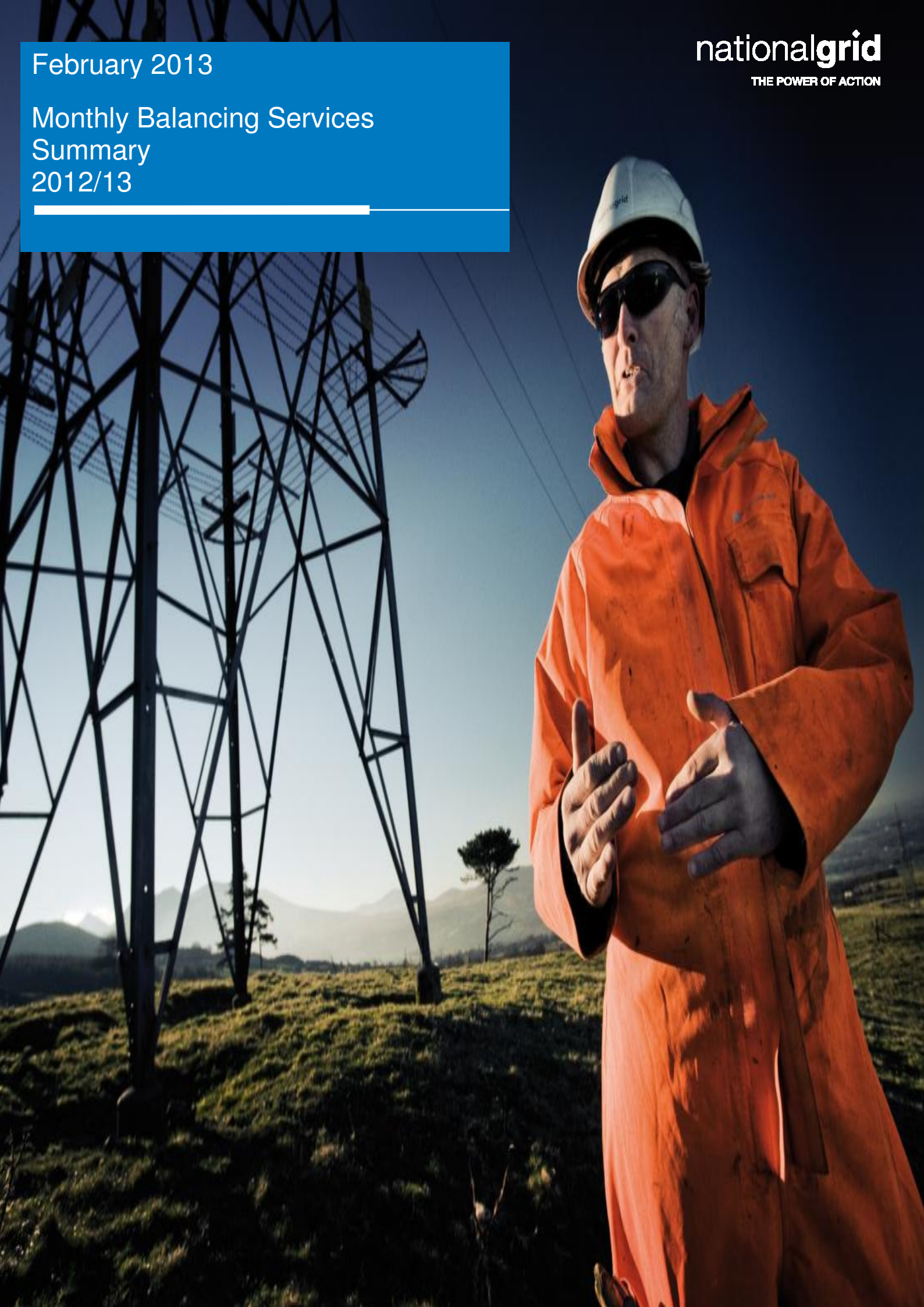
nationalgrid
THE POWER OF ACTION

February 2013

Monthly Balancing Services Summary 2012/13



Contents

1. Introduction

National Grid procures Balancing Services to operate the transmission system in an efficient, economic and co-ordinated manner. A number of statements and market reports pertaining to the procurement and use of Balancing Services are already published on the industry information web site. National Grid has undertaken to publish this summary on a monthly basis to increase the timeliness and visibility of the Balancing Service actions taken during the given month. This Monthly Summary provides information on the procurement of Balancing Services in twelve separate monthly publications.

1.1 Purpose of Monthly Balancing Services Summary Report

The purpose of the Monthly Balancing Services Summary Report is to provide information in respect of Balancing Services that National Grid has procured during the relevant month for the purpose of operating the electricity transmission system. This publication contains volume and cost information associated with these balancing services and is based on the latest data and information available at the time of publication. The data in this report is subject to revision post publication as reconciled information becomes available. This report, however, is intended only to give an indication of the balancing actions National Grid has undertaken and so the relevant months report will not be republished in light of any revisions.

1.2 Nature of information provided in this report

The information provided for the relevant month is based upon preliminary data. As future monthly summaries are produced, information in the graphs and tables will be updated to reflect the latest information available at that time. Changes to preliminary data that occur after the publication of the relevant month's report will thus be visible in the graphs and tables of future reports. Each monthly report will report volume data on a monthly rolling basis. The cost values contained in this document are predominantly reported to 2 decimal places (£m). Due to confidentiality agreements in place within Balancing Services contracts and the resolution of utilisation on a monthly basis, some information cannot be published in relation to the provision of some of these services. Where there are only a limited number of providers in a given month, cost information will not be separately identified on a monthly basis against the relevant service.

1.3 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, Short Term Operating Reserve, BM Start-up
- System to Generator Operational Intertripping Schemes
- Commercial Intertrip Service
- Ancillary Contracts to manage System Issues
- Maximum Generation Service
- All Other Services
- System to System Services
- Energy Related Products (including PGBT)

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 on the National Grid website.

1.4 Report Structure

This report presents the Balancing Services under four main titles:

- Services Procured via Market Arrangements
- Services Procured via Non-Tendered Bilateral Contracts
- Energy Related products
- A summary section providing the high level information for all services for the relevant month.

1.5 Services not included in the report

The monthly total costs in this document intentionally do not include the acceptance of Bids or Offers in the Balancing Mechanism. However where the structure of ancillary services include a utilisation component exercised through the Balancing Mechanism those Bid and Offer volumes and costs have been included in the relevant graphs to better inform participants of the costs in those areas.

Further information on Bid and Offer acceptances is contained within the Balancing Principles Statement which can be located on the National Grid Website in the Electricity section under Balancing Services & Transmission Licence Statements. All Bid and Offer information is available by clicking the following link to the NETA web site in the BRMS, http://www.bmreports.com/

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.

2.1.1 Market Arrangements for Reactive Power

All contracts awarded via tender **round 29 (TR29)** commenced on the **1st April 2012**. Further information regarding the nature of these contracts please refer to the National Grid Website:
http://www.nationalgrid.com/uk/Electricity/Balancing/services/ReactivePower/.

For this reporting period, the total utilisation volume for reactive power procured via market arrangements was **0GVArh**. The total expenditure relating to the capability and utilisation costs of reactive power procured via market arrangements was **£0.00m.**

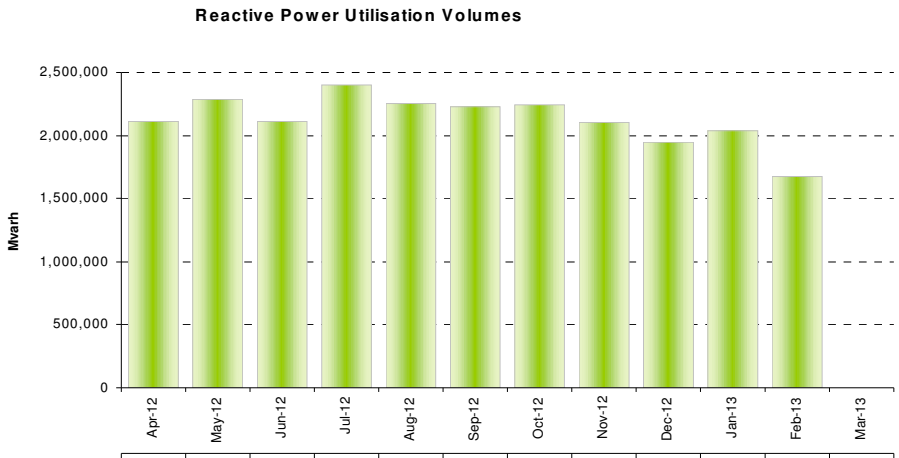
2.1.2 Default Arrangements for Reactive Power

For this reporting period, the total utilisation volume for reactive power under the default arrangements was **1,673GVArh**. The total amount spent on Reactive Power under the default arrangements during this reporting month was **£4.43m.**

For further information regarding the default payment arrangements please view the Introduction to Reactive document which can be found on the National Grid Website.
For this month, the combined total expenditure on reactive power was **£4.43m.**

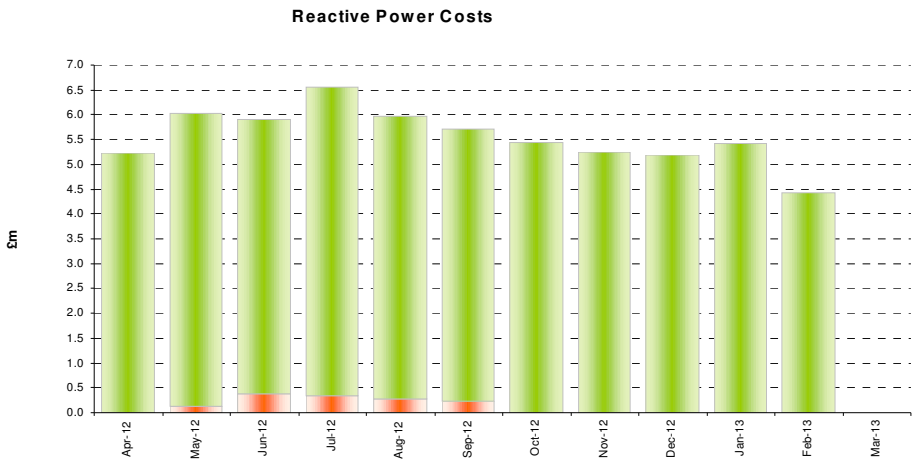
Monthly Balancing Services Summary February 2013

Utilisation of Reactive Power under market and default arrangements for the relevant month is detailed in the chart below.



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Reactive Default Utilisation Volume (MVArh)	2,111,225	2,281,362	2,114,530	2,402,691	2,256,223	2,227,141	2,242,862	2,103,583	1,949,291	2,041,611	1,672,621	
Reactive Market Utilisation Volume (MVArh)	0	0	0	0	0	0	0	0	0	0	0	

Utilisation costs of Reactive Power under market and default arrangements over the relevant period are detailed in the chart below.



