Winter Consultation 2014/15

July 2014

Roles and Responsibilities

National Grid owns the high-voltage electricity transmission network in England and Wales and is the System Operator of the high-voltage electricity transmission network – the country's power motorways - for the whole of Great Britain. We are responsible for managing the flows of electricity to homes and businesses on a real time basis.

We don't generate the power - neither do we sell it to consumers. We all pay our bills to energy suppliers, who buy enough electricity to meet their customers' needs from the power stations and other electricity producers.

Once that electricity enters our network, our job is to 'fine tune' the system to make sure supply and demand match second by second.

On the gas side, we are the system owner and operator of the gas transmission network for the whole of Great Britain, responsible for managing the flow of gas to homes and businesses.

Like electricity, we do not own the gas we transport and neither do we sell it to consumers; that again, is the responsibility of energy suppliers and shippers.

Together, these networks connect people to the energy they use.

Introduction

July 2014

Welcome to our 2014 Winter Consultation Report. We have made some changes to the format and content of this year's document. The document continues to have two main sections: winter review and winter consultation. Whilst the winter review section remains similar to previous years, where we review the previous winter, providing a detailed examination of the supply demand position for electricity and gas; this year's winter consultation section is different. To avoid duplication of content with the Winter Outlook Report that will be released in early October, we have focused the winter consultation section on seeking your views and requesting your feedback. We hope this approach will encourage you to engage with us.

The UK energy market continues to evolve: there is great interest in the energy supply and demand position over the coming years. Security of supply is a key area of focus. This is particularly true with respect to electricity as the generation mix diversifies over time. Following the proposal from the Electricity Market Reform (EMR), a security of supply reliability standard has been introduced by the Department of Energy and Climate Change (DECC). A measure using loss of load expectation (LOLE) has been introduced in our analysis for the 2014 Future Energy Scenarios[1] report and in Ofgem's Electricity Capacity Assessment Report 2014[2] to replace the de-rated plant margin. Our electricity consultation section in this report provides further information on this measure.

I really hope you respond to the questions in this consultation document. Please tell us your views on the coming winter, what you want to see in this document and how we should engage with you. We are ready to listen and act on your feedback.

Please send your feedback to commercial.operation@nationalgrid.com by Friday 29 August 2014.

Cordi O'Hara
Director, UK Market Operation
National Grid

[1] National Grid's UK Future Energy Scenarios Document: http://www2.nationalgrid.com/uk/industry-information/future-of-energy/future-energy-scenarios/
[2] Ofgem's Electricity Capacity Assessment Report 2014: https://www.ofgem.gov.uk/publications-and-updates/electricity-capacity-assessment-2014

Executive Summary

July 2014

It is National Grid's responsibility to produce the Winter Consultation Report. This year's document focuses on two areas: firstly the review of the gas and electricity supply demand position for last winter and secondly encouraging greater stakeholder participation within the winter consultation. This should improve the robustness of the assumptions underpinning the analysis within the Winter Outlook Report that will be published in October.

This report includes a range of questions covering the outlook for gas and electricity, including questions on the potential impact of a gas disruption due to the Russia/Ukraine dispute, electricity security of supply methodology and how we could improve our engagement to maximise the value of the winter consultation.

Gas: Potential Disruption to Russian Imports

The analysis within this document does not assume there will be any disruption to the exports of Russian gas. We have, however, included a section on the potential impact of any disruption, and some questions seeking views on how the market might respond.

Electricity: Security of Supply analysis

The assessment of electricity security of supply contained within this document has not changed from that within Ofgem's Electricity Capacity Assessment Report (ECAR), published in June this year, which was based on analysis from National Grid, as well as Ofgem's own analysis. We will revisit our assessment of security of supply, by undertaking new analysis supported by additional information available to us via responses to this consultation.

One of the key proposals from the EMR is the establishment of a reliability standard for security of supply, as introduced by the Department of Energy and Climate Change (DECC) in the Delivery Plan. The loss of load expectation (LOLE) represents the number of hours per year in which supply is expected to be lower than demand under normal operation of the system.

We are currently minded to harmonise security of supply analyses within the Winter Outlook Report with that within Ofgem's Electricity Capacity Assessment Report (ECAR). We wish to understand whether stakeholders value the margin calculation we have historically included within the Winter Consultation, or whether we should adopt the methodology used within Ofgem's ECAR.

National Grid encourages all stakeholders to provide their feedback on any element of the potential supply demand balance for this coming winter, or to provide answers to the specific questions within this report.

Stakeholder Engagement

We have been producing the Winter Outlook Report for over a decade and the Summer Outlook Report since 2008. The outlook reports have evolved over the years, as the UK market has developed and as our stakeholders have provided feedback on how to improve the reports. We believe now is the time to review and further improve the Outlook Reports.

We are keen to hear your views:

Number	Question
SEQ1	Are the Winter Consultation and Winter Outlook Report of value to you?
SEQ2	How do you use the Winter Consultation and Winter Outlook Report?
SEQ3	What is important to you within the Outlooks?
SEQ4	How could they be improved?
SEQ5	How can we improve our engagement with you?
SEQ6	How should we engage with you to ensure we receive the most relevant information? For example, would you prefer face to face meetings, electronic surveys, webinars, workshops at Operational Forum meetings or written consultations?

We want to ensure that the outlook documents provide maximum value to all our stakeholders. We can only do this by incorporating your views on how they can be improved.

Please contact us with your thoughts, views and opinions and/or answers to the questions above and elsewhere with this document at:

commercial.operation@nationalgrid.com

Please respond by Friday 29 August 2014.

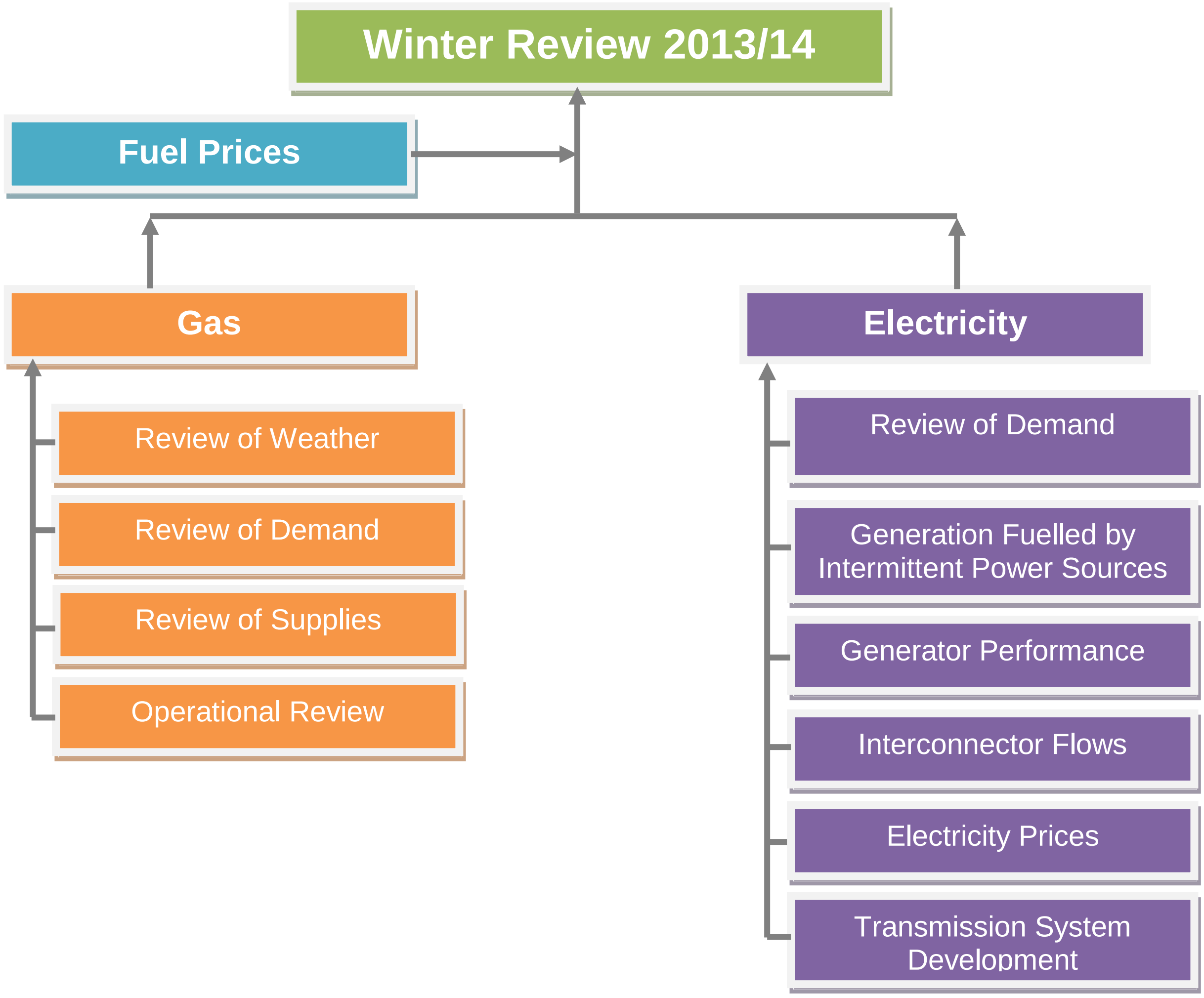
Alternatively, please call Gary Dolphin,
Market Outlook Manager on 01926 65 6210.

