Month	Total Contracted Capacity MW	Total Actual MW Instructed	Average Warming Contract Price £/MWh	Average Hot Standby Contract Price £/MWh	Average Actual Price Warming £/Mwh	Average Actual Price Hot Standby £/Mwh
Apr-05	28,711	54,381	10.86	8.62	0.59	5.67
May-05	28,711	79,659	10.86	8.62	0.97	5.64
Jun-05	28,711	65,338	10.86	8.62	1.37	12.60
Jul-05	28,711	55,627	10.86	8.62	1.36	5.88
Aug-05	28,711	22,932	10.86	8.62	0.92	2.20
Sep-05	28,711	102,638	10.86	8.62	2.19	6.45
Oct-05	28,711	120,273	10.86	8.62	3.43	5.78
Nov-05	28,711	66,042	10.86	8.62	4.70	9.96
Dec-05	28,711	25,162	10.86	8.62	3.22	11.50
Jan-06	28,711	16,241	10.86	8.62	3.43	4.11
Feb-06	28,711	9,464	10.86	8.62	6.33	23.14
Mar-06	28,711	17,372	10.86	8.62	4.05	8.87

The total amount spent on Warming and Hot Standby during the reporting period was **£7.4m**.

Further details are available by clicking the [Warming & Hot Standby](#) link.

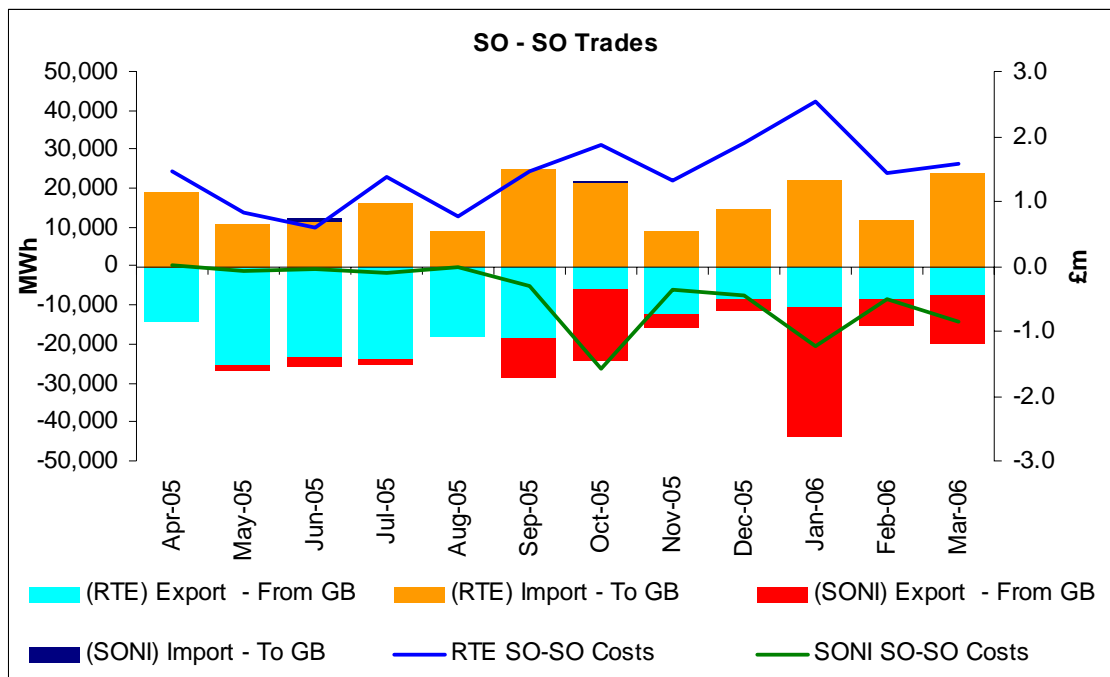
3.6 Fast Reserve (Procured on a Non-Tendered basis)

Non-Tendered Fast Reserve is a service that is contracted on a bilateral basis with service providers. The nature of the service is similar to the Firm Fast Reserve service although the payment and utilisation mechanisms differ for each service.

The availability payments during the relevant month totalled **£32.2m**. (Excluding Utilisation Via Offers and Bids Accepted in the Balancing Mechanism).

3.7 System to System Services

System to System services are provided mutually with other Transmission System Operators connected to the GB system via interconnectors. Such services are typically used to manage interconnector transfer profiles and to increase or reduce power flows across an interconnector to resolve transmission constraints on either side, or provide Emergency Assistance if required. The graph below shows the total net volume imported and exported between GB, France and Ireland.