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Reactive Default Total £m	5.23	5.91	5.53	6.22	5.69	5.48	5.44	5.25	5.20	5.42	4.43	
Reactive Market Total £m	0.00	0.12	0.38	0.35	0.27	0.23	0.00	0.00	0.00	0.00	0.00	

2.2 Fast Reserve (Tendered)

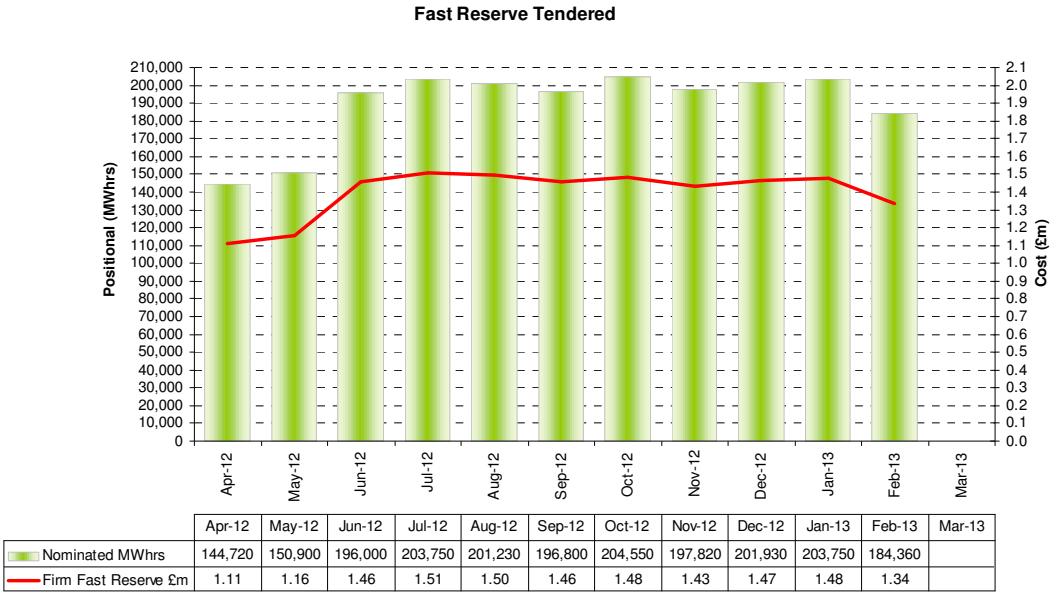
Further information explaining the service and assessment criteria of tenders for this Balancing Service can be found on the National Grid Website under Electricity/Balancing/tender reports/fast reserve.

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

	Units tendered in previous months	Units tendered this month	Units accepted from previous months	Units accepted from this month	Total MW tendered	Total MW contracted	Max GWh tendered	Max GWh contracted	Nominated MWhrs	Firm Fast Reserve £m
Apr-12	3	0	3	0	300	300	144.80	144.80	144,720	1.11
May-12	3	0	3	0	300	300	150.90	150.90	150,900	1.16
Jun-12	4	0	4	0	400	400	196.00	196.00	196,000	1.46
Jul-12	4	0	4	0	400	400	203.75	203.75	203,750	1.51
Aug-12	4	0	4	0	400	400	201.23	201.23	201,230	1.50
Sep-12	4	0	4	0	400	400	196.80	196.80	196,800	1.46
Oct-12	4	0	4	0	400	400	204.55	204.55	204,550	1.48
Nov-12	4	0	4	0	400	400	197.82	197.82	197,820	1.43
Dec-12	4	0	4	0	400	400	201.93	201.93	201,930	1.47
Jan-13	4	0	4	0	400	400	203.75	203.75	203,750	1.48
Feb-13	4	0	4	0	400	400	184.36	184.63	184,360	1.34
Mar-13										

Please note that eligible companies and eligible unit data is no longer made available to us so we are unable to report this information.

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



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Nominated MWhrs	144,720	150,900	196,000	203,750	201,230	196,800	204,550	197,820	201,930	203,750	184,360	
Firm Fast Reserve £m	1.11	1.16	1.46	1.51	1.50	1.46	1.48	1.43	1.47	1.48	1.34	

A total of **400MW** of capacity was contracted during the month. The total expenditure on availability and utilisation excluding bids and offers was **£1.34m**.
For more information on Fast Reserve please refer Fast Reserve information at:
http://www.nationalgrid.com/uk/Electricity/Balancing/services/reserveservices/fastreserve/.

Fast Reserve Contracts placed through non-tendered bilateral agreements are detailed in section 3.6 of this report.

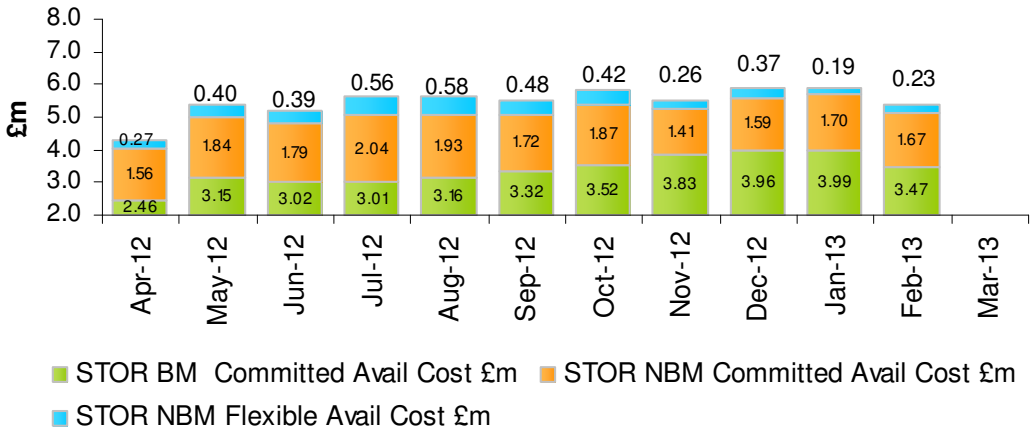
2.3 Short Term Operating Reserve (STOR) including Balancing Mechanism (BM) and Non Balancing Mechanism (NBM)

National Grid procures Short Term Operating Reserve (STOR) through a competitive tender process which is conducted three times per year. For further information regarding this service, and the timetable for future tenders, please refer to the STOR information at:
http://www.nationalgrid.com/uk/Electricity/Balancing/services/reserveservices/STOR/.

The current reporting month falls in **Season 2012/13 6.6**, which was covered by tender rounds **10** to **18**. The volume that was assessed as economic and proceeded to contract for season **6.6** was **3,573MW.**

The average availability payment for STOR during season **6.6** was **£6.91/MWh** for both non-working days and working days. The average contracted utilisation payment for STOR during season **6.6** was **£201/MWh.**

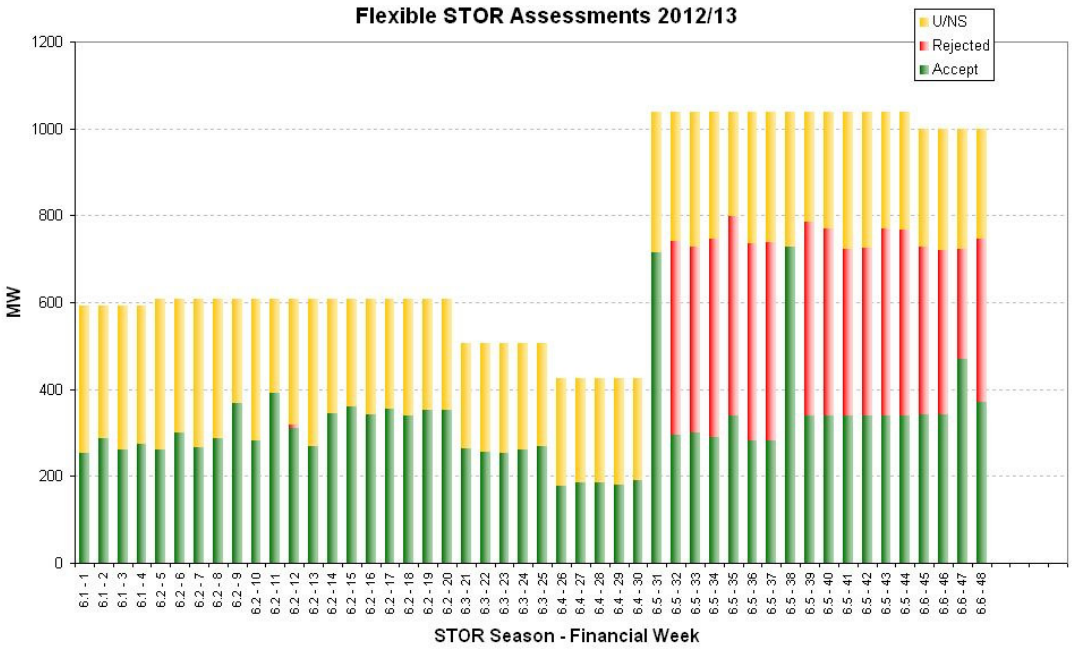
STOR BM & NBM Availability Costs



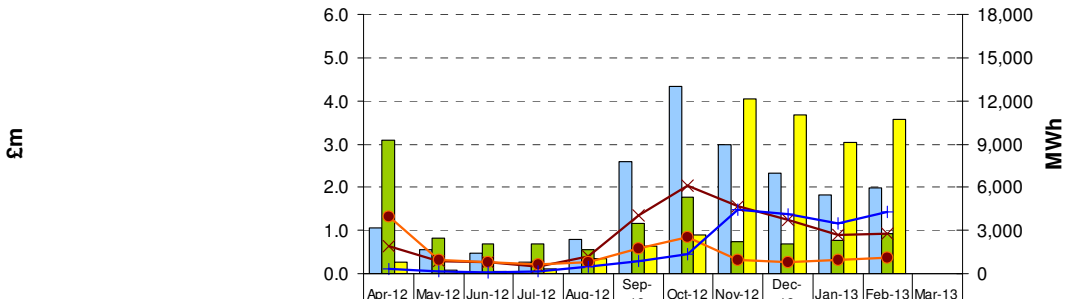
Note – the underlying data, presenting flexible STOR information since 1 April 2007, is available in the MBSS_DATA excel attachment.

Previous Year STOR BM & NBM Availability Costs

Previous Years September costs	February 2011/12	February 2010/11	February 2009/10	February 2008/09	February 2007/08
STOR BM committed Avail Cost £m	5.35	4.68	4.10	3.62	3.03
STOR NBM committed Avail Cost £m	0.59	0.32	0.38	0.40	0.31
STOR NBM flexible Avail Cost £m	0.16	0.88	0.70	0.37	0.35
Average utilisation payment £/MWh	223.90	256.08	282.98		



STOR BM & NBM Utilisation MWhr and Cost



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
STOR BM Committed Utilisation MWhrs	3,198	1,650	1,423	765	2,385	7,776	13,013	8,993	7,008	5,436	5,937	
STOR NBM Committed Utilisation MWhrs (Inc Ramp Energy)	9,267	2,462	2,047	2,045	1,666	3,462	5,335	2,240	2,069	2,286	2,765	
STOR NBM Flexible Utilisation MWhrs (Inc Ramp Energy)	790	273	172	338	992	1,871	2,721	12,137	11,033	9,137	10,692	
STOR BM Committed Util Cost £m (Settlement)	0.64	0.30	0.27	0.16	0.40	1.34	2.03	1.56	1.23	0.89	0.92	
STOR NBM Committed Util Cost £m	1.31	0.32	0.26	0.22	0.26	0.57	0.84	0.32	0.27	0.32	0.37	
STOR NBM Flexible Util Cost £m	0.12	0.04	0.03	0.05	0.15	0.30	0.44	1.49	1.37	1.15	1.42	

Non-BM STOR Availability payments, Non-BM STOR Utilisation payments and BM STOR Availability payments are paid as Balancing Services. BM STOR Utilisation payments are paid via the BM Bids and Offers, not as a Balancing Service, they are included in this report only to clarify the total STOR expenditure.