Winter Consultation Report 2014/15 Contents

Winter Consultation Report 2014/15 Figures and Tables

Winter Review 2013/14

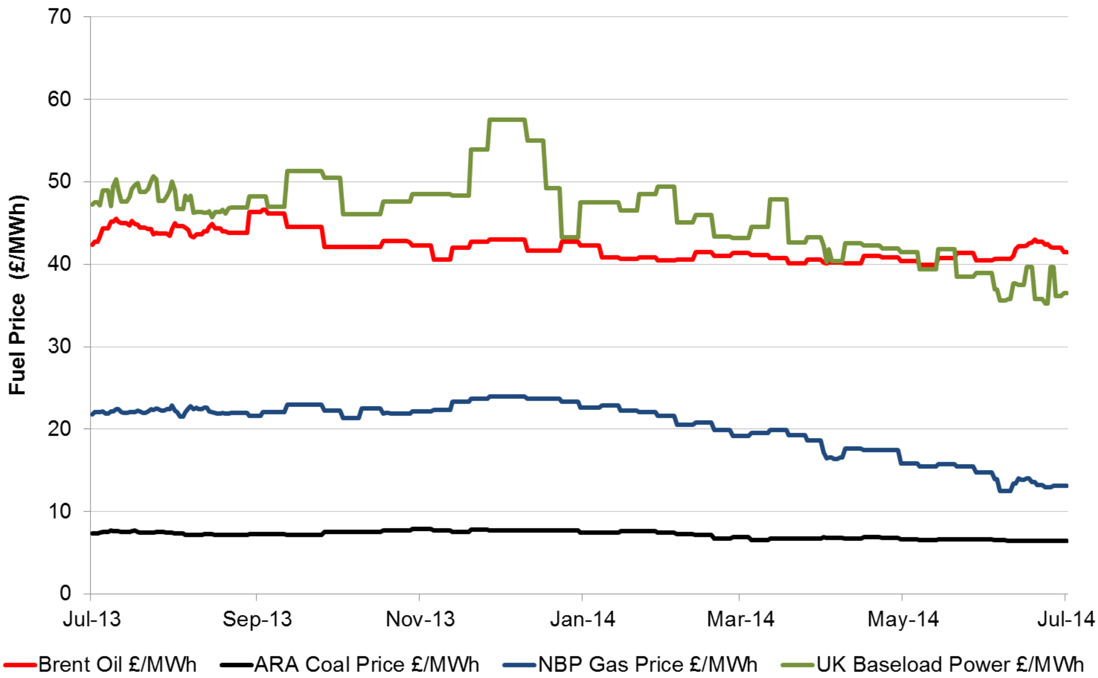
Below is a schematic of the Winter Review sections of this document.



Fuel Prices

1. **Figure F1** shows energy prices for the 12-month period between July 2013 and June 2014.

Figure F1 – Energy Prices since July 2013



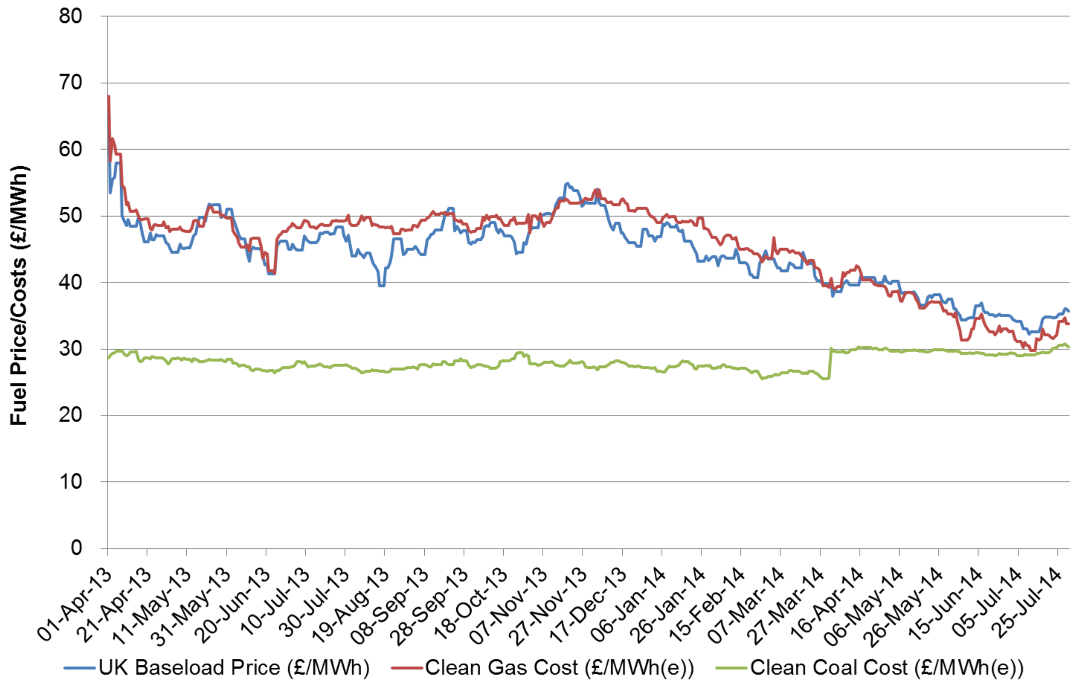
2. The chart shows a differing picture over the last 12 months for the various fuels, with a slight increase in the price of oil, a slight decline in the price of coal but more significant declines in both gas and baseload power.
3. Oil prices have been relatively stable over the previous 12 months, remaining between $103 - $116/bbl (£42.30/MWh - £46.60/MWh) with an overall increase of ~6% over the period.
4. Coal prices increased to over $85/tonne (~£7.80/MWh) during Winter 2013/14, but overall have shown a slight decline of ~1%.
5. UK gas prices remained fairly stable until January 2014 but have since been steadily declining, losing over 35% in value.
6. Electricity prices have generally followed the gas price over the last 12 months both across the year, and to a lesser extent, with declining prices from January 2014.

7. From 1 April 2014, the UK has applied a Carbon Price Support (CPS) of £9.55/tonne (~€11.7/tonne) which is ~90% increase on the CPS in 2013. (£4.94/tonne). [See **Figure F2**].

Figure F2 – Carbon Price since July 2013

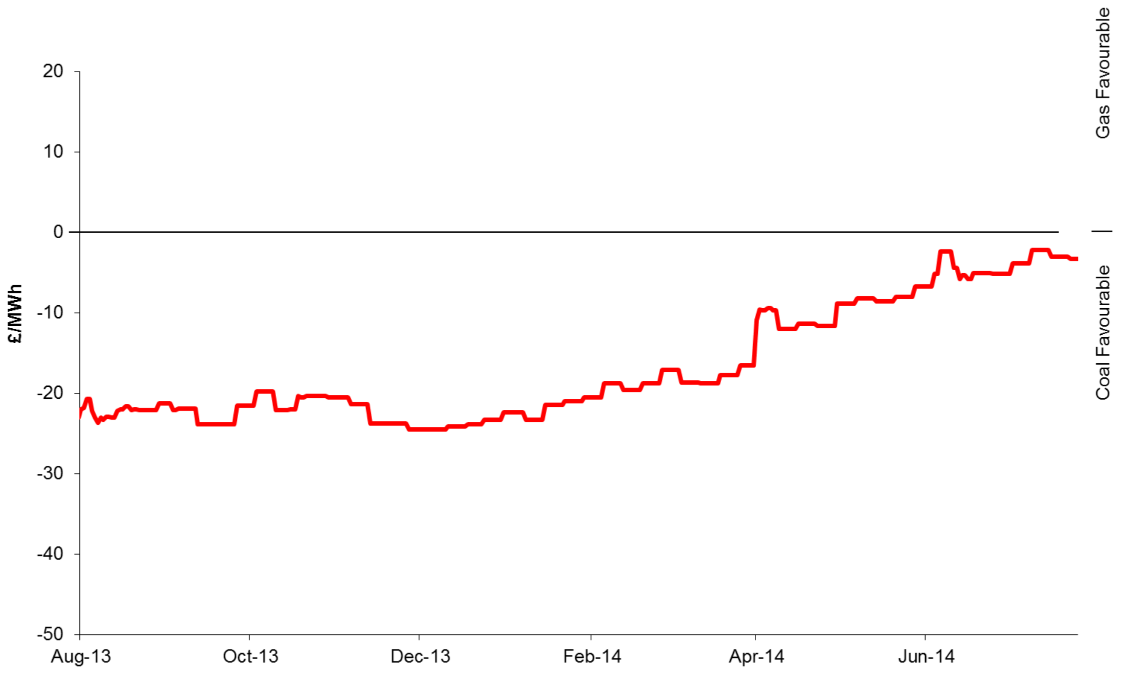
8. The generation costs for coal and gas last winter are compared to the day-ahead base load electricity price in **Figure F3**. The electricity price movements were generally in line with the cost of gas generation but rose above it briefly during a period of scarcity in November, corresponding to a period of export on the French Interconnector. The cost of coal fired generation remained significantly lower than the cost of gas fired generation throughout the whole winter.