The total energy volumes associated with system to system services during the reporting period was **269GWh** Export (from England) and **196GWh** Import (to GB).

A total spend associated with system to system services during the reporting period was **£12.6m**

3.8 System to Generator Operational Intertripping Schemes

National Grid is party to a number of agreements relating to Intertripping schemes as defined under section 4.2.A of the CUSC.

These schemes fall under a number of different category types, a proportion of these categories entitle the counter party to payments for the arming (capability fee) and utilisation of this service.

2005/6 System to Generator Operational Inter-tripping scheme costs

Capability Payments **£0.1m**

Utilisation Payments **£0.0m**

3.9 All Other Services

During the reporting period a number of Balancing Services were utilised that are not reported specifically due to contract confidentiality and commercially sensitive information. For the purpose of reporting this spend has been aggregated. These include bespoke services to manage specific system conditions and costs relating to fee and liabilities.

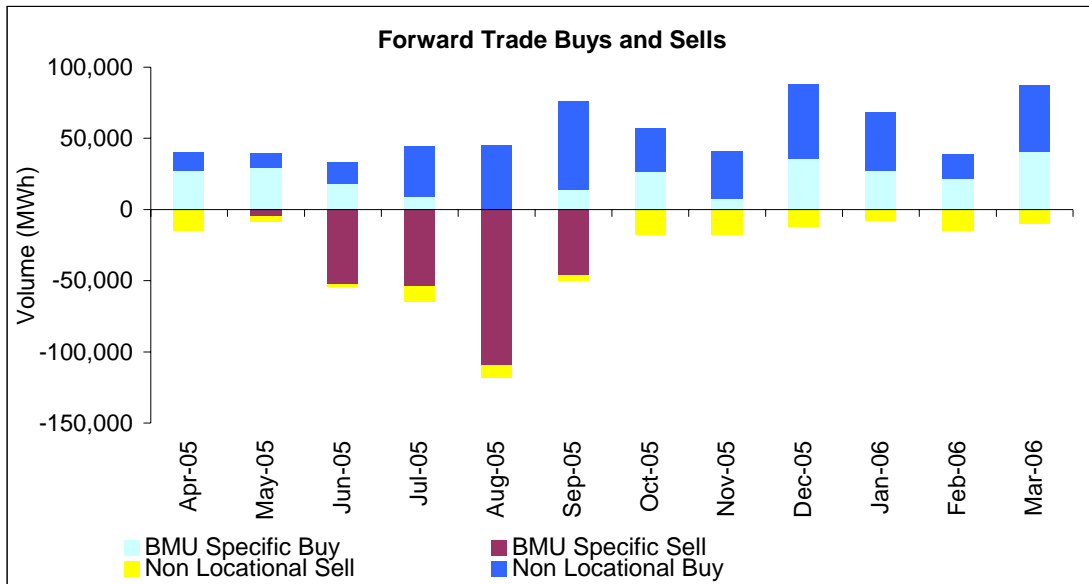
A total spend on All Other Services during the reporting period was **£10.1m**.

3.10 Forward Trading

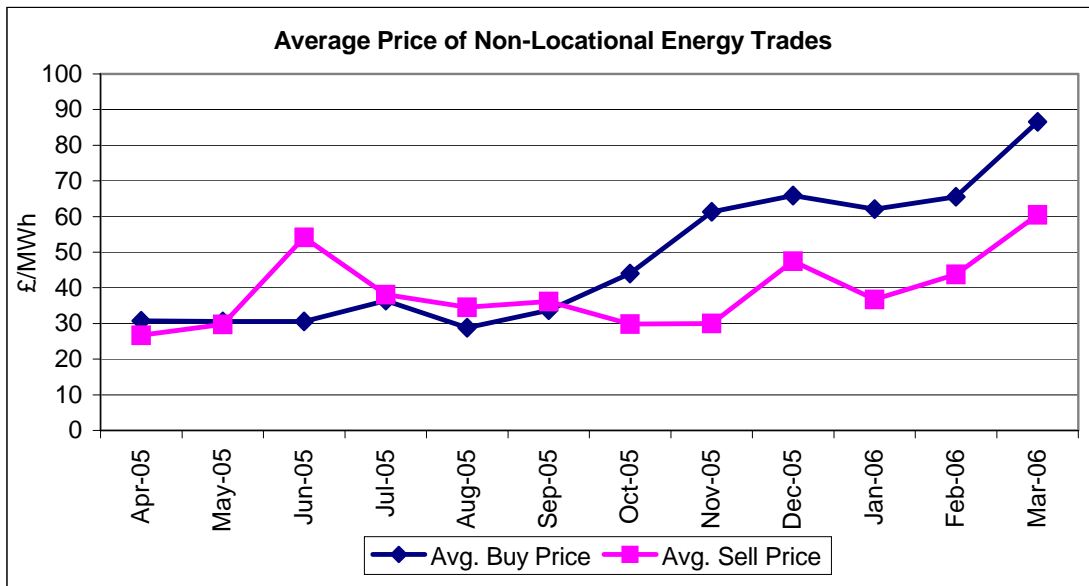
National Grid's forward trading is undertaken to reduce the overall costs of balancing the system, and to resolve system issues as appropriate. There are a number of products and procurement mechanisms available. During the reporting period, National Grid traded a gross volume of **1,052,874 MWh**.