The total STOR expenditure on availability payments and utilisation payments to both BM and NBM providers for the month was **£8.08m.**
The total STOR Utilisation volume for both BM and Non-BM units for the month was **19,395MWh.**
For further information on the nature of this service please refer to the STOR information at:
http://www.nationalgrid.com/uk/Electricity/Balancing/services/reserveservices/STOR/

2.4 Tendered Frequency Response.

Please see Section 3.2

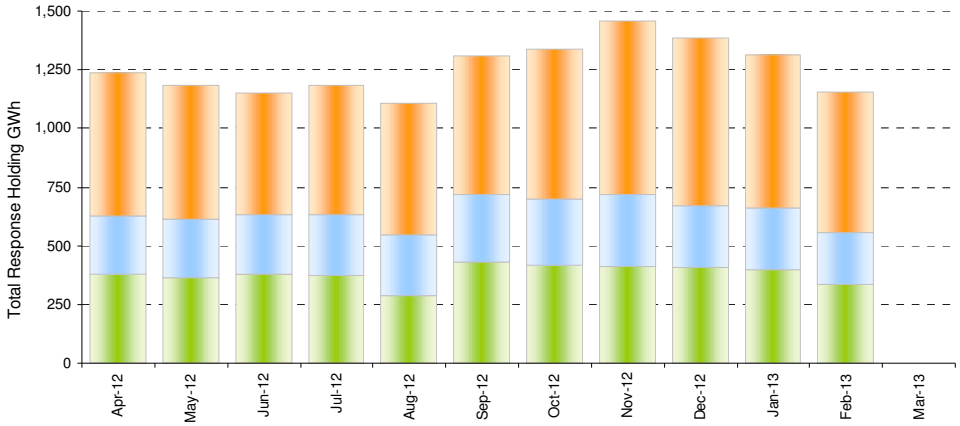
3. Services Procured Via Non-Tendered Bilateral Contracts

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 comprise a Holding Payment (£/MW/h) and a Response Energy Payment (£/MW/h). Details on frequency response holding are given below. More information on this can be found on the National Grid Website:
http://www.nationalgrid.com/uk/Electricity/Balancing/services/frequencyresponse/mandatoryfreqresp/.

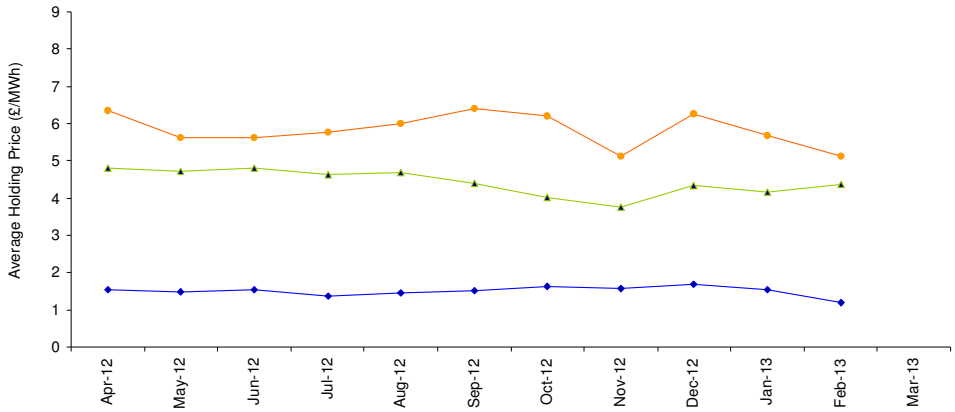
Mandatory Frequency Response Holding



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
High (GWh)	611.07	568.99	514.38	552.96	561.53	587.56	638.57	738.74	711.82	654.13	598.28	
Secondary (GWh)	249.61	248.17	254.66	257.48	261.79	289.57	283.76	305.73	265.40	260.19	218.43	
Primary (GWh)	377.21	365.76	379.76	372.99	285.78	430.82	415.98	411.07	406.33	399.36	336.83	

The chart below shows the Average Holding cost of Mandatory Frequency Response.

Mandatory Frequency Response Average Holding Price



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Primary	4.82	4.72	4.81	4.63	4.69	4.41	4.01	3.75	4.35	4.16	4.37	
Secondary	1.53	1.49	1.55	1.38	1.46	1.51	1.64	1.57	1.70	1.55	1.19	
High	6.34	5.63	5.63	5.77	6.00	6.40	6.20	5.12	6.26	5.69	5.13	

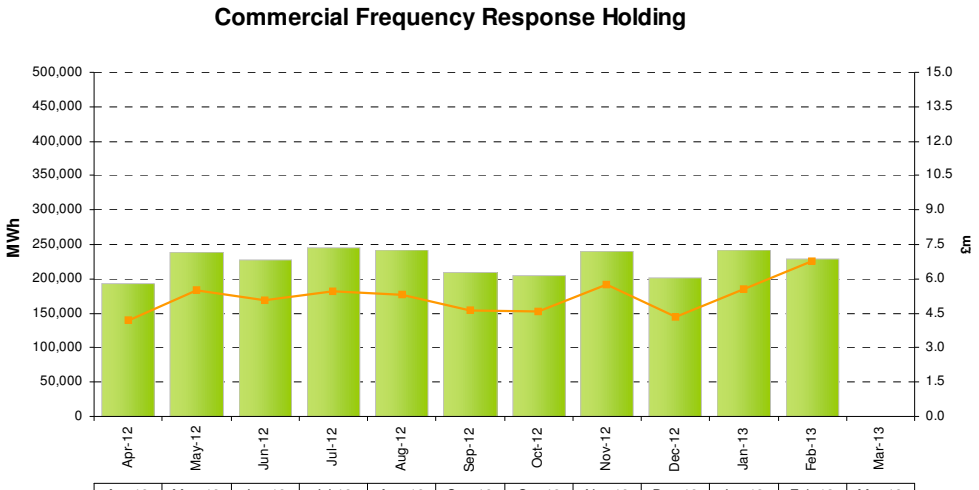
Spend on Mandatory Frequency Response holding for the reporting month was **£4.75m**.

Spend on Response Energy Payments was **£0.07m**[1]. The methodology for calculating these payments is given in the Connection & Use of System Code (CUSC) section 4.1.3.9 & 4.1.3.9A. The CUSC can be found on the National Grid website.

The total expenditure on Mandatory Frequency Response during the reporting month was **£4.82m**.

3.2 Commercial Frequency Response

Commercial Frequency Response is a collection of services that can be provided by demand side participants and generation plant. The technical characteristics of these services 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) and through the firm frequency response (FFR) tender rounds.



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Holding Volume	192,843	238,344	226,902	245,348	241,842	208,884	204,829	239,756	202,004	242,078	228,273	
Response cost	4.19	5.49	5.08	5.46	5.30	4.63	4.60	5.74	4.31	5.56	6.78	

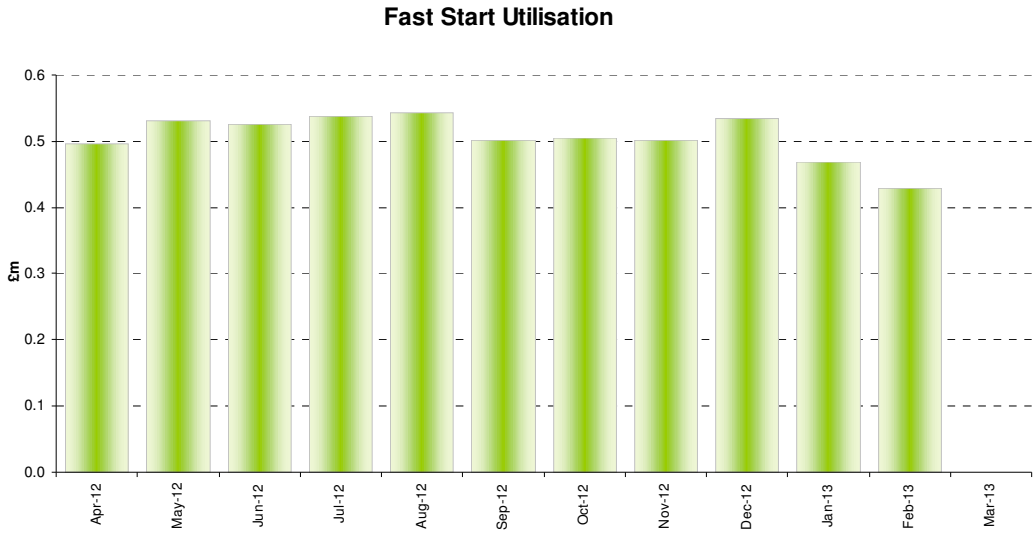
The total amount spent on Commercial Frequency Response holding during the reporting month was **£6.78m**.

[1] 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.

Further information on Commercial Frequency is found in the appropriate place on the National Grid Website, or specifically on firm frequency response through the tenders and reports section of National Grid's Balancing Services website.

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:



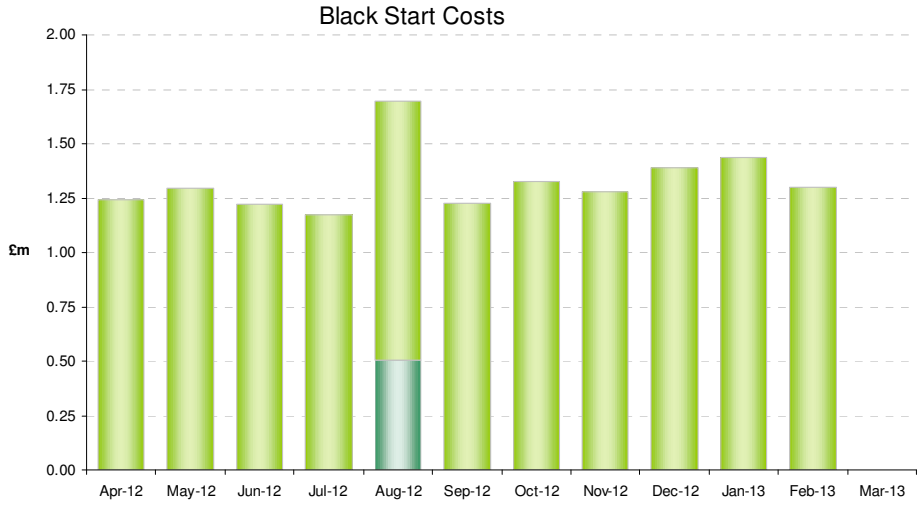
	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Fast Start	0.50	0.53	0.53	0.54	0.54	0.50	0.50	0.50	0.54	0.47	0.43	

The total amount paid during the relevant reporting month for the availability and utilisation of the Fast Start service was **£0.43m.**

Further information on Fast Start can be found on the National Grid Website: http://www.nationalgrid.com/uk/Electricity/Balancing/services/balanceserv/reserve_serv/faststart/.

3.4 Black Start

During the reporting month there were up to **22** stations with Black Start agreements in place. No new agreements were entered into during the period. The total amount paid during the relevant reporting month for the availability of the Black Start service was **£1.30m**.

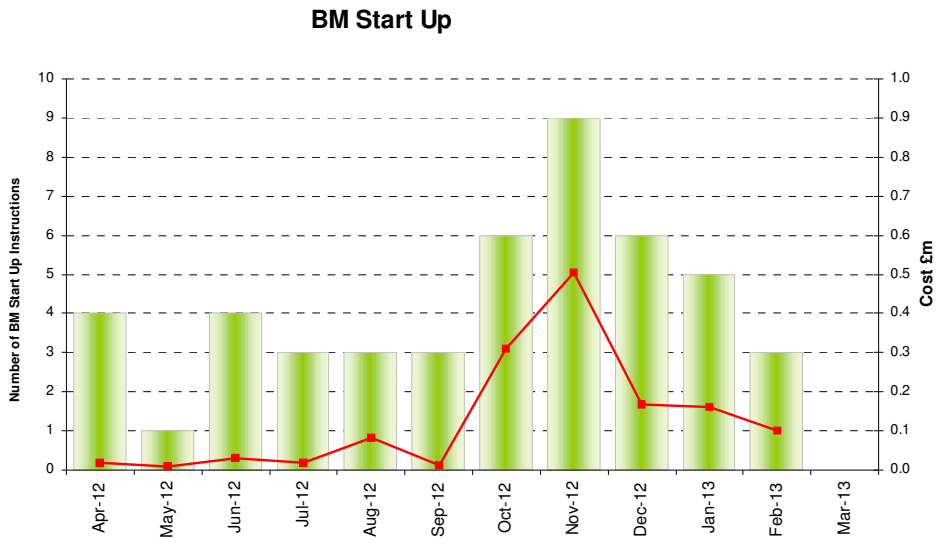


	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Blackstart Contract costs (£m)	1.24	1.30	1.22	1.17	1.19	1.23	1.33	1.28	1.39	1.43	1.30	
Other Black Start Costs (£m)	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	

Further information on Black Start can be found on the National Grid Website: http://www.nationalgrid.com/uk/Electricity/Balancing/services/systemsecurity/blackstart2/.