Figure F3 – 2013/14 Base Load Electricity Prices and Clean Gas/Coal Costs



9. **Figure F4** shows the relative dark and spark spreads, indicating whether gas or coal was favoured for electricity generation over the last 12 months.

Figure F4 – Relative power generation economics



10. Power generation economics have favoured coal for all of the previous 12 months. However, with gas prices falling since the start of the year the difference between the spark and dark spreads has been reducing.

11. Whilst the chart shows a bias for coal generation, there are other factors at play that determine the precise generating mix, these include power station generating efficiencies, ownership and the portfolio of energy companies.

Gas

12. This section reviews winter 2013/14 in terms of gas demand, supply and operational experience.

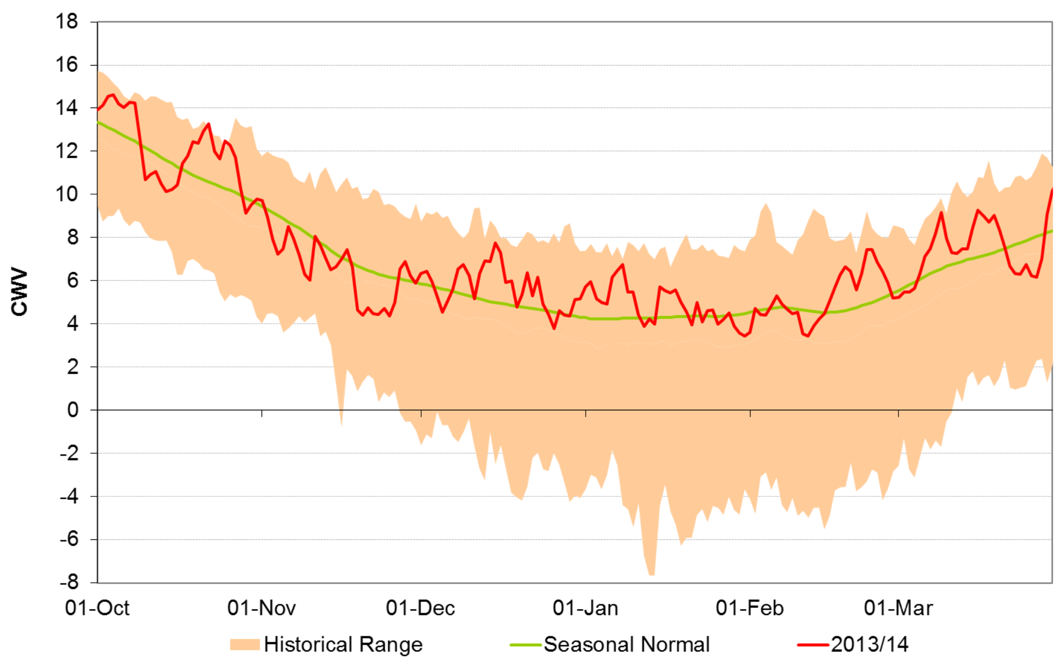
Review of Weather

13. The 6 month period from October to March was the 5th warmest when compared to the last 86 winters. The coldest day was on 12 February 2014 and was the warmest "cold day" in severity when compared to the last 86 years.

14. For the 3 month mid-winter period from December to February, the severity was average. Consequently, observed non-daily metered (NDM) gas demand, consumers most sensitive to weather, was 3% lower than seasonal normal demand over the winter period.

15. **Figure W1** compares the winter 2013/14 weather in terms of Composite Weather Variable (CWV) with the daily maximums and minimums since October 1928. The seasonal normal line has been adjusted for climate change and is not the average of the historical values.

Figure W1 – Winter Composite Weather 2013/14

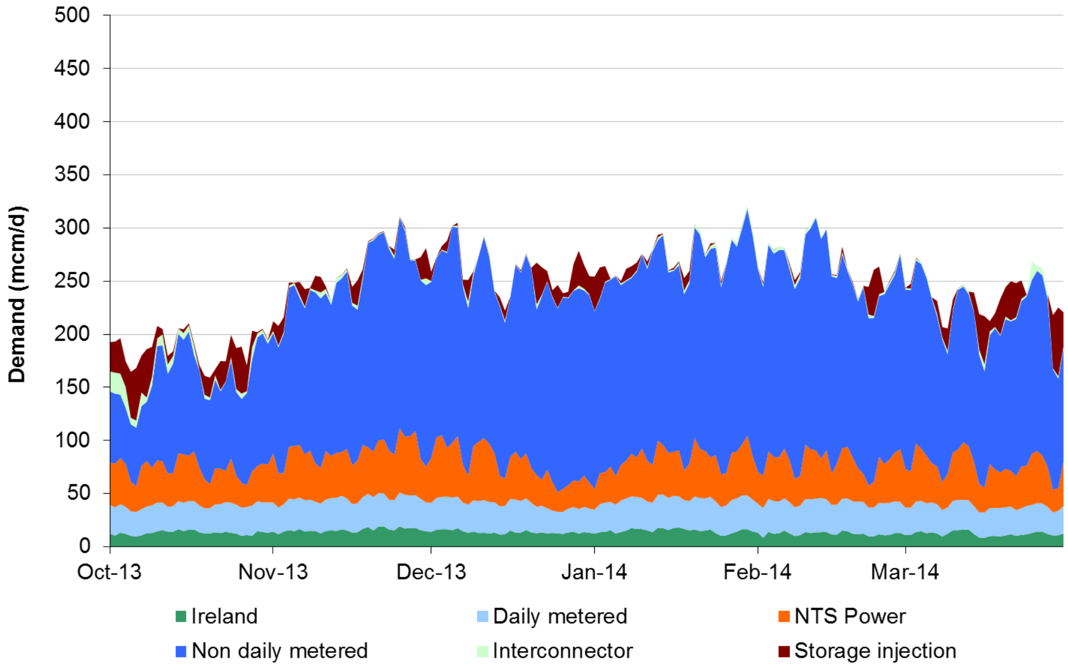


Review of Demand

16. The highest demand day in winter 2013/14 was 30 January 2014 with a demand of 323 mcm/d. It was marginally warmer than the coldest day over the winter (12 February). While the NDM demand was slightly lower on 30 January compared to 12 February, power demand and exports were higher.

17. This can be seen in **Figure G1**, which shows the gas demand for winter 2013/14.

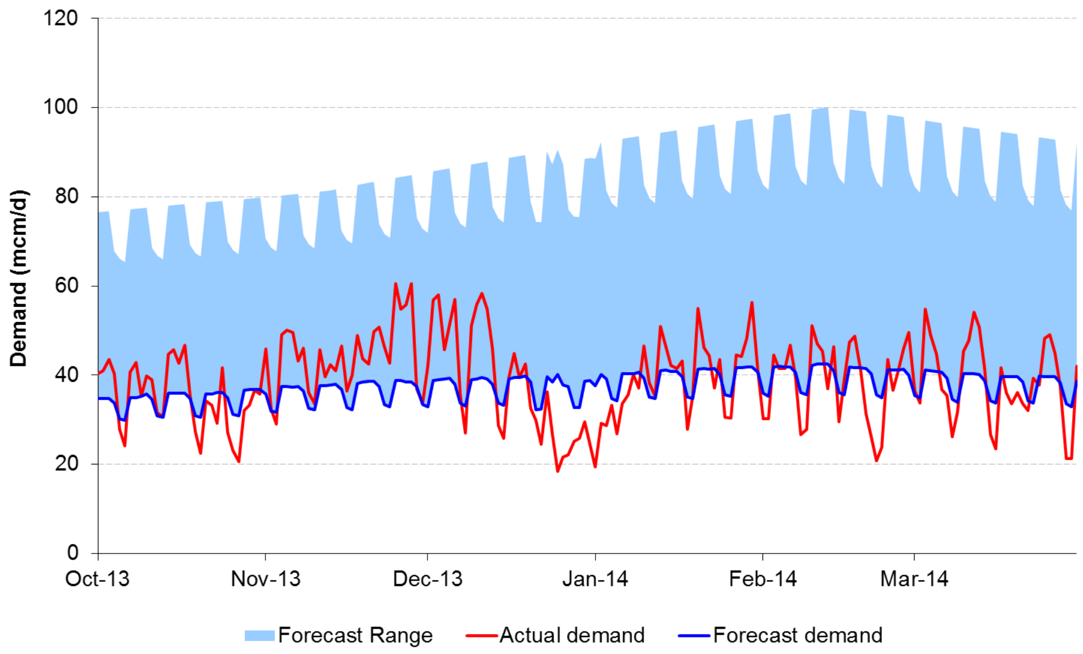
Figure G1 – Winter Gas Demand 2013/14



18. The chart shows relatively low demands for much of the winter mainly due to the mild temperatures and low power generation demand.

19. **Figure G2** shows the National Transmission System (NTS) connected power generation demand for winter 2013/14 together with the pre-winter base case forecast and high and low forecast ranges to reflect generation merit orders depending on whether gas is base load or marginal generation.

Figure G2 – Winter Power Generation Demand 2013/14



20. The chart shows that power generation was at the bottom of the forecast range for much of the winter. Coal was predicted to be the primary source of fuel for power generation as a result of favourable coal prices relative to gas.

21. The review of gas supplies section shows the demand associated with IUK exports and storage injection in more detail.

Review of Supplies

22. **Table G1** summarises the make-up of gas supplies for winters 2011/12, 2012/13 and 2013/14 by supply source.

Table G1 – Winter Gas Supply by Source

	2011/12		2012/13		2013/14	
	bcm	%	bcm	%	bcm	%
UKCS	21	39%	16	30%	17	37%
Norway	16	31%	18	34%	17	37%
Continent	4	8%	9	17%	6	13%
LNG	8	15%	4	8%	3	7%
Storage	3	6%	6	11%	3	7%
Total	**53**		**53**		**46**	

23. For winter 2013/14 the table shows:

- A halt in the decline in UK Continental Shelf (UKCS); this is the first increase in UKCS supplies for some years
- Lower levels of imports from Norway and markedly lower imports from the Continent
- Slightly less LNG
- Significantly less storage use than in 2012/13

24. **Table G2** shows the make-up of supplies for winters 2011/12, 2012/13 and 2013/14 by terminal.

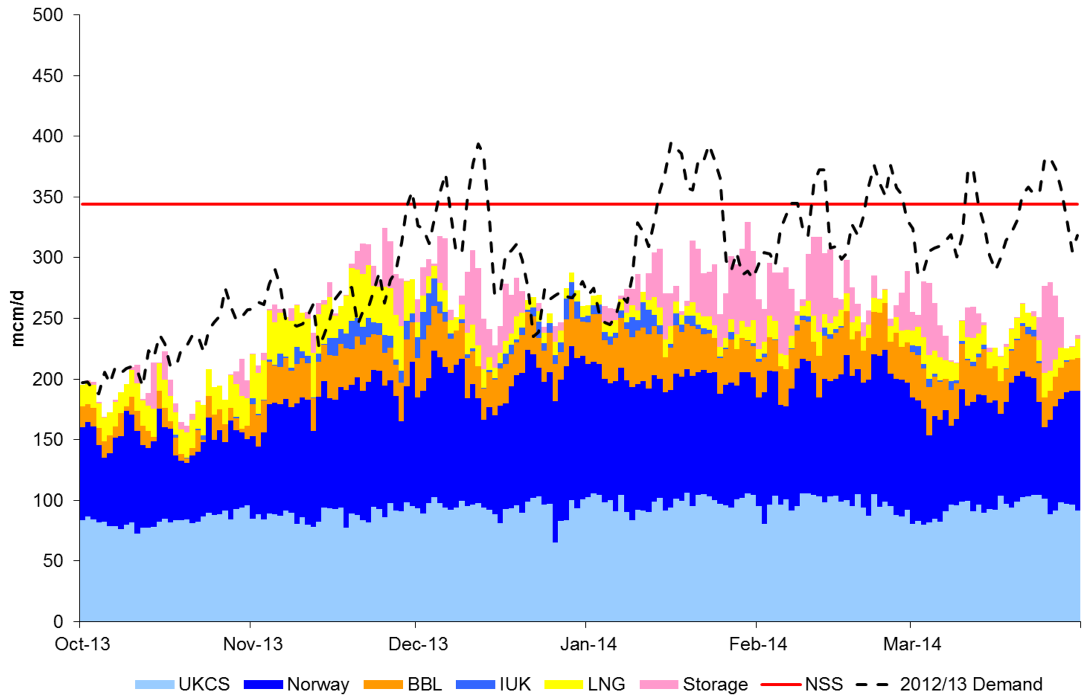
Table G2 – Winter Gas Supply by Terminal

	2011/12		2012/13		2013/14	
	bcm	%	bcm	%	bcm	%
Bacton	12	22%	13	22%	10	22%
Barrow	2	3%	1	3%	1	2%
Grain	3	5%	1	5%	1	2%
Easington inc Rough	14	27%	17	27%	15	33%
Milford H.	5	10%	3	10%	2	4%
Burton P.	0.2	0%	0.5	0%	0.4	1%
St Fergus	11	21%	12	21%	10.5	23%
Teesside	3	5%	2	5%	2.5	5%
Theddlethorpe	2	3%	1	3%	2	4%
MRS & SRS	1	2%	2	2%	1.5	3%
Total	**53**		**53**		**46**	

25. For winter 2013/14, the table shows similar flows at most terminals with the main exceptions being lower flows through Bacton, reflecting lower imports from the Continent, and at Easington, reflecting lower imports from Norway and lower withdrawals from the long term storage facility at Rough.

26. **Figure G3** shows the gas supply by source for winter 2013/14

Figure G3 – 2013/14 Gas Supply



27. The chart also shows forecast range of Non Storage Supply (NSS) and the NSS as used in the calculation of the Gas Margins Notice. The NSS forecast represents an upper expectation of supply associated with cold weather / high demands and is part of the mechanism that National Grid uses to decide whether to issue a Margins Notice[3] at times of potential supply and demand imbalance. The NSS threshold figure for winter 2013/14 was 344 mcm/d.

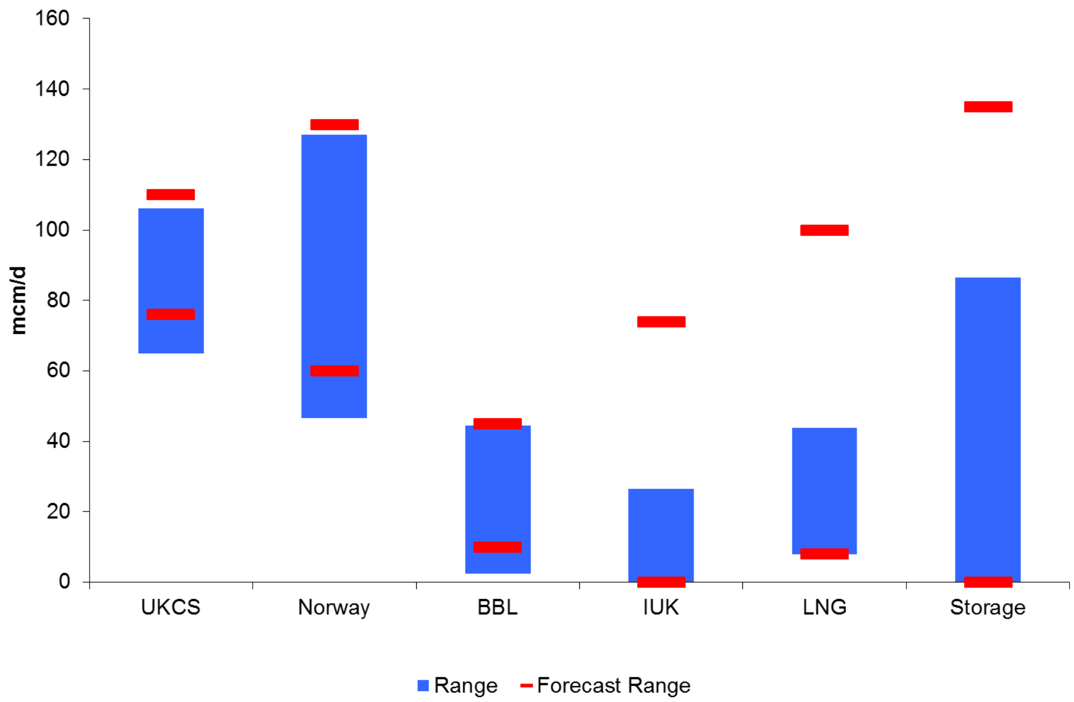
28. The average level of NSS over the winter period was 238 mcm/d.

29. Historically the Winter Review listed days with supply in excess of 400 mcm/d. In winter 2012/13 there were no days with this level of supply, so days with supply in excess of 350 mcm/d were shown instead. In winter 2013/14, demand was lower still, due to warmer weather and low gas use for power generation. As a consequence, supplies never reached 350 mcm/d and the highest supply was 329 mcm/d, reached on 30 January 2014.

[3] http://www2.nationalgrid.com/uk/industry-information/gas-transmission-system-operations/balancing/gas-deficit-warnings-and-margins-notices/

30. The factors impacting the deliverability of non-storage supplies and storage are considered in turn in the following sub-sections. **Figure G4** shows the forecast range for each of the supply components and the range of actual flows.

Figure G4 – Forecast Ranges and Actual Flows



UKCS Supplies

31. The UKCS range as reported in the Winter Outlook document was 76 -110 mcm/d. For setting the level of NSS utilised in the Gas Margins Notice calculation a level of 99 mcm/d was used.

32. Average flows from the UKCS across the 6-month winter period were 93 mcm/d and 96.5 mcm/d for the 100 days of highest demand.

33. **Figure G4** shows the range of daily UKCS flows for the winter, together with the forecast range from winter 2013/14. Agreement between forecast and actual ranges is good, particularly at the high end.

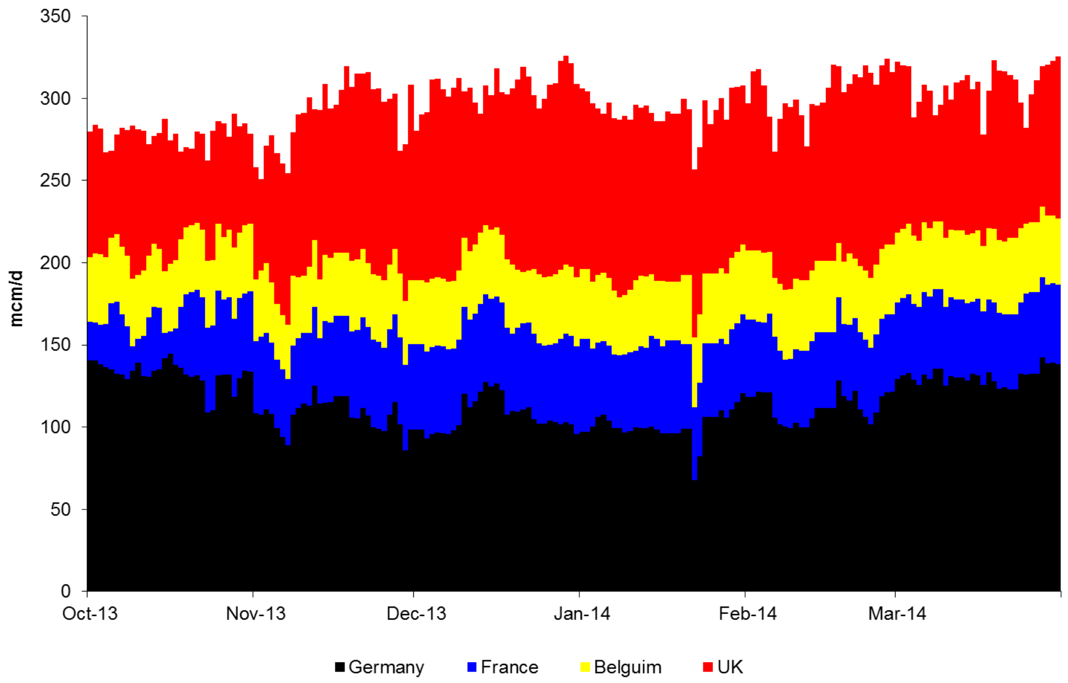
Norwegian Imports

34. Our forecasts for Norwegian imports to the UK for winter 2013/14 were subject to uncertainties in the balance of Norwegian flows between supplies to the UK and to the Continent. To capture this uncertainty, a central view of Norwegian flows to the UK was produced within a range of 60 - 130 mcm/d bounded by the extremes of high and low flows to the continent, with resulting low and high flows to the UK.

35. Norwegian flows were mostly within our anticipated range, as shown in **Figure G4**, though as for the UKCS, agreement was better at the top end of the range than at the bottom. Average Norwegian flows across the 6-month winter period were 94 mcm/d, which was below our NSS forecast at 110 mcm/d.

36. **Figure G5** shows our estimate of daily Norwegian exports to the UK and the Continent during winter 2013/14.

Figure G5 – 2013/14 Norwegian Exports to UK and the Continent



37. The chart shows little seasonality in Norwegian production. The average level of Norwegian production across the 6-month winter period was 320 mcm/d and 326 mcm/d for December to February. These flows are in line with the pre-winter forecasts of 320 mcm/d and 330 mcm/d respectively.

Continental Imports – BBL

38. Based on the experience of winter 2012/13, our forecast for BBL flows was widened to a range of 10 – 45 mcm/d. **Figure G4** shows that this was a good estimate for high flows, but there were flows below the bottom of the range. Imports averaged ~29 mcm/d across all the winter and 33 mcm/d for December to February.

Continental Imports – IUK

39. As in previous winters, IUK was expected to be the marginal source of non-storage supply and would, in terms of operation, be similar to storage when UKCS and other imports could not meet demand with potential upper flows of 70 mcm/d. IUK flows closely follow the price differential between NBP and Zeebrugge and, as a result, depend on both demand and supply availability in Great Britain and north west Europe.

40. Based on the experience of the previous winter, the forecast range for IUK imports was widened to 0 - 74 mcm/d.

41. Average IUK imports for the 6 months of winter were 4.5mcm/d with a peak flow of 26 mcm/d.

LNG Imports

42. The forecast for LNG imports depends not only on supply and demand within the UK, but also the availability of LNG on the world market. This led to a very wide range of 8 - 100 mcm/d.

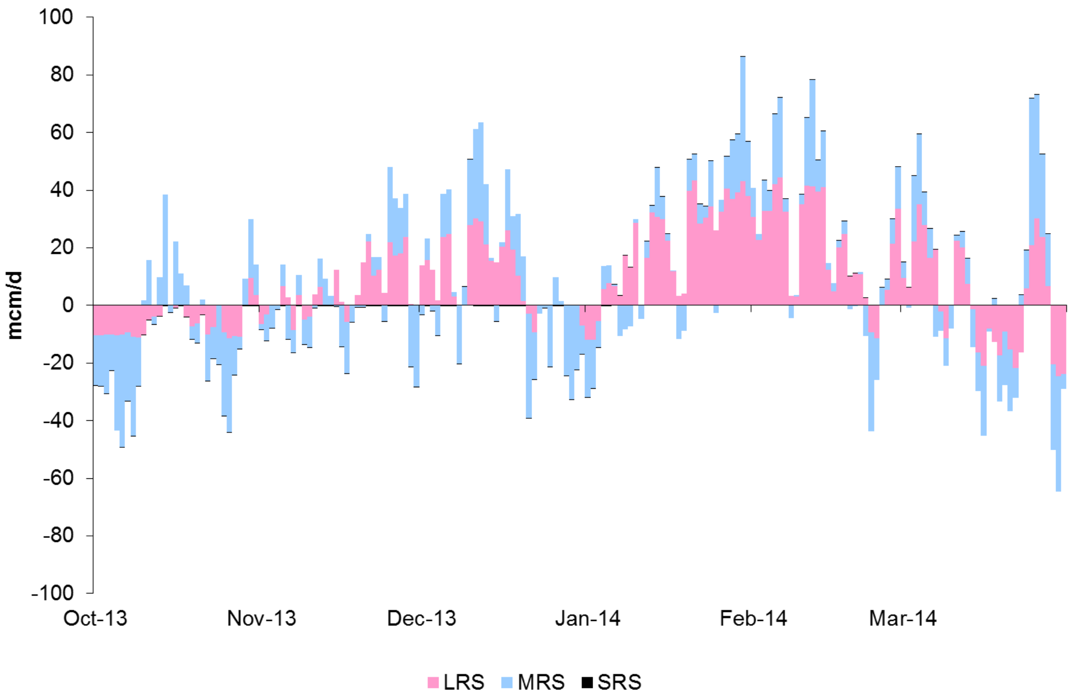
43. LNG flows ranged from 8 to 44 mcm/d with an average flow of 18 mcm/d. Flows were higher in November than in the mid-winter period, with a range of 8 – 11 mcm/d and an average of 11 mcm/d between the start of December and the end of February. The NSS threshold level was 50 mcm/d.

2013/14 Storage Performance

44. Storage deliverability for winter 2013/14 was approximately 138 mcm/d, based on observed performance rather than nameplate specification. This was a slight increase from our expectations at the beginning of the winter and was due to increased capacity at Holford.

45. **Figure G6** shows storage withdrawals and injections over the winter for Long Range Storage (LRS) at Rough, Medium Range Storage (MRS) and Short Range Storage (SRS).

Figure G6 – 2013/14 Storage Withdrawals and Injection

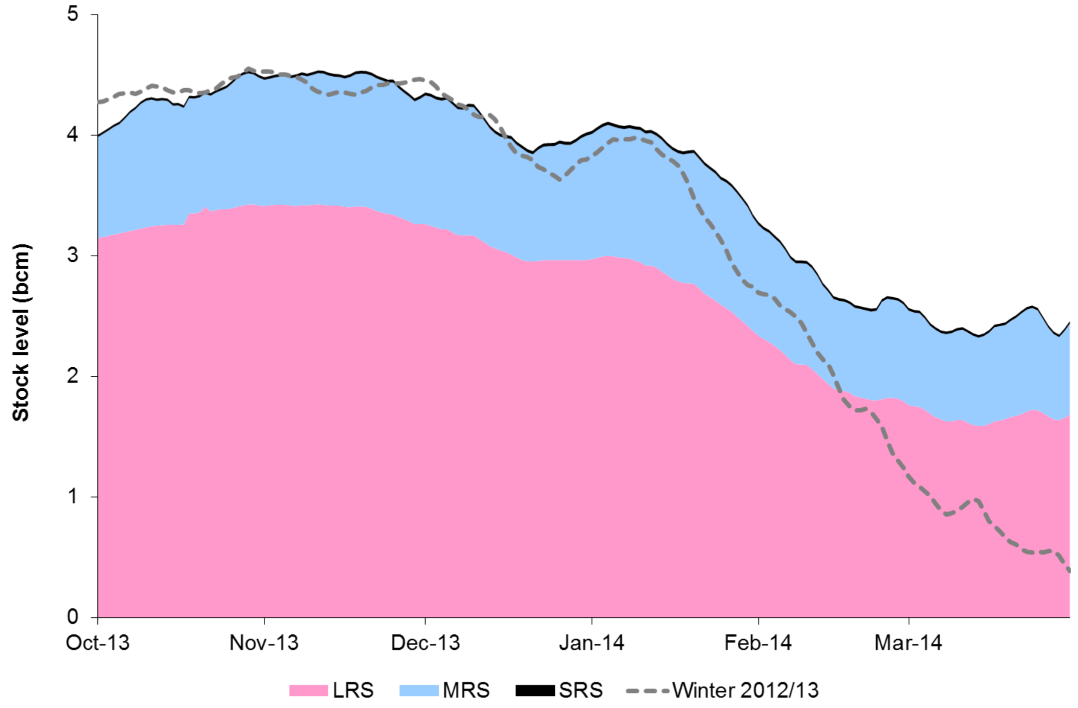


46. The chart shows:

- Both withdrawal and injection at MRS sites throughout the winter. For the 6-month winter period, aggregated MRS withdrawals were 3.4 bcm compared to 1.8 bcm injected.
- SRS storage was used little throughout the winter period.

47. **Figure G7** shows the level of storage stocks through the winter.

Figure G7 – 2013/14 Storage Stocks

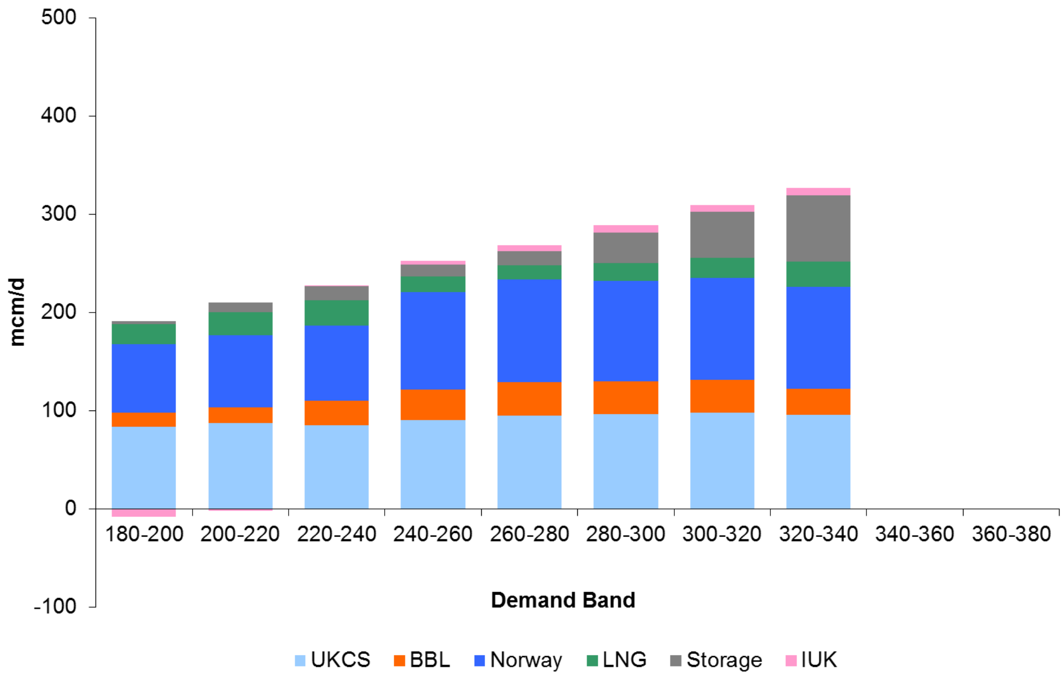


48. The chart shows how little storage was used through the winter in comparison to the previous winter. The previous winter, with high rates of withdrawal all the way to the end of March, is shown on the chart for comparison. At the end of March 2014, the aggregate stock level was 2.4 bcm, 54% of full capacity, whereas at the end of March 2013, storage was only 5% full.

2013/14 Supply Flexibility

49. With little in the way of LNG or IUK imports, flexibility through the winter was provided principally by storage, as shown in **Figure G8**.

Figure G8 – Supply Make-up Winter 2013/14 (all demand)



50. The chart displays the mean make-up of supplies by supply type in demand bands of 20 mcm/d increments. As demand increased:

- UKCS remained flat (i.e. no swing or seasonality)
- Norway showed some limited swing or seasonality
- BBL, LNG and IUK provided minimal swing
- Storage showed the highest levels of swing.

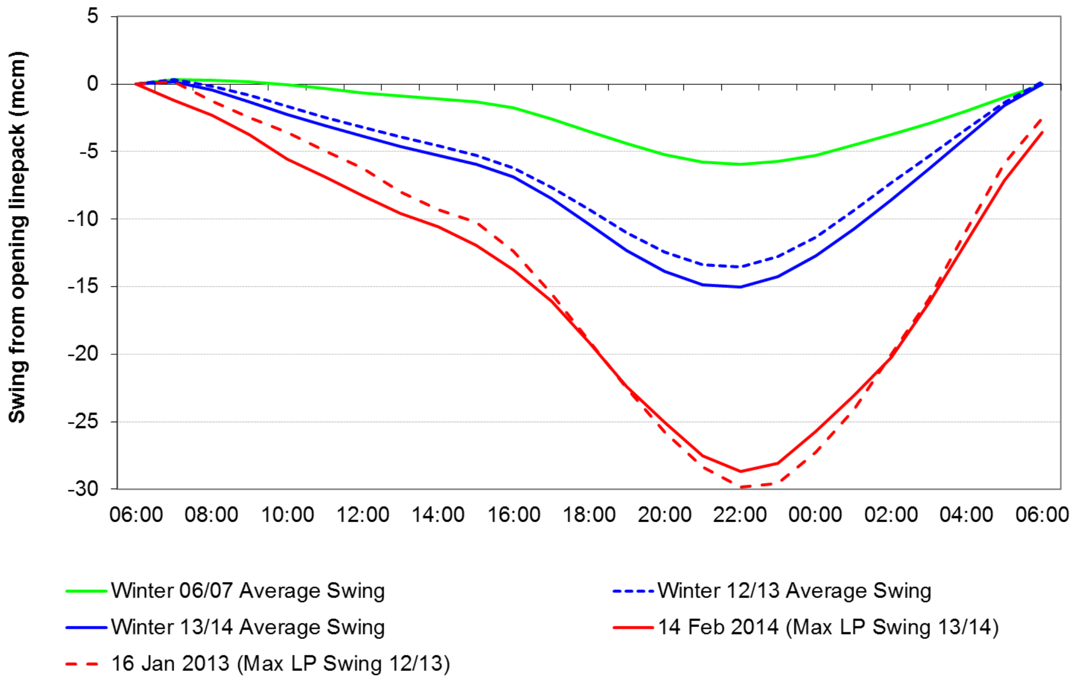
However, demand was extremely low and it is probably not appropriate to assume that this pattern would have been exhibited if demand had been more typical.

Operational Review

51. Following the cold winter of 2012/13 extending into March and April, 2013/14 saw a relatively stable winter with mild temperatures leading to lower demands, and together with reliable, consistent supplies from UKCS and Norway, storage stocks remained healthy. Plant availability was high this year leading to no commercial constraint actions being taken.
52. Gas-fired power generation continued to be suppressed as prices continued to favour coal burn. Distribution Network Demand returned to the levels seen two years ago, but still well below last year's totals.
53. UKCS and Norway supplied similar quantities to last year, but with demand down, we saw their overall percentage of total supplies rise. LNG supplies remained low as the suppressed UK prices provided little or no driver compared to the higher Asian energy markets. The lower prices also affected Interconnector imports and storage withdrawal.
54. The volume of gas delivered from Europe via IUK and BBL Interconnectors was reduced from last year with IUK switching to export mode on various occasions at the beginning and end of the period. There was no real market driver for imports to challenge the record daily volumes delivered at the end of last winter.
55. The use of Linepack flexibility continues to rise with the average swing on the network increasing by 30% this winter and is now more than 250% greater than the levels seen in 2006/07. This continues to lead to a number of operational issues including the ability to accurately forecast end of day pressures and frequent changes to operational and compressor strategies in order to maintain the safe operation of the system. There is a continuing increase in within day supply and demand profiling and frequent and rapid storage site transitions between injection and withdrawal. As a result of this, we are undertaking a project to review the future requirements for a more flexible system. We are considering how different events or factors across gas days and within day might affect the way that the system is managed and possible asset, commercial and operability options that could be progressed to deliver more capability in this area.

56. **Figure G9** shows the average within day linepack swing.

Figure G9 – Average Within Day Linepack Swing



57. **Figure G9** shows the average daily Linepack swing for 2006/07, 2012/13 and 2013/14. The red line shows the highest swing seen on a particular day for each of the past two years.

58. Power Station demand continued to reduce year on year, as fuel prices continued to favour coal generation over gas. Electricity generated from gas reduced by 7% in the past year and is almost 50% of the levels seen in 2010/11.

Electricity

59. This section of the report reviews the last winter, 2013/14, for electricity, focusing on demand, generation and interconnection. In general, margins were adequate for the duration of the winter, with favourable interconnector flows and generation availability broadly consistent with forecasts.

Review of Demand

60. In this section, due to different customer requirements, we are reporting demands of different definitions:

- Transmission System Demand (TSD) as defined in the Grid Code[4], is demand including station demand, pumping demand and interconnector exports (France, The Netherlands and Ireland).
- National Demand is demand excluding station demand, pumping demand and interconnector exports.
- Average Cold Spell (ACS) demand[5] is transmission restricted demand excluding station demand, pumping demand and exports, with embedded wind treated as generation (as used in Ofgem's Electricity Capacity Assessment Report (ECAR)[6]. 'Restricted' refers to demand assuming demand side response (DSR).

61. Station demand (onsite power station requirement, for example, for systems start-up) has been assessed as 600 MW in GMT and 500 MW in BST.

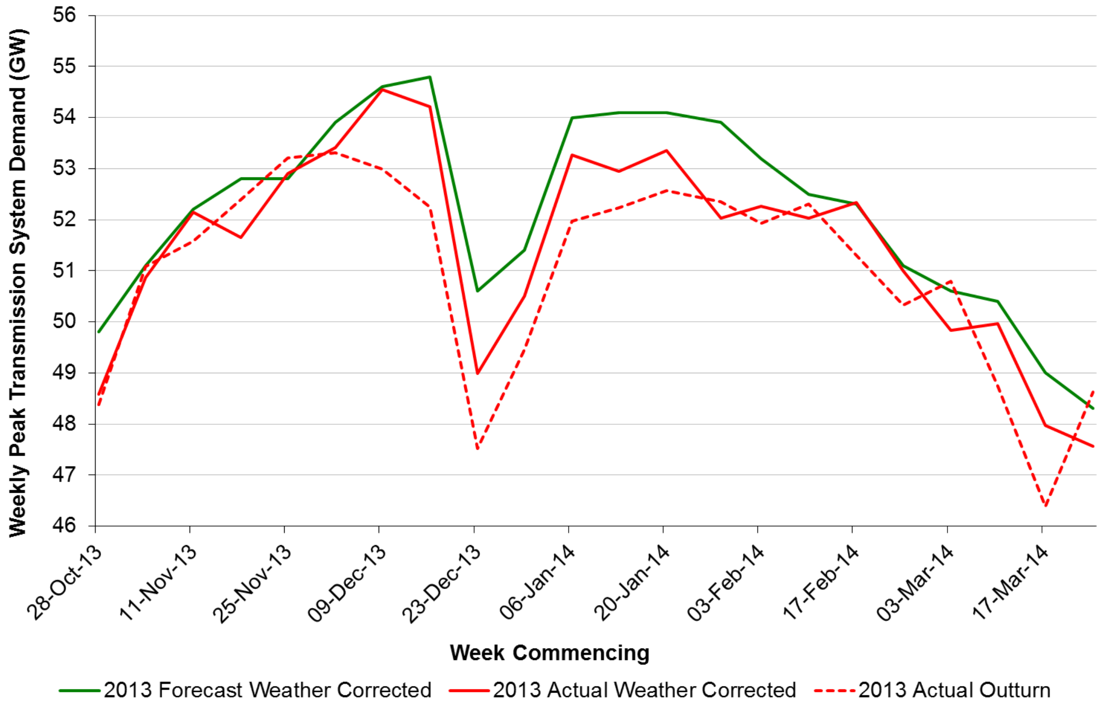
62. Actual peak demand levels were very low due to the unusually mild weather conditions.

- Transmission System Demand peak was 53.3 GW on 4 December 2013.
- National Demand peak was 51.8 GW on 25 November 2013; this corresponded to a Transmission System Demand of 53.2 GW.
- ACS peak demand was 54.1 GW.

[4] The Grid Code can be found at http://www2.nationalgrid.com/uk/Industry-information/Electricity-codes/Grid-code/ See document 'OC1 Demand Forecasts'
[5] Ofgem's Electricity Capacity Assessment Report: https://www.ofgem.gov.uk/publications-and-updates/electricity-capacity-assessment-2014
[6] ACS demand in UK Future Energy Scenarios 2014 is defined as total amount of generation required, whether this comes from micro, distributed or transmission connected generation.

63. **Figure E1** shows forecast and actual weather corrected demands and actual demand outturn for winter 2013/14.

Figure E1 – Forecast Weather Corrected and Actual Demands for 2013/14

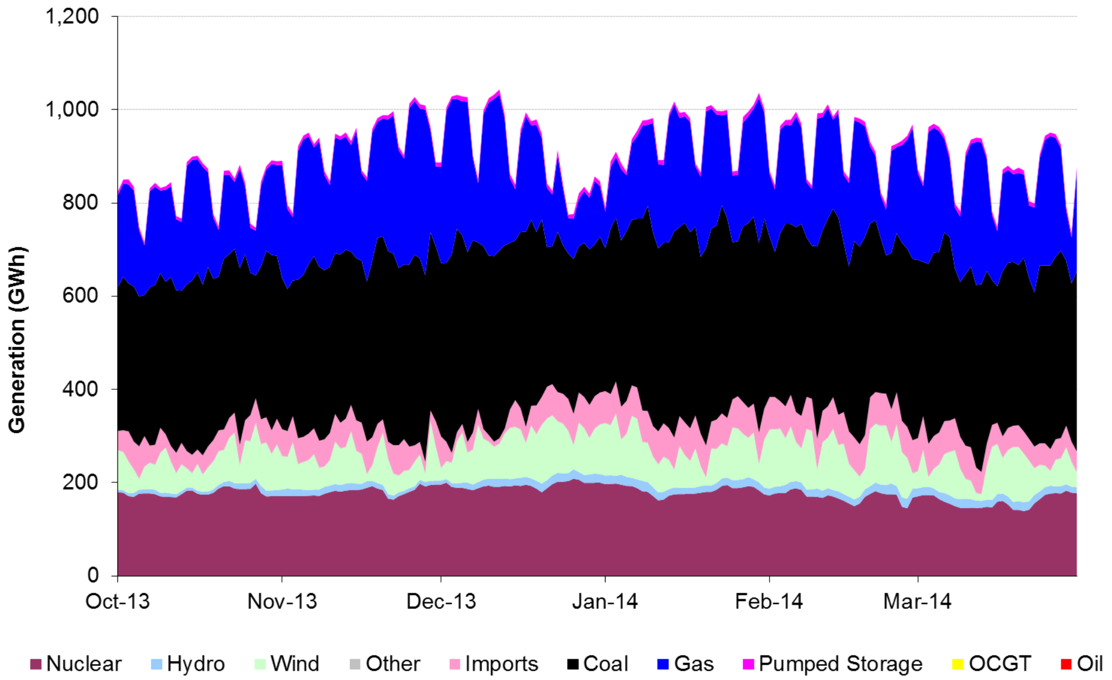


64. Some companies actively reduce their demand for electricity over peak periods to reduce their electricity charges. Despite the low demand levels, demand-side response (DSR) was far higher than in previous years. Typical DSR levels of 1,200 MW were experienced throughout the Triad period, on occasion up to almost 2,000 MW.

Generator Performance

65. **Figure E2** shows the outturn 2013/14 generation mix. Coal fired generation again provided the greatest proportion of the total with gas being the marginal fuel type. Coal generation continued to be cheaper than gas due to the relative price difference between the two fuels. Oil-fired generation ran on only 1 day over the winter, on 4 November 2013. There was a marked increase in wind generation compared to last winter (please also see **Table E2**, which shows metered wind farm output).

Figure E2 – Winter 2013/14 Generation Mix by Fuel Type



66. Looking across the range of generation sources, the assumed availabilities from last year's Winter Outlook Report are compared with the actual availabilities at the winter peak. This data is presented in **Table E1**.

67. For wind and hydro generation, assumed availability is the actual load factor at the time of the demand peak. This is used because the limiting factor is the input energy. For other fuel types, assumed availability uses technical notified availability.

68. Our generation forecasts are based on the generator notified availabilities which are submitted by the generation companies in accordance with Operational Code 2 of the Grid Code. These notified availabilities include planned generator outages. Generators may suffer breakdowns or losses close to real time. **Table E1** shows the assumed availability after accounting for average losses. The average losses are calculated for each fuel type from the last three winters' data.

69. The actual availability is the outturn value. It is the sum of the real time Maximum Export Limits (MELs) excluding wind MELs, which are replaced with the metered wind output.

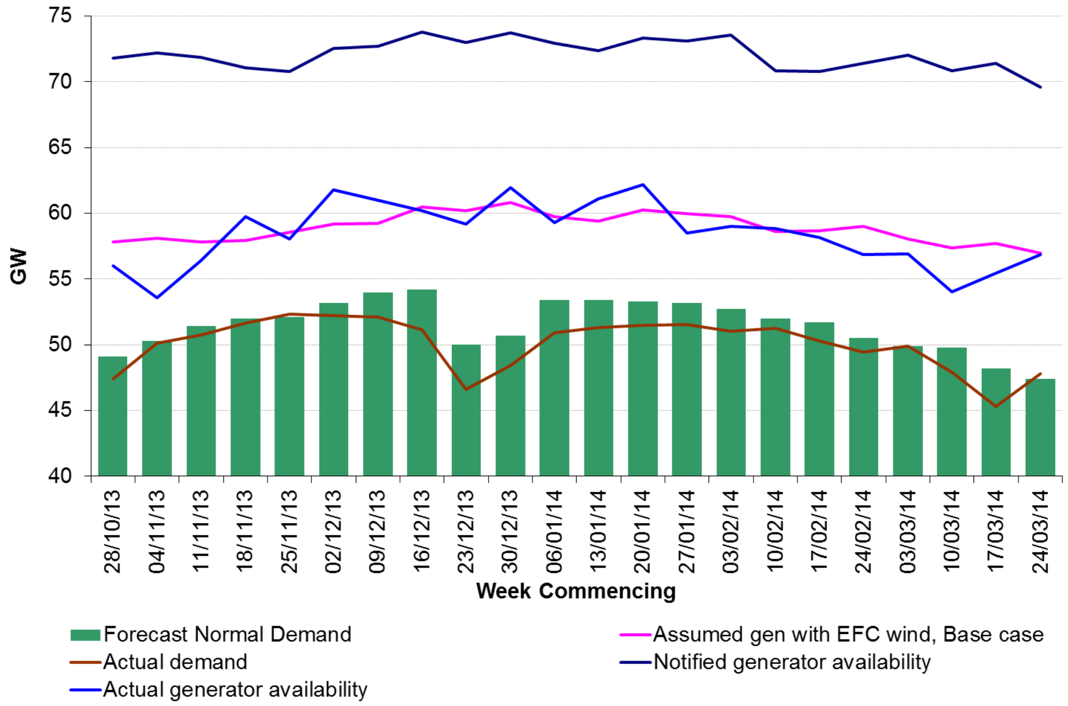
70. Overall the actual availability at the winter peak on 25 November 2013 was slightly better than the assumed value of 82%. This was mainly due to the availability of nuclear and CCGT plant being higher than assumed. Coal plant availability was close to the assumed value.

Table E1 – Winter 2013/14 Assumed and Actual Availability of Generation Plant

Power Station Type	Assumed Availability at Demand Peak	Actual Availability at Demand Peak
Nuclear	84%	90%
Interconnectors (IFA & BritNed)	100%	100%
Hydro generation	79%	71%
Wind generation	25%	28%
Coal (inc. biomass)	85%	84%
Oil	87%	100%
Pumped storage	97%	99%
OCGT	95%	88%
CCGT	86%	90%
Weighted Average	**82%**	**83%**

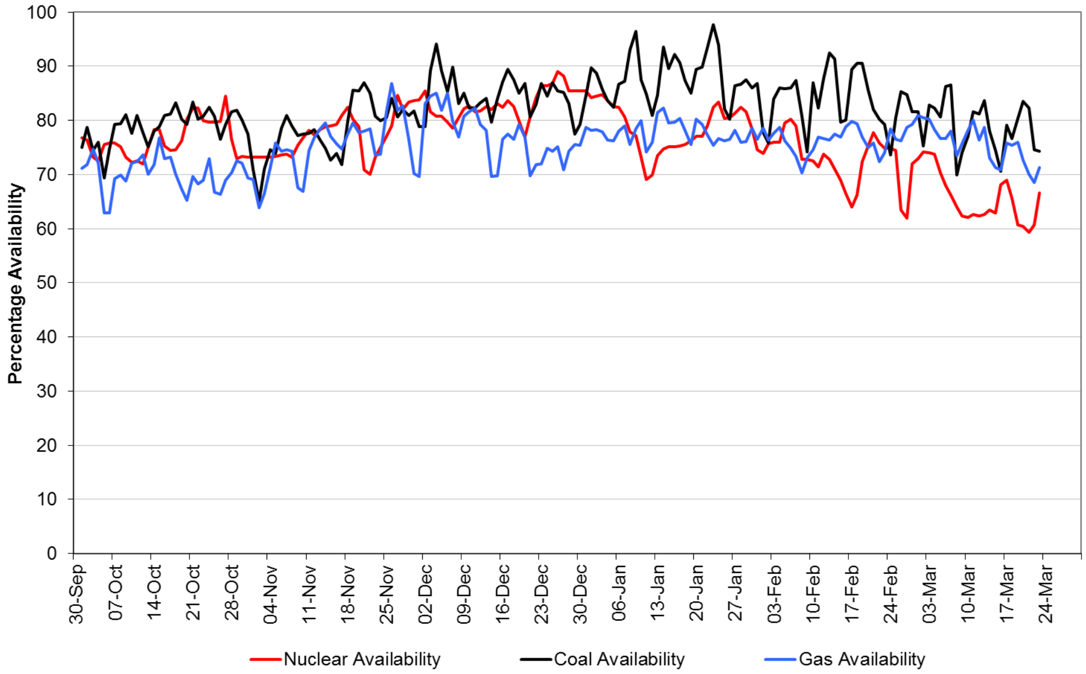
71. **Figure E3** shows actual generator availability across the winter against that assumed in last year's Winter Outlook Report. Overall generator availability was similar to forecast. The variances are mainly due to the outturn level of wind generation. The lowest demand and generation margin for winter 2013/14 was 7% on 4 November, which was due to a slightly higher than average volume of plant on short term breakdown combined with low levels of generation from wind. However, this was still an adequate margin and no system warnings were issued.

Figure E3 – Winter 2013/14 Actual Generator Availability



72. Looking at the main fuel types across the whole winter period, **Figure E4** shows the availability of the Nuclear, Coal and Gas generation. The graph shows availability beginning to drop as winter ends and generators start taking planned outages.

Figure E4 – Winter 2013/14 Generation Availability by Main Fuel Types

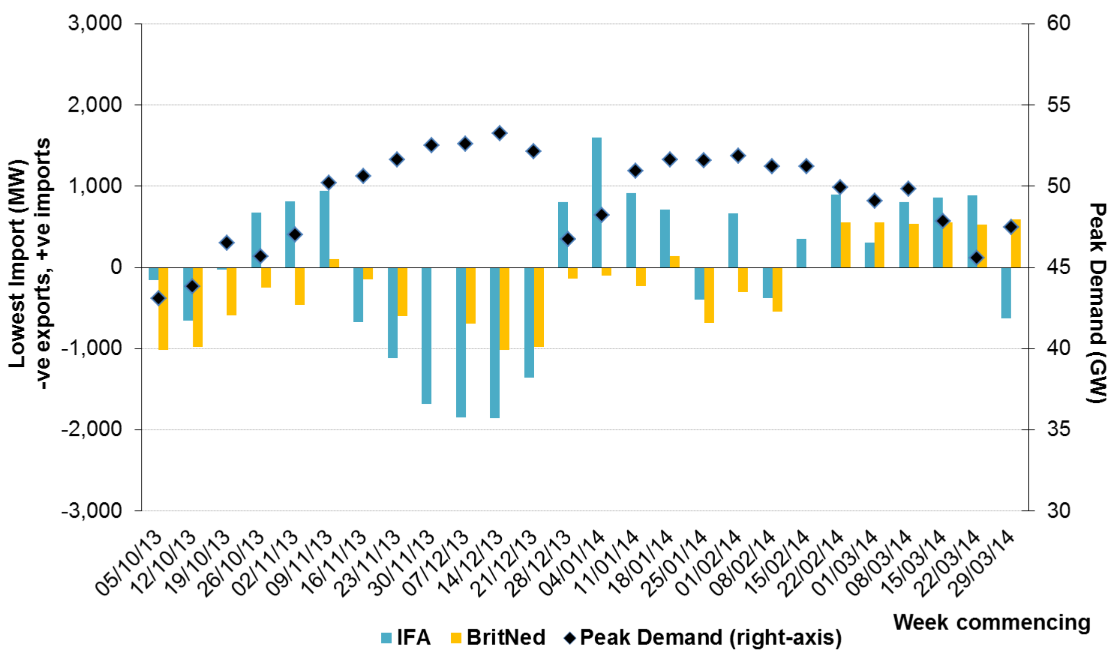


Interconnector Flows

Interconnectors

73. IFA[7] has a maximum capability of +/-2000MW. During the winter period, there were a couple of brief restrictions due to essential maintenance work, however, the full capacity was available for the significant majority of the period. BritNed[8] has a maximum capability of +/-1000MW and operated with this capability all winter. Price differentials between the three markets (Britain, The Netherlands and France) have been the main driver for flows across IFA and BritNed: at the weekend, the price differentials between the markets were consistently sufficient to result in full import into the UK; during the week, low differentials and activity on the spot market resulted in greater volatility. During the month of December, in particular, prices in France and Britain came close enough that several days saw maximum swings on IFA. **Figure E5** shows the lowest import points on the two Continental interconnectors during the winter. The chart shows how often we can expect to see exports and low imports from the Continent over the winter peak.

Figure E5 – Minimum Imports experienced from the Continent