Non Locational		} Total Net Spend £34.2m
Buy Volume	403,134 MWh	
Sell Volume	124,755 MWh	
BMU Specific		
Buy Volume	257,243 MWh	
Sell Volume	267,742 MWh	

The following chart shows the monthly profile of our trading activities, both for non-locational energy trades and BMU-Specific trades;



The following chart shows the monthly profile of our trading activities, combined for buy and sell non-locational energy trades;



Further details are available by clicking the [Energy Related Products](#) link.

3.11 Pre-Gate BMU Transactions (PGBTs)

Information on PGBT activity is given in the table below.

PGBT Transactions Sourced and Agreed

PGBT	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Sourced	0	0	6	5	3	15	10	20	6	7	0	1
Agreed	0	0	4	2	2	10	4	14	5	4	0	1

Price £/MWh	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Avg Buy	0	0	88.6	80.0	86.1	0	0	380.3	417.3	177.9	0	450
Avg Sell	0	0	0	0	0	1.9	8.1	0	0	17.6	0	0

Volume MWh	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Buy	0	0	4,770	2,400	2,503	0	0	24,226	5,473	2,274	0	1,256
Sell	0	0	0	0	0	44,811	9,003	0	0	11,827	0	0

Total	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Buy	0	0	0.4	0.2	0.2	0.2	0	9.2	2.3	0.4	0	0.6
Sell	0	0	0	0	0	(0.1)	(0.1)	0	0	(0.2)	0	0
Cost £m	0	0	0.4	0.2	0.2	0.1	(0.1)	9.2	2.3	0.2	0	0.6

The total net spend on PGBTs during the reporting period was **£13.1m**.

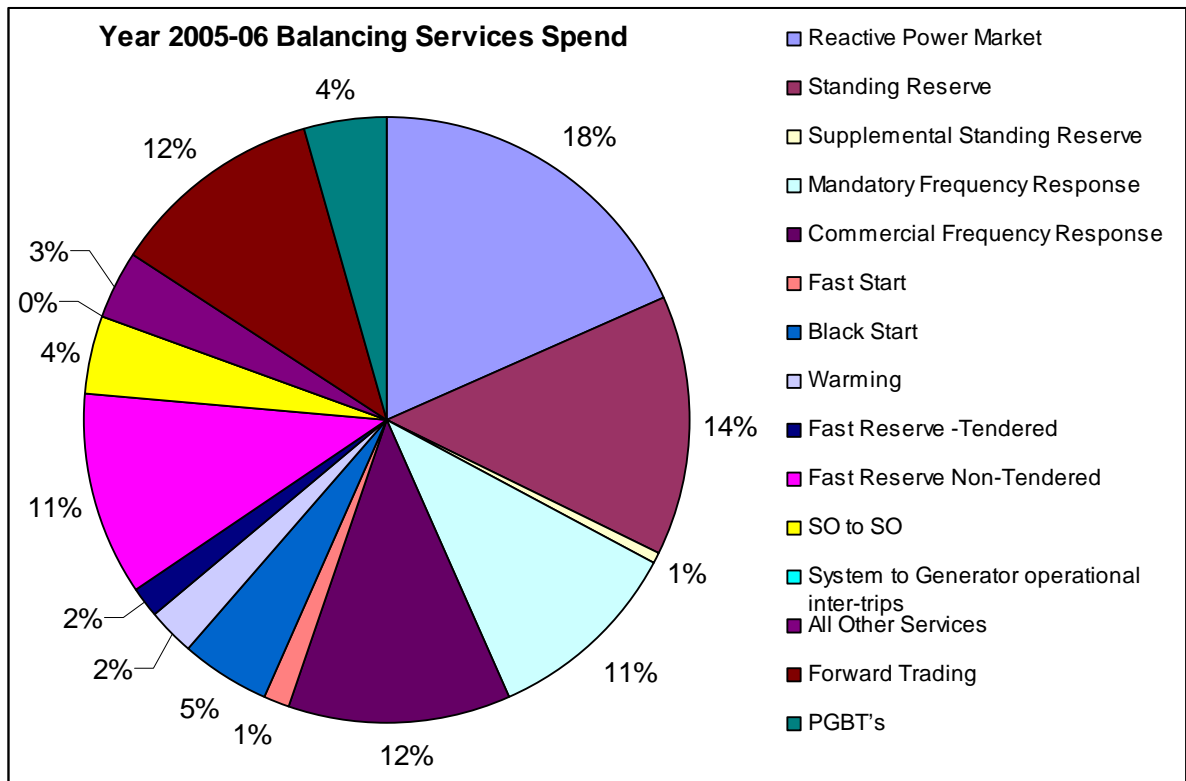
Details on real time PGBT transactions can be found on the BMRS (system warning page) and post event, on the [National Grid information website](#).