3.5 BM Start up

The chart below contains information relating to the procurement of BM Start Up Balancing Services.



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
No. of BMSU Instructions	4	1	4	3	3	3	6	9	6	5	3	
Total Spend £/m	0.02	0.01	0.03	0.02	0.08	0.01	0.31	0.51	0.17	0.16	0.10	

The total amount spent on BM Start Up during the reporting month was **£0.10m.** The total number of BM Start Up instructions was **3**. Further details are available via the National Grid Website: http://www.nationalgrid.com/uk/Electricity/Balancing/services/reserveservices/bmstartup/.

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.

	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Fast Reserve Total Cost in £m	£5.26	£6.15	£6.10	£7.05	£7.49	£5.94	£6.57	£7.42	£6.32	£6.74	£5.99	
Non Tendered Holding Volume MWh	357,644	419,091	410,998	446,775	465,902	384,597	408,336	461,358	403,521	413,751	383,492	

The availability payments during the relevant month totalled **£5.99m**. 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 Northern Ireland.

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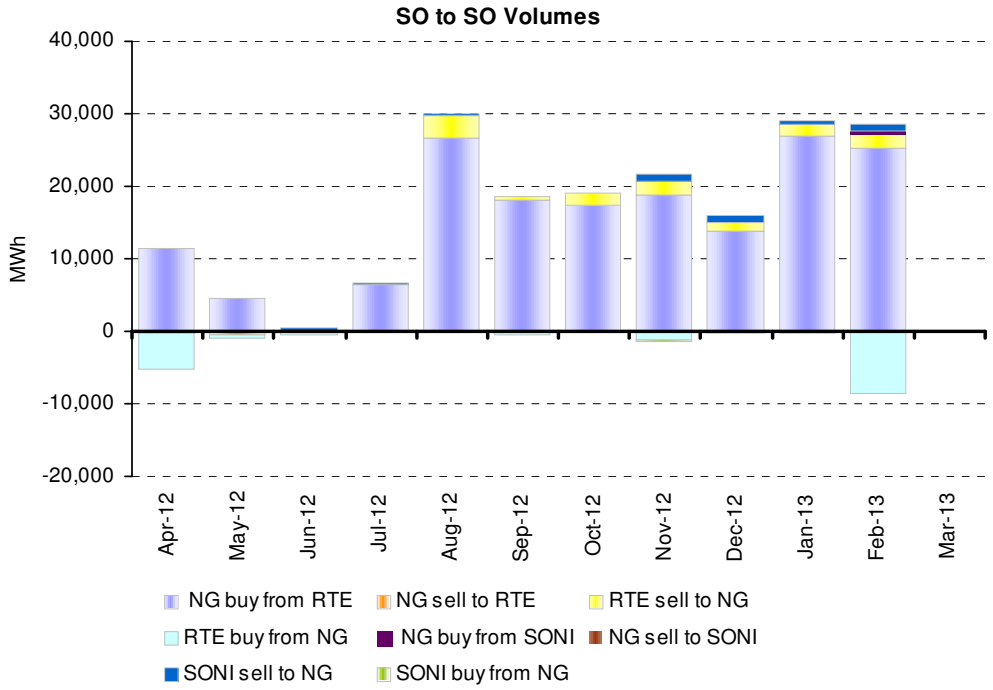
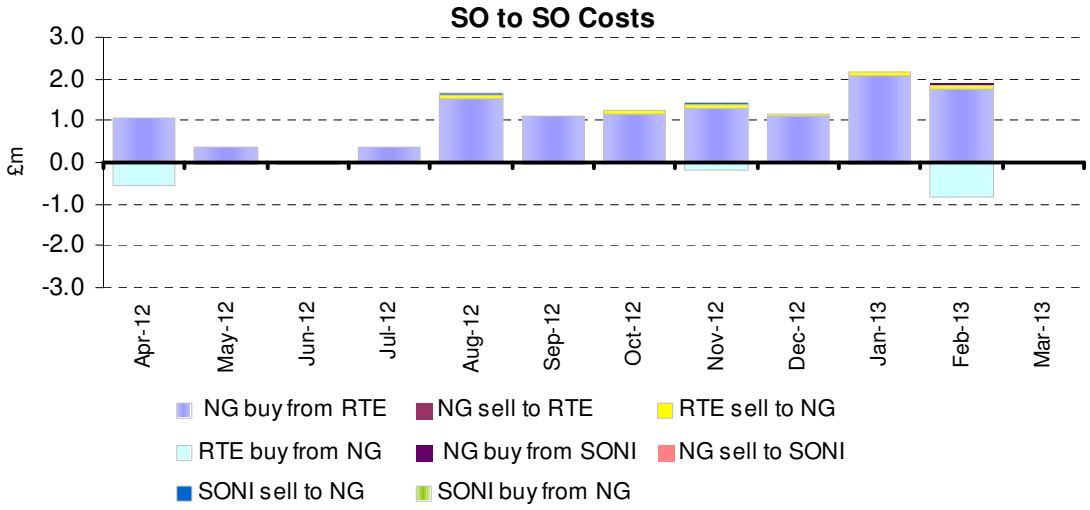


The total energy volumes associated with system to system services during the reporting month was **-8GWh** export (from GB) and **29GWh** import (to GB).

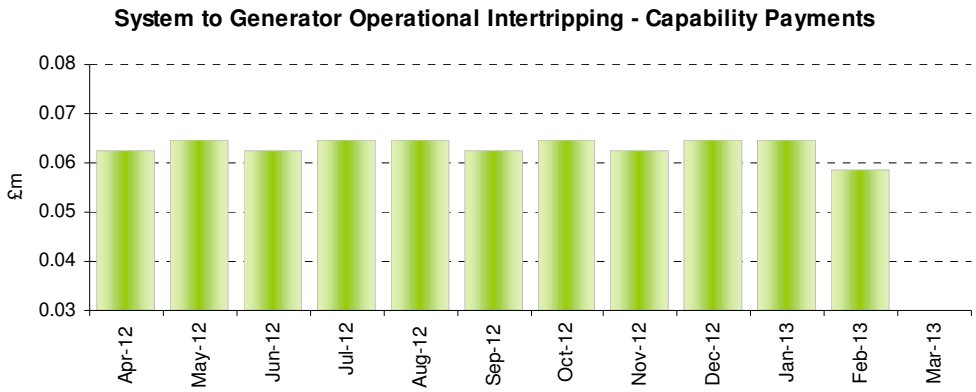
The next graph shows total net expenditure associated with System to System Services and was **£1.04m.**



3.8 System to Generator Operational Inter-tripping Schemes

As a consequence of their connection conditions, certain generators are obligated to have in place operational intertrip schemes.

These schemes fall under a number of different category types as defined under section 4.2.A of the CUSC which describes the compensation arrangements relating for these schemes. A proportion of these categories entitle the counter party to payments for the arming (capability fee) and utilisation of this service.

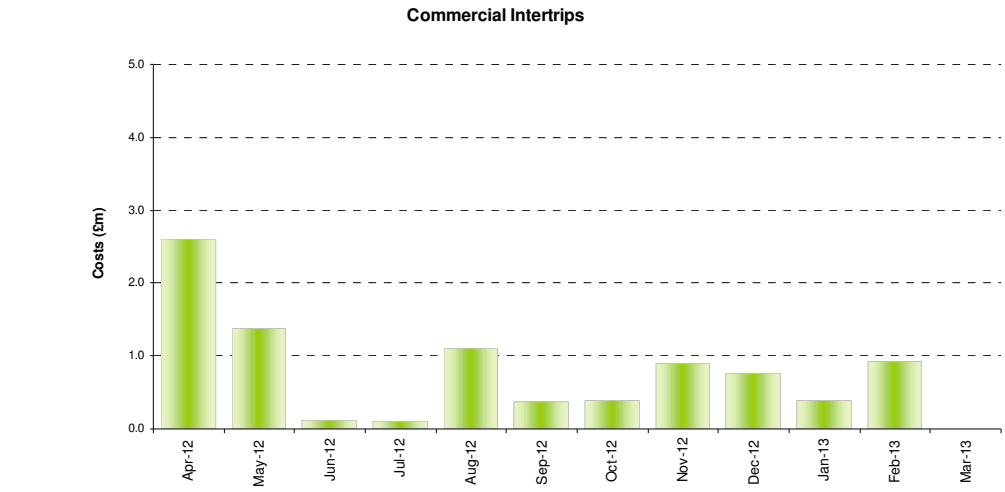


System to Generator Operational Intertripping – Capability Payments in the reporting month totalled **£0.06m.**

3.9 Commercial Intertrip Service

In addition to System to Generator Operational Inter-tripping Schemes, National Grid will seek to, where it proves economic and efficient to do so, enter into commercial Intertrip schemes to manage system issues.

Monthly Balancing Services Summary February 2013



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Commercial Intertrip	2.60	1.38	0.13	0.10	1.11	0.37	0.39	0.90	0.77	0.39	0.92	

Expenditure on Commercial Intertrips was **£0.92m.**

Month	Capability Payment £'s	Arming Payment £'s	Number of Hours of Intertrip Arming, Outside of Pre-Paid Arming Contract(s)	Contracted Pre-paid Arming £'s	Number of Hours Armed under Pre-Paid Arming Contract(s)	Number of Trips	Tripping Payment £'s
Apr-12	98,298	462,733	243	2,037,600	69	0	0
May-12	101,587	59,586	147	1,222,560	8	0	0
Jun-12	98,298	26,703	48	0	17	0	0
Jul-12	101,587	0	0	0	0	0	0
Aug-12	101,587	1,011,377	290	0	0	0	0
Sep-12	98,310	271,745	80	0	151	0	0
Oct-12	101,587	290,655	162	0	0	0	0
Nov-12	98,310	800,770	194	0	21	0	0
Dec-12	101,587	668,245	227	0	0	0	0
Jan-13	101,587	292,173	180	0	0	0	0
Feb-13	91,756	829,283	0	0	0	0	0
Mar-13							

Under commercial intertrip agreements arming is payable either as;

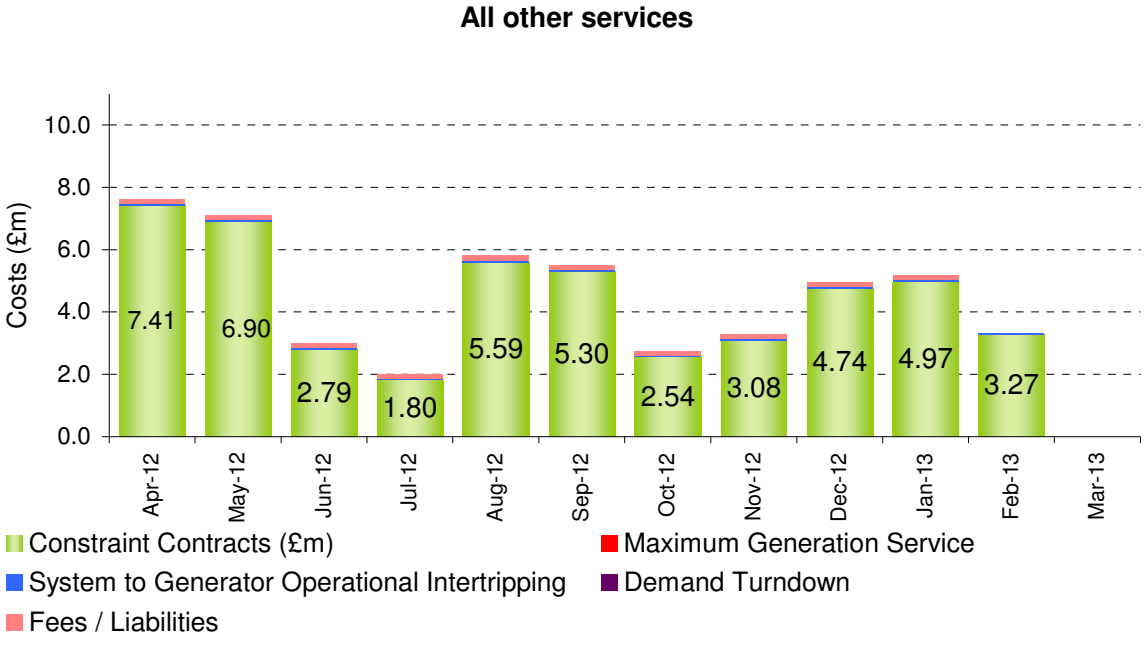
1. A fixed pre-agreed sum, this may be for a fixed number of hours or unlimited hours (shown above as Contracted arming) or;
2. Payable on utilisation with the generator typically having the right to alter their payments with a short notice period (shown above as Arming Payments).
3. NGET have on occasion agreements in place with generators to manage system issues which include the use of a number of hours of arming on an intertrip. The figure quoted in the “Contracted pre-paid arming” column is the maximum firm payment that could be made

assuming the intertrip is available for use for all the Contracted Arming Hrs as quoted in the above table during the contracted period.

4. Contracted pre-paid arming allows for arming of the intertrip for an aggregated total of 50% of the hours across the duration of the contract.

3.10 Ancillary Contracts to manage System Issues

On occasion, National Grid enters into bespoke Ancillary service contracts to manage certain transmission system issues. A number and nature of these contracts is necessarily confidential however where possible National Grid will make the information available via our website. The costs reported here include any costs of 'Transmission Related Agreements', which are entered as a consequence of certain customer choices of connection conditions.



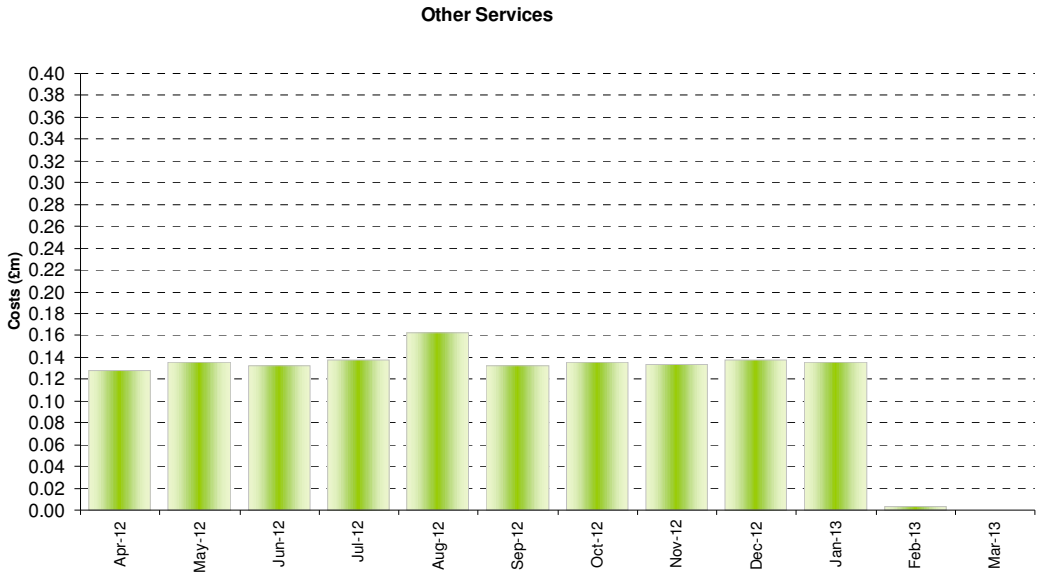
Further details on constraint contracts are available, where possible, via the National Grid Website:
http://www.nationalgrid.com/uk/Electricity/Balancing/services/systemsecurity/constraint_agree/Requirement/

3.11 Maximum Generation Service

The Maximum Generation Service (MGS) is required to provide additional short term generation output during periods of system stress for system balancing. This service allows access to unused capacity outside of the Generator's normal operating range. MGS will be initiated by the issuing of an Emergency Instruction in accordance with the Grid Code BC2.9.2. Details of the service are contained in the CUSC section 4.2.

3.12 Other Services

These include bespoke services to manage specific system conditions and costs relating to fees and liabilities.



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Other Services	0.13	0.14	0.13	0.14	0.16	0.13	0.14	0.13	0.14	0.14	0.00	

The total expenditure on All Other Services during the reporting month was **£0m**.

4. Energy Related Products

4.1 Forward Trading

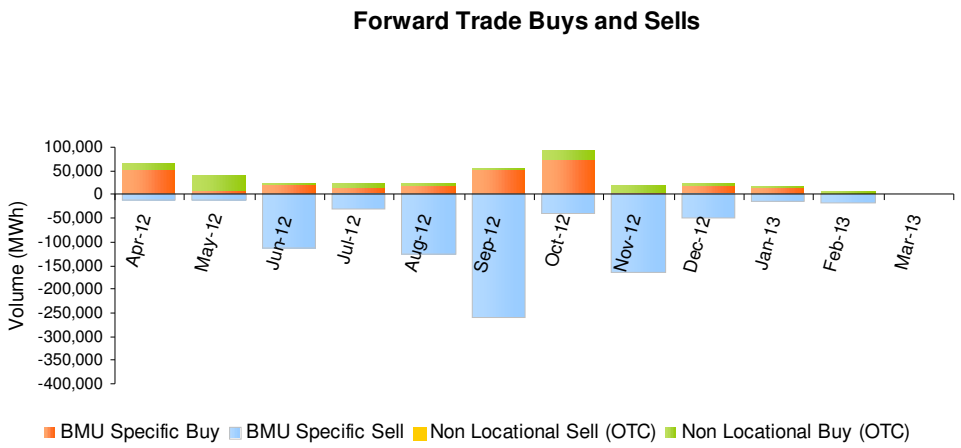
National Grid's forward trading is undertaken to reduce the overall costs of balancing the system, and to resolve system issues as appropriate. There are a number of products and procurement mechanisms available. During the reporting month, National Grid traded a gross volume of **24,433MWh.**

Non Locational	
Buy Volume	5,836MWh
Sell Volume	0MWh

BMU Specific	
Buy Volume	295MWh
Sell Volume	-18,302MWh

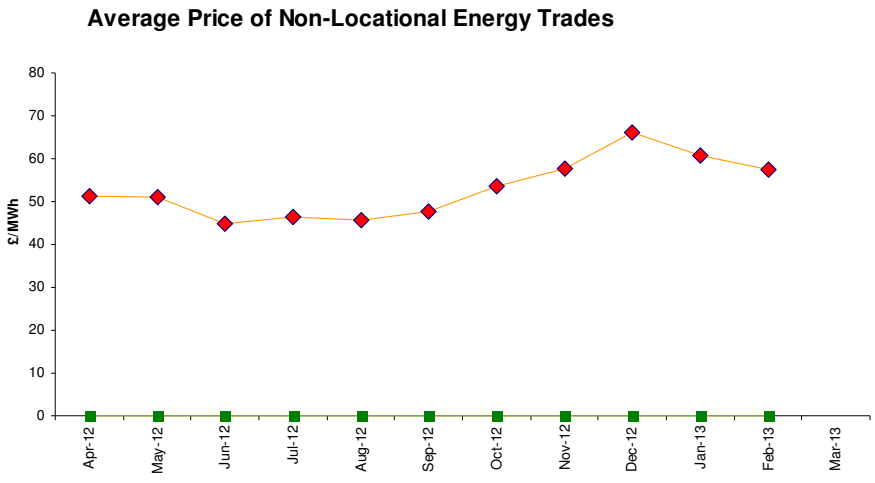
Total Net Spend **£0.02m**

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



The following graph shows the monthly profile of our non-locational energy trading activities. It comprises all the trades undertaken by National Grid through Power Exchanges and through the use of brokerage houses for that purpose.

Monthly Balancing Services Summary February 2013

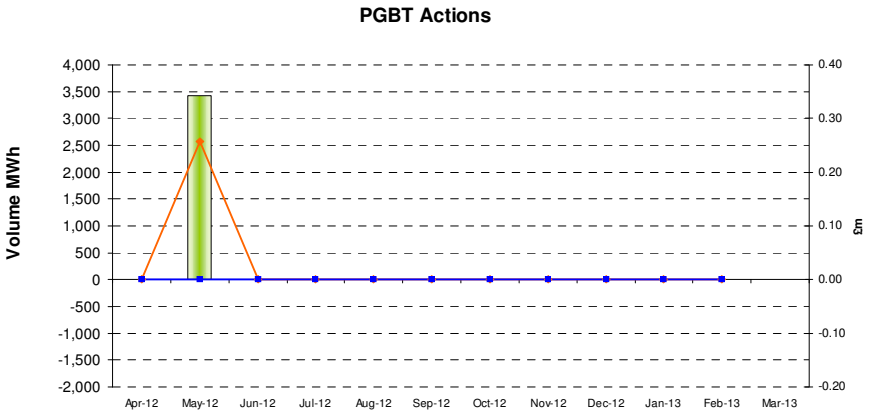


	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Avg. Buy Price (£/MWh)	51.29	51.03	44.94	46.33	45.52	47.81	53.64	57.81	66.21	60.75	57.52	
Avg. Sell Price (£/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Further details are available via the National Grid Website: http://www.nationalgrid.com/uk/Electricity/Balancing/services/energyrelated/.

4.2 Pre-Gate BMU Transactions (PGBT)

Information on PGBT activity Transactions Sourced and Agreed is given in the chart below.



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Sell (MWh)	0	0	0	0	0	0.00	0	0	0	0	0	
Buy (MWh)	0	3,419	0	0	0	0	0	0	0	0	0	
Sell £m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Buy £m	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

The total net spend on PGBT during the reporting month was **£0m.**
Details on real time PGBT transactions can be found on the BMRS (system warning page) and post event, on the National Grid Website.

5. Constraints

National Grid resolves constraints in the GB Transmission System through different mechanisms, including bids and offers in the Balancing Mechanism, PGBTs, Trades and SO-SO actions. This section presents the costs for National Grid to resolve constraints in the reporting period, breaking them down into the three aforementioned categories. The costs of resolving constraints via intertrip contracts (see section 3.9) and bilateral contracts (see section 3.10) have already been explored.

The total cost of resolving constraints via Balancing Mechanism was **£2.66m**. This cost includes part of the costs of SO-SO actions (section 3.7), Trades (section 4.1) and PGBTs (section 4.2) already reported above.

Explanatory notes on the meaning of each row in the tables below follow at the end of this section.

Monthly Balancing Services Summary February 2013

5.1 Summary of costs of constraint actions, including Balancing Mechanism, Trades and SO-SO actions

	Type of Constraint	Location	Date						
	Export			Export summary	Import			Import summary	Grand Summary
	Scotland	Cheviot	England & Wales		Scotland	Cheviot	England & Wales		
Constrained Volume (GWh) [A]	-2.65	-44.89	-8.63	-56.17	3.19	0.00	4.41	7.60	**63.78**
Average Price of Action (£/MWh) [B]	12.43	26.57	27.95	26.12	123.91	0.00	181.01	157.04	**41.73**
Average Energy Replacement Price (£/MWh) [C]	47.27	42.92	42.91	43.12	53.86	0.00	55.07	54.56	**44.49**
Total Direct Cost (£m) [G]=[A*(B-C)]	0.09	0.73	0.13	0.96	0.22	0.00	0.56	0.78	**1.73**
Reserve Replaced (GWh)	2.42	72.88	5.12	80.41	0.00	0.00	0.00	0.00	**80.41**
Volume of Actions Required for Reserve Replacement (GWh) [D]	1.79	38.23	3.41	43.43	0.00	0.00	0.00	0.00	**43.43**
Average Reserve Replacement Price (£/MWh) [E]	116.53	71.45	73.24	135.02	0.00	0.00	0.00	0.00	**135.02**
Average Energy Reference Price for Reserve Replacement (£/MWh) [F]	49.64	47.04	43.07	86.78	0.00	0.00	0.00	0.00	**86.78**
Total Reserve Cost (£m) [H]=[D*(E-F)]	0.12	0.93	0.10	1.16	0.00	0.00	0.00	0.00	**1.16**
Total Cost (£m) [I]=[G+H]	0.21	1.67	0.23	2.11	0.22	0.00	0.56	0.78	**2.89**
Additional (Transferred) Costs (£m) [J]	0.00	0.07	0.02	0.09	-0.04	0.00	-0.28	-0.32	**-0.23**
Total constraint net cost (£m) [I+J]	0.22	1.74	0.25	2.20	0.18	0.00	0.27	0.46	**2.66**

*Please note Constrained Volumes for Import and Export are now shown as positive volumes. The Grand Summary therefore is the absolute constrained volume.

Monthly Balancing Services Summary February 2013

5.2 Break down of constraint costs per category

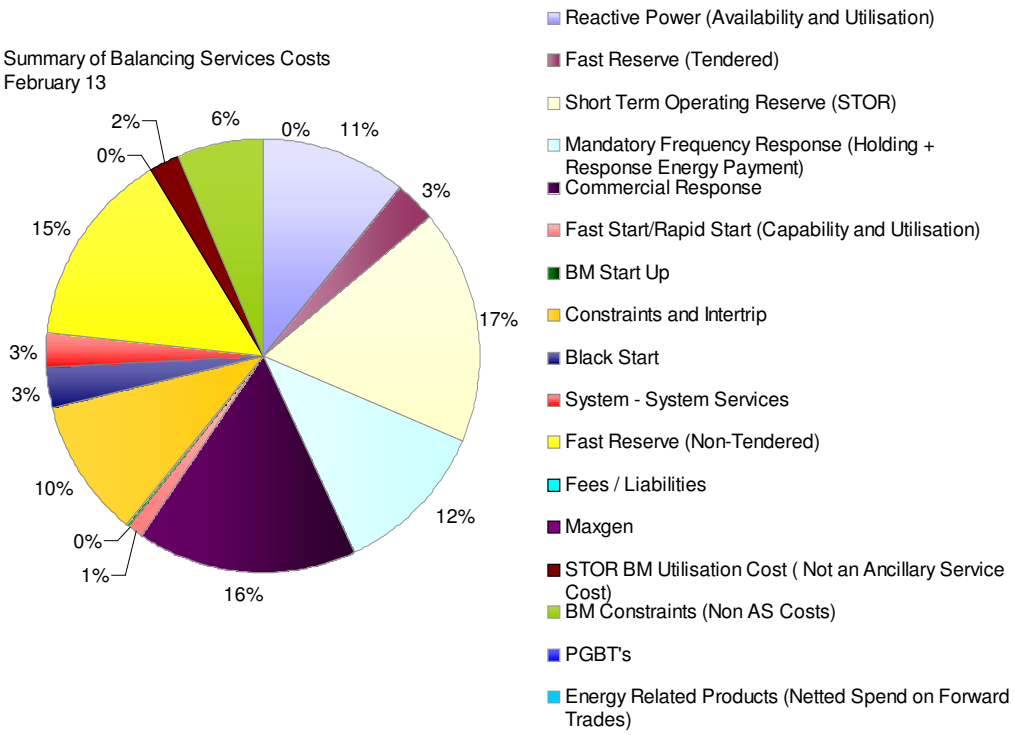
ACTION TYPE	Export	Import	Total
BM Actions	1.71	0.45	2.16
SO-SO Trades	0	0	0
Trades (including PGBT)	0.49	0.00	0.49
Total	2.20	0.46	2.66

5.3 Explanatory Notes

Row	Description
Constrained Volume (GWh)	Total volume of bids/offers accepted for BM Units within a constrained zone
Average Price of Action (£MWh)	Volume weighted average prices of bids / offers
Average Energy Replacement Price (£/MWh)	Volume weighted average of the energy reference price(*)
Total Direct Cost (£m)	Constrained Volume x (Average Price of Action - Average Energy Replacement Price)
Reserve Replaced (GWh)	Additional reserve created to replace reserve sterilised behind constraints e.g. capacity of additional units sychronised to the system
Volume of Actions Required for Reserve Replacement (GWh)	Volume of actions required by National Grid to create replacement reserve e.g. offers in the BM to run a unit at SEL thus gaining access to capacity of unit.
Average Reserve Replacement Price (£/MWh)	Volume weighted average of prices of the reserve actions
Average Energy Reference Price for Reserve Replacement (£/MWh)	Volume weighted average of the energy reference price(*) for periods when reserve is replaced
Total Reserve Cost (£m)	Reserve replaced x (Average Reserve Replacement Price - Average Energy Reference Price for Reserve Replacement)
Total Cost (£m)	Total Direct Cost + Total Reserve Cost
Additional (Transferred) Costs (£m)	For some import constraints, actions taken in BM units within the constrained zone may end up being the cheapest option for creating system reserve - in this case all or part of the cost is transferred to the relevant account. In all other circumstances,
Total constraint net cost (£m)	Total Cost + Additional (Transferred) Costs
(*) Energy reference price (£/MWh)	For each settlement period, it is the volume weighted average of the submitted bids/offers available for National Grid to resolve NIV, i.e. the lowest (highest) available price of offers (bids) stacked up to NIV when the market is short (long)

6. Summary

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



7. 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.
The Procurement Guidelines and Balancing Principles Statement Reports can be accessed via:
http://www.nationalgrid.com/uk/Electricity/Balancing/transmissionlicencestatements/

Electricity Balancing Services
Email: BSIS@uk.ngrid.com

Monthly Balancing Services Summary February 2013

8. Information Summary Page

Balancing Services	Info Provision	Total costs £m	Total Value
Reactive Power Market	Utilisation Volume (MA)		0GVArh
	Utilisation Volume (DefaultPM)		1673GVArh
	Total Spend (MA)	0.00	
	Total Spend (Default PM)	4.43	
Short Term Operating Reserve(STOR) Including BM and NBM Availability & Utilisation			
	Average Contracted Availability Payment		£6.91 /MW/h
	Average Contracted Utilsation Payment		£201 /MWh
	Total Spend	8.08	
	Total Utilisation Volume (MWh)		19394.617 MWh
Mandatory Frequency Response	Holding Volumes & Prices:		Primary / Sec / High
	Average Volume held MW		502 325 891
	Average price £/MW/h		4.37 1.19 5.13
	Total Holding Spend	4.75	
	Total Response Energy Payment Spend	0.07	
Commercial Frequency Response	No. Of Contracts		
	Total Spend	6.78	
Fast Start	Total Spend	0.43	
Black Start	Total Spend	1.30	22
BM Start Up	Total Cost of BM Start Up	0.10	
	Number of instructions		3
Fast Reserve-Tendered	Total Spend on Availability & Utilisation	1.34	400MW
Fast Reserve Non-Tendered	Total Spend on Availability	5.99	
SO to SO	Volume Imported		29GWh
	Volume Exported		-8GWh
	Total Spend	1.04	
System to Generator operational inter-trips			
	Capability Payments	0.06	
	Utilisation Payments	0.00	
Commercial Intertrip Service	Total Spend	0.92	
Balancing Services Constraint Contracts	Total Spend	3.27	
BM Constraints only	Total Spend	2.66	
Maximum Generation Service	Total Spend	0.00	
All Other Services	Total Spend	0.00	
Forward Trading	Traded gross volume		24433MWh
	Net cost of forward trading	0.02	
	OTC - Power Exchange & Energy		
	Buy Volume		5836MWh
	Sell Volume		0MWh
	OTC - BMU Specific		
	Buy Volume		295MWh
	Sell Volume		-18302MWh
PGBT	No. of PGBT entered into:		
	Sourced		0
	Agreed		0
	Average PGBT Prices £/MWh:		
	Buy		0.00
	Sell		0.00
	Volume MWh:		
	Buy		0MWh
	Sell		0MWh
	Total Cost of PGBT	0.00	
Summary	Total	£41.23m	

9. Summary of BSIS Costs

MBSS costs report absolute costs (volume x price) on services. Costs differences in the table below compared to summary on page 24 are directly related to the estimate of the additional costs of obtaining that service above the costs of balancing the system.

2012/13	A. Year to Date Total Cost	B. Year To Date Target	C. Year to Date Latest Cost Forecast	D. Year to Date Initial Target Forecast	E. Projected Total Cost for Year (Cost Outturn + Latest Cost Forecast)	F. Projected Scheme Target Total (Year 1)	G. Initital Forecast for Year
Energy Imbalance	-£13.7	£14.8	-£33.8	-£34.1	-£12.9	£15.6	-£33.3
Operating Reserve	£89.5	£72.9	£55.4	£42.0	£95.1	£77.7	£46.9
BM Startup	£1.4	£8.3	£8.4	£8.6	£2.3	£9.2	£9.5
STOR	£74.3	£85.7	£78.3	£84.7	£81.4	£93.5	£92.4
Constraints - E&W	£80.9						
Constraints - Cheviot	£94.3	£199.6	£162.5	£163.4	£195.6	£215.0	£180.2
Constraints - Scotland	£30.2						
Footroom	£17.6	£27.6	£26.9	£24.2	£18.1	£28.1	£24.7
Fast Reserve	£111.9	£84.4	£76.8	£76.9	£118.9	£91.4	£83.9
Response	£171.0	£161.0	£163.3	£156.8	£183.5	£173.5	£169.3
Reactive	£61.1	£56.3	£53.1	£56.0	£66.9	£62.1	£61.8
Minor Components	£42.3	£37.8	£33.4	£32.6	£45.2	£41.1	£35.5
TOTAL (excl TLIC)	£719.6	£748.4	£658.7	£611.1	£794.0	£807.0	£670.9
TLIC	£39.1	£0.0	£33.6	£0.0	£40.8	£0.0	£0.0
Total (incl TLIC)	£758.7	£748.4	£692.3	£611.1	£834.8	£807.0	£670.9

Note - Individual cost forecasts of 'England & Wales, Cheviot and Scotland' are not available. Outturn costs remain split by area.

Monthly Balancing Services Summary February 2013

Latest Projection of Scheme Outturn Cost	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Total 11/12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Total 12/13	Total
Energy Imbalance	-22.0	-10.5	-2.3	-11.7	-1.8	-1.3	-10.4	-4.3	1.1	-1.0	9.3	-9.2	-64.0	6.1	1.9	-5.0	-2.4	-3.9	-8.7	3.1	-0.2	-3.6	-3.3	2.2	0.8	-12.9	-76.9
Operating Reserve	3.2	2.2	1.0	2.1	4.2	3.5	5.2	3.3	4.8	6.6	8.7	4.8	49.6	10.4	7.0	5.4	6.5	6.5	5.5	11.4	9.1	11.2	8.7	7.9	5.6	95.1	144.7
BM Startup	0.2	0.5	0.2	0.1	0.2	0.4	0.5	0.3	0.0	0.1	0.2	0.0	2.7	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.5	0.2	0.2	0.1	0.9	2.3	4.9
STOR	5.8	6.3	7.1	7.2	7.0	7.7	6.5	10.1	10.3	9.9	9.7	9.8	97.4	6.1	6.0	5.6	6.0	5.5	7.1	8.0	7.9	7.7	7.0	7.4	7.2	81.4	178.9
Constraints - E&W	3.9	17.8	4.7	2.6	4.6	4.4	3.9	13.4	7.2	2.5	8.6	2.5		3.7	3.6	4.2	2.0	9.3	12.1	10.6	21.6	7.0	8.0	3.9			
Constraints - Cheviot	8.8	7.6	10.6	6.2	8.9	19.6	13.9	14.2	9.8	6.8	7.9	6.8	325.5	7.6	6.7	2.9	0.8	3.5	6.2	0.7	4.4	3.9	0.9	1.8	31.3	195.1	520.6
Constraints - Scotland	4.2	6.3	7.1	2.7	3.8	11.8	17.2	11.1	20.4	14.3	13.8	15.7		6.2	3.3	1.5	0.8	1.7	7.0	5.5	6.3	4.2	0.7	1.3			
Footroom	0.3	1.0	1.8	2.3	1.7	3.2	2.4	1.6	1.5	2.1	0.1	0.0	18.0	0.3	0.6	5.5	2.3	2.0	4.3	1.3	0.2	0.8	0.5	0.0	0.4	18.1	36.1
Fast Reserve	6.6	7.4	6.9	6.6	7.5	7.7	8.4	7.3	8.5	8.7	7.6	8.8	92.0	8.5	9.1	9.3	10.4	11.1	9.8	10.4	11.4	10.9	11.0	10.0	7.0	118.9	210.9
Response	13.9	13.6	14.2	14.8	15.5	18.4	16.7	18.6	17.2	18.5	16.6	14.4	192.4	15.2	14.9	14.9	15.0	15.0	17.2	15.9	15.9	16.1	16.4	14.5	12.5	183.5	375.9
Reactive	5.1	5.6	5.7	6.2	5.9	5.3	6.0	5.5	5.0	5.1	4.4	4.3	64.2	5.2	6.0	5.9	6.6	6.0	5.7	5.4	5.2	5.2	5.4	4.4	5.8	66.9	131.1
Minor Components	3.1	4.0	4.4	4.3	4.3	4.7	3.5	2.5	4.9	2.2	2.5	3.3	43.8	3.3	3.7	4.9	3.0	2.8	4.1	4.2	3.8	5.0	3.7	3.7	2.9	45.2	89.0
TOTAL (excl TLIC)	33.2	61.9	61.3	43.3	61.7	85.4	73.9	83.7	90.8	75.8	89.4	61.3	821.7	72.8	62.8	55.1	50.9	59.5	70.3	76.8	86.0	68.6	59.1	57.2	74.4	793.5	1615.2
TLIC	1.2	3.3	2.7	1.7	3.3	6.9	5.1	8.8	7.7	6.9	11.7	5.2	64.6	2.4	1.6	1.6	2.1	2.1	4.4	4.4	4.4	5.9	7.1	4.4	1.7	42.2	106.7
Total (incl TLIC)	34.4	65.2	64.0	45.1	64.9	92.3	79.0	92.5	98.5	82.7	101.2	66.5	886.3	75.2	64.4	56.7	53.0	61.6	74.7	81.2	90.4	74.5	66.2	61.6	76.2	835.7	1721.9
Estimated BSUoS Vol (TWh)	47.2	47.5	46.3	46.5	46.8	46.9	50.3	53.4	57.2	58.5	56.6	54.1	611.2	50.3	49.7	45.2	46.5	46.2	46.0	52.2	54.8	57.7	60.1	54.3	54.1	617.2	1228.4
Forecast NGET Profit/(Loss)														-50.0													
Estimated Internal BSUoS (£m)	8.6	8.9	8.6	8.9	8.9	8.6	8.9	8.6	8.9	8.9	8.3	8.9	105	8.6	8.9	8.6	8.9	8.9	8.6	8.9	8.6	8.9	8.9	8.1	8.9	105	210
Estimated BSUoS Charge (£/MWh)	0.84	1.45	1.47	1.08	1.46	1.96	1.60	1.69	1.71	1.41	1.69	1.26	1.48	1.58	1.40	1.36	1.24	1.44	1.67	1.60	1.69	1.31	1.10	1.17	1.50	1.46	1.45

Note - Individual cost forecasts of 'England & Wales, Cheviot and Scotland' are not available. Outturn costs remain split by area.

New Wind Generation

New wind generation reported in Elexon Settlement Data as having generated more than 2 MW in any half hour for the first time during this month.

BMU ID	Month First Metered	Connection Area	Max Metered MW
CRGHW-1	01/02/2013	SCOTLAND	6.556

How we manage Wind generation

Energy generated by Windfarms varies according to how windy it is. Sometimes there is very little wind, and on other days wind generation could be too strong such that the turbines shut down automatically for their own protection.
In order to balance the system we require backup generation everyday. This covers for power station breakdowns, forecasting errors and for unexpected events. In the past we have seen periods when the level of electricity generated from wind within the UK, Ireland and parts of Northern Europe has been very low. This can coincide with days of peak electricity demand when it's cold and still.

Monthly Balancing Services Summary February 2013

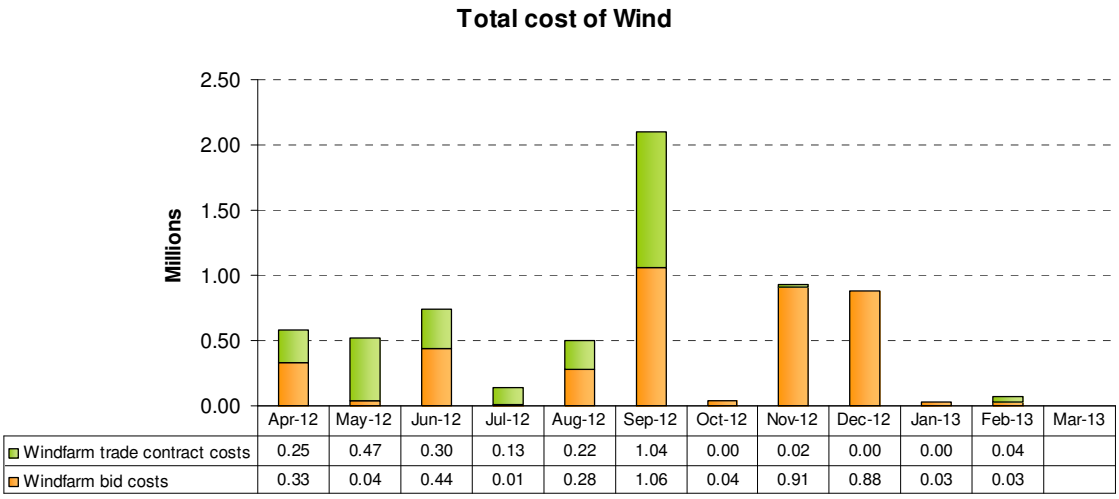
The cost of using backup generation is part of the total cost of balancing the system.

Sometimes we ask some wind farms to stop generating because very high wind may affect the transmission network, causing constraints.

Wind Costs
Bids and offers are some of the actions taken by National Grid in its role as System Operator. The record daily total cost of Wind bids is currently £1.69m on 11/09/09.

The yearly total cost of constraining wind which includes trades and bids was **£0.18m** in 2010, **£31.08m** in 2011 and cost for 2012 so far is **£6.53m** (Apr – Mar).

The graph below shows the monthly total cost of constraining Wind:



	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Windfarm trade contract costs	0.25	0.47	0.30	0.13	0.22	1.04	0.00	0.02	0.00	0.00	0.04	
Windfarm bid costs	0.33	0.04	0.44	0.01	0.28	1.06	0.04	0.91	0.88	0.03	0.03	

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Detail BSIS Costs

2011-13		Outturn for Month	Target for Month	Latest Cost forecast for month	Initial Target forecast for month	Scheme to Date Total Cost	Scheme to Date Target Forecast	Scheme to Date Initial Target	Projected Total cost for Scheme (Cost Outturn + Latest Cost Forecast)	Projected Total Target for Scheme	Initial Target Forecast for Scheme
Energy Imbalance		**2.2**	**6.2**	**-0.8**	**-0.8**	**-77.8**	**-11.2**	**-67.3**	**-76.9**	**-10.4**	**-66.5**
	BM	0.9	6.2	-0.8	-0.8	-99.1	-11.2	-67.3	-98.3	-10.4	-66.5
	Forward Trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SO-SO	1.3	0.0	0.0	0.0	21.3	0.0	0.0	21.3	0.0	0.0
Operating Reserve		**7.9**	**8.7**	**3.8**	**2.9**	**139.1**	**140.9**	**98.5**	**144.7**	**145.7**	**103.4**
	BM	7.0	4.9	2.9	2.0	101.8	82.3	54.5	105.3	85.0	57.3
	Constrained Margin	0.6	2.9	0.5	0.5	29.1	42.1	32.2	30.5	43.6	33.8
	Forward Trade	0.1	0.1	0.1	0.0	3.5	1.8	1.2	3.6	1.9	1.3
	UTUV (Forward Trade)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Forward Constrained Margin	0.0	0.2	0.0	0.0	1.3	2.5	1.9	1.4	2.6	2.0
	SO-SO	0.2	0.4	0.3	0.2	2.9	7.3	4.8	3.2	7.6	5.1
	SO-SO Constrained Margin	0.0	0.3	0.1	0.1	0.5	4.9	3.8	0.7	5.1	4.0
	AS Demand Downturn	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	AS Capacity Contracts	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BM Startup		**0.1**	**1.0**	**1.1**	**1.1**	**4.0**	**16.9**	**17.8**	**4.9**	**17.8**	**18.7**
STOR		**7.4**	**7.8**	**7.1**	**7.7**	**171.7**	**164.2**	**162.3**	**178.9**	**171.9**	**170.0**
	Standing Reserve	0.3	0.3	0.2	0.2	13.7	7.3	5.4	13.9	7.6	5.6
	AS - BM Reserve Option Fees	3.5	7.5	6.9	7.5	90.8	156.9	156.9	97.7	164.3	164.3
	AS - NBM Reserve Option Fees	1.8	0.0	0.0	0.0	39.8	0.0	0.0	39.8	0.0	0.0
	AS - NBM Reserve Utilisation	1.8	0.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0	0.0
	AS - Supplemental Standing Reserve	0.0	0.0	0.0	0.0	-3.6	0.0	0.0	-3.6	0.0	0.0
Constraints		**7.0**				**489.8**					
	BM	2.3				206.1					
	Forward Trade	0.5				129.6					
	SO-SO	0.0	13.4	16.9	4.1	1.3	383.5	365.7	521.1	398.9	382.4
	AS - Intertrip and Constraints	4.3				152.8					
Footroom		**0.0**	**0.1**	**0.3**	**0.3**	**35.7**	**48.3**	**47.3**	**36.1**	**48.7**	**47.7**
	BM	0.0	0.1	0.3	0.3	30.6	48.3	47.3	31.0	48.7	47.7
	Forward Trade	0.0	0.0	0.0	0.0	5.1	0.0	0.0	5.1	0.0	0.0
	SO-SO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fast Reserve		**10.0**	**7.8**	**6.2**	**6.2**	**203.9**	**167.4**	**157.4**	**210.9**	**174.4**	**164.4**
	BM	2.1	1.6	1.6	1.6	36.6	44.9	42.2	38.3	46.6	43.8
	AS - Firm Fast Reserve	1.3	1.4	1.0	1.0	28.6	26.9	25.4	29.8	28.1	26.5
	AS - SpinGen	5.4	4.0	3.0	3.0	115.2	79.6	74.9	118.7	83.1	78.4
	AS - Other Fast Reserve	6.1	4.3	3.2	3.2	127.6	85.7	80.7	131.3	89.5	84.4
	AS - Fast Start	0.4	0.5	0.4	0.4	11.0	9.8	9.2	11.5	10.2	9.6
Response		**14.5**	**12.4**	**12.5**	**12.5**	**363.4**	**335.8**	**330.7**	**375.9**	**348.3**	**343.2**
	BM	3.0	1.9	2.0	2.0	99.1	92.7	87.4	101.1	94.6	89.4
	AS - Generator Response	4.8	4.6	4.6	4.6	120.7	107.0	107.1	125.3	111.6	111.7
	AS - Demand Side Response	0.1	0.8	0.8	0.8	8.2	19.5	19.5	9.0	20.3	20.3
	AS - Response Energy	0.1	0.1	0.1	0.1	7.0	2.4	2.4	7.1	2.5	2.5
	AS - Other Response	6.6	4.9	4.9	4.9	128.4	114.3	114.4	133.4	119.2	119.3
Reactive		**4.4**	**5.5**	**5.5**	**5.5**	**125.3**	**117.1**	**116.5**	**131.1**	**122.9**	**122.3**
	AS - Default Utilisation	4.4	5.5	5.5	5.5	123.9	117.1	116.5	129.7	122.9	122.3
	AS - Market Agreement Available Capabi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	AS - Market Agreement Synchronised Ca	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	AS - Market Agreement Utilisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	AS - Sync Comp	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0	0.0
Black Start		**1.3**	**1.4**	**1.4**	**1.4**	**40.4**	**38.4**	**38.4**	**42.0**	**40.0**	**40.0**
	BM+BMSU	0.0	0.0	0.0	0.0	9.3	4.5	4.5	9.3	4.5	4.5
	AS - Black Start Availbility Contracts	1.3	1.3	1.3	1.3	29.8	29.7	29.7	31.2	31.1	31.1
	AS - Black Start Capital Contributions	0.0	0.1	0.1	0.1	0.6	2.1	2.1	0.7	2.2	2.2
	AS - Black Start Feasibility Studies	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
	Other Blackstart costs	0.0	0.1	0.1	0.1	0.7	2.1	2.1	0.8	2.2	2.2
Unclassified BM		**2.4**	**1.4**	**1.1**	**1.0**	**35.5**	**37.4**	**23.1**	**36.6**	**38.8**	**24.1**
BM+AS General		**-0.7**	**0.4**	**0.2**	**0.2**	**-2.0**	**7.7**	**6.2**	**-1.7**	**8.0**	**6.5**
	Non Delivery	-0.4	0.0	0.0	0.0	-10.4	0.0	0.0	-10.4	0.0	0.0
	Other Reserve (Unwinding)	0.2	0.2	0.1	0.1	5.5	3.9	3.2	5.7	4.1	3.3
	Ramping	0.0	0.1	0.0	0.0	0.4	1.5	1.2	0.4	1.6	1.3
	SO-SO invoked by external party	-0.5	-0.2	-0.1	-0.1	-1.6	-4.6	-3.7	-1.8	-4.8	-3.9
	AS - SO-SO BSUoS	0.0	0.1	0.0	0.0	0.6	1.3	1.1	0.7	1.4	1.1
	AS - SO-SO Interconnector	0.0	0.0	0.0	0.0	0.5	0.9	0.7	0.5	1.0	0.8
	AS - Trading Option Fees	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
	AS - Bank Charges	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	AS - Incidentals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	AS - Disputes Formally Raised	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.1	0.8	0.7
	AS - Queries/NGC Identified Issues	0.0	0.2	0.1	0.1	2.8	3.8	3.1	3.0	4.0	3.3
Reconciliation		**0.6**	**0.0**	**0.0**	**0.0**	**12.1**	**0.0**	**0.0**	**12.1**	**0.0**	**0.0**
TOTAL (Excl TLIC)		**57.2**	**66.2**	**55.5**	**42.2**	**1541.3**	**1446.4**	**1296.5**	**1615.7**	**1505.0**	**1356.2**

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Note- Individual constraint cost forecasts of 'BM, Forward Trades, SO-SO and AS-Intertrip and constraints' are not available. Outturn costs remain split by variable.

Volume of BM Actions by Category

Feb-12		Total for Month	Scheme forecast for Month	Year to Date Total	Year to Date Scheme Forecast	Projected total for year	Scheme Forecast for Year
Energy Imbalance		**49,796**	**-189,502**	**-2,185,489**	**-2,647,435**	**-2,185,489**	**-5,532,545**
	BM	-31,614	-189,502	-2,406,243	-2,647,435	-2,406,243	-5,532,545
	Forward Trade	0	0	0	0	0	0
	SO-SO	81,410	0	220,754	0	220,754	0
Operating Reserve		**475,247**	**202,819**	**4,324,791**	**2,398,254**	**4,324,791**	**4,727,846**
	BM	165,974	93,002	1,323,715	1,207,793	1,323,715	2,415,225
	Constrained Margin	249,241	84,561	2,512,355	897,823	2,512,355	1,737,623
	Forward Trade	15,718	2,067	186,379	26,840	186,379	53,672
	UTEV (Forward Trade)	0	0	0	0	0	0
	Forward Constrained Margin	4,389	4,974	165,553	52,813	165,553	102,213
	SO-SO	16,552	8,267	62,803	107,359	62,803	214,687
	SO-SO Constrained Margin	23,373	9,948	73,988	105,626	73,988	204,426
Absolute STOR		**12,542**	**1,033**	**55,367**	**13,420**	**55,367**	**26,836**
	Standing Reserve	12,542	1,033	55,367	13,420	55,367	26,836
Constraints by Area		**584,696**	**TBC**	**5,102,804**	**TBC**	**5,102,804**	**TBC**
	E&W	584,696		5,102,804		5,102,804	
Constraint Margin Replacement		**450,769**	**TBC**	**4,675,960**	**TBC**	**4,675,960**	**TBC**
	E&W	450,769		4,675,960		4,675,960	
Footroom		**-9,689**	**0**	**-1,165,125**	**-1,436,124**	**-1,165,125**	**-3,203,354**
	BM	-9,170	0	-1,127,205	-1,436,124	-1,127,205	-3,203,354
	Forward Trade	0	0	-35,229	0	-35,229	0
	SO-SO	-519	0	-2,692	0	-2,692	0
Fast Reserve		**16,659**	**16,485**	**175,428**	**211,868**	**175,428**	**472,363**
	BM	16,659	16,485	175,428	211,868	175,428	472,363
Absolute Response		**314,584**	**154,558**	**3,937,954**	**2,938,029**	**3,937,954**	**5,665,874**
	BM	314,584	154,558	3,937,954	2,938,029	3,937,954	5,665,874
Unclassified BM	**Unclassified BM**	**-167,410**	**0**	**-1,040,274**	**0**	**-1,040,274**	**0**
BM General		**4,008**	**0**	**20,233**	**0**	**20,233**	**0**
	Non Delivery	0	0	0	0	0	0
	Other Reserve (Unwinding)	1,595	0	7,314	0	7,314	0
	Ramping	0	0	0	0	0	0
	SO-SO invoked by external party	2,413	0	12,919	0	12,919	0
Transmission Losses	**Transmission Losses**	**653,889**	**375,435**	**5,635,545**	**4,050,549**	**10,484,996**	**8,900,000**

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Glossary of Terms used in BSIS Tables

NIA		The Net Imbalance Adjustment
Energy Imbalance		
	BM	Offers and bids taken in the BM to manage the difference between generation supplied to the BM and system demand
	Forward Trade	Trades undertaken ahead of gate closure to reduce the forecast difference between generation to be supplied to the BM and system demand
	SO-SO	Interconnector actions entered into between the system operators of the interconnected transmission systems following interconnector gate closure to reduce the forecast difference between generation to be supplied to the BM and system demand
Operating Reserve		
	BM	Offers and bids taken in the BM to establish headroom on BMUs
	Constrained Margin	Offers and bids taken in the BM which both create additional reserve and replace pre-existing headroom that is sterilised behind a constraint boundary
	Forward Trade	Trades undertaken ahead of gate closure to establish additional headroom on BMUs
	UTEV (Forward Trade)	UnTagged Energy Volume is non-locational energy trade volume traded to help meet the forecast energy imbalance.
	Forward Constrained Margin	Trades undertaken ahead of gate closure which both create additional reserve and replace pre-existing headroom that is sterilised behind a constraint boundary
	SO-SO	Interconnector actions entered into between the system operators of the interconnected transmission systems following interconnector gate closure to establish additional headroom on BMUs
	SO-SO Constrained Margin	Interconnector actions entered into between the system operators of the interconnected transmission systems following interconnector gate closure which both create additional reserve and replace pre-existing headroom that is sterilised behind a constraint boundary
	AS Demand Downturn	Ancillary services that enable demand to turndown relative to synchronised generation which, when pulled back to maintain energy balance, creates additional headroom
	AS Capacity Contracts	Ancillary services that provide additional generation capacity for headroom
BM Startup		Optional service that allows BMUs to be warmed ready to

		synchronise in BM timescales and held in a state of hot-standby if required
STOR		
	Standing Reserve	Offers and bids taken in the BM to run STOR BMUs
	AS - BM Reserve Option Fees	Ancillary service availability fees for STOR BMUs
	AS - NBM Reserve Option Fees	Ancillary service availability fees for non-BM STOR providers
	AS - NBM Reserve Utilisation	Ancillary service utilisation fees for non-BM STOR providers
	AS - Supplemental Standing Reserve	Ancillary service fees associated wit supplemental standing reserve
Constraints		
	BM	Offers and bids taken in the BM to resolve constraints
	Forward Trade	Trades undertaken ahead of gate closure to resolve constraints
	SO-SO	Interconnector actions entered into between the system operators of the interconnected transmission systems following interconnector gate closure to resolve constraints
	AS - Intertrip and constraints	Ancillary services which provide operational intertrips, commercial intertrips and bespoke contracts to manage constraints
Footroom		
	BM	Offers and bids taken in the BM to establish negative regulating reserve capability (for example by desynchronising a BMU operating at SEL and increasing output on another BMU)
	Forward Trade	Trades undertaken ahead of gate closure to establish footroom
	SO-SO	Interconnector actions entered into between the system operators of the interconnected transmission systems following interconnector gate closure to establish footroom
Fast Reserve		
	BM	Offers and bids taken in the BM to run fast reserve BMUs
	AS - Firm Fast Reserve	Ancillary service availability fees associated with fast reserve contracts
	AS - SpinGen	Ancillary service fees associated with spingen fast reserve
	AS - Other Fast Reserve	Ancillary service fees associated with non-BM fast reserve units
	AS - Fast Start	Ancillary service fees associated with OCGT fast start
Response		
	BM	Offers and bids taken in the BM to position BMUs to be able to provide frequency response
	AS - Generator Response	Ancillary service payments for frequency response capability on generation BMUs
	AS - Demand Side Response	Ancillary service payments for frequency response capability from demand side service providers
	AS - Response	Ancillary service payments for the energy delivered when

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	Energy	providing frequency response
	AS - Other Response	Ancillary service payments for firm response, and firm response energy, including part loaded response.
Reactive		
	AS - Default Utilisation	Ancillary service payments for metered reactive power provided under the Default Payment Arrangements
	AS - Market Agreement Available Capability	Ancillary service payments for the available capability to provide reactive power pursuant to a market agreement
	AS - Market Agreement Synchronised Capability	Ancillary service payments for the synchronised capability to provide reactive power pursuant to a market agreement
	AS - Market Agreement Utilisation	Ancillary service payments for metered reactive power provided pursuant to a market agreement
	AS - Sync Comp	Ancillary service payments for provision of synchronous compensation
Unclassified BM		Actions not satisfying the specific criteria of any other category
BM+AS General		
	Non Delivery	Correction for failure to delivery energy as contracted.
	Other Reserve (Unwinding)	Costs associated with reversing a previously agreed BOA.
	Ramping	Costs associated with managing changes on the interconnectors to limit rate of change of transfer to the technically achievable ramp rates
	SO-SO invoked by external party	SO-SO trades over an interconnector instigated at the request of the other system operator connected to the interconnector
	AS - SO-SO BSUoS	BSUoS charges associated with interconnector actions entered into between the system operators of the interconnected transmission systems following interconnector gate closure
	AS - SO-SO Interconnector	Interconnector fees associated with interconnector actions entered into between the system operators of the interconnected transmission systems following interconnector gate closure
	AS - Trading Option Fees	Energy trading broker fees
	AS - Bank Charges	Interest costs in respect of disputes
	AS - Incidentals	Exchange rate adjustments
	AS - Disputes Formally Raised	Disputes raised on AS payments
	AS - Queries/NGC Identified Issues	Forecast cost of unsigned contracts/disputes not yet formally raised