Further information is available through the link on [PGBT offers](#).

4. Summary

This report has provided information on the Balancing Services procured (or acquired) during the relevant period.

As a summary of financial activity, the following breakdown of balancing service costs is provided by category, for this reporting period.



5. Further information

For further information on the types of Balancing Services that National Grid intends to procure, please refer to the prevailing **Procurement Guidelines**. Information on bid and offer acceptances in the Balancing Mechanism is contained within the **Balancing Principles Statement Report**. These documents, along with the **Procurement Guidelines Report**, are published in accordance with Standard Condition C16 of the Transmission Licence and are available on the National Grid Industry Information website at:

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

Electricity Balancing Development

Email: Balancingservices@uk.ngrid.com

6. Information Summary Page

Balancing Service	Info Provision	Value
Reactive Power Market	Utilisation Volume (MA)	9,030,983 Mvarh
	Utilisation Volume (DefaultPM)	17,379,846 Mvarh
	Total Spend (MA)	£17.0m
	Total Spend (Default PM)	£37.5m
Standing Reserve	<u>Average availability payments:</u>	
	Non-Working Days	£4.65/MW/h
	Working Days	£4.65/MW/h
	Total Spend	£41.2m
Supplemental Standing Reserve	<u>Average availability payments:</u>	
	Non-Working Days	£0.00/MW/h
	Working Days	£6.31/MW/h
	Total Spend	£1.6m
Mandatory Frequency Response	<u>Holding Volumes & Prices:</u>	
	Average Volume held MW	Pri / Sec / High 484 349 855
	Average price £/MW/h	3.10 3.45 1.86
	Total Holding Spend	£36.2m
Commercial Frequency Response	Total Response Energy Payment Spend	(£5.0)m
	No. Of Contracts	6
Fast Start	Total Spend	£35.1m
	Average Capability Rate	£10.76/h
Black Start	Total Spend	£4.3m
		£14.5m
Warming	Total Cost of Warming & Hot Standby	£7.4m
	MWh Utilised during period (warming)	635,128MWh
Fast Reserve-Tendered	Total Spend on Availability & Utilisation ³	£4.5m
Fast Reserve Non-Tendered	Total Spend on Availability	£32.2m
SO to SO	Volume Imported	195 GWh
	Volume Exported	177 GWh
	Total Spend	£12.6m
System to Generator operational inter-trips	Capability Payments	£0.1m
	Utilisation Payments	£0.0m
All Other Services	Total Spend	£10.1 m
Forward Trading	Traded gross volume	1,052,874 MWh
	Net cost of forward trading	£34.2m
	OTC – Power Exchange & Energy	
	Buy Volume	403,134 MWh
	Sell Volume	124,755 MWh
	OTC – BMU Specific	
	Buy Volume	257,243 MWh
	Sell Volume	267,742 MWh

³ Other than Fast Reserve utilisation achieved through the acceptance of bids or offers

PGBT's	<u>No. of PGBT's entered into:</u>	
	Sourced	73
	Agreed	46
	<u>Average PGBT Prices £/MWh:</u>	
	Buy	£240.05/MWh
	Sell	£9.27/MWh
	<u>Volume MWh:</u>	
	Buy	42,904 MWh
	Sell	65,642 MWh
	Total Cost of PGBT's	£13.1m
Summary	Total	£296.6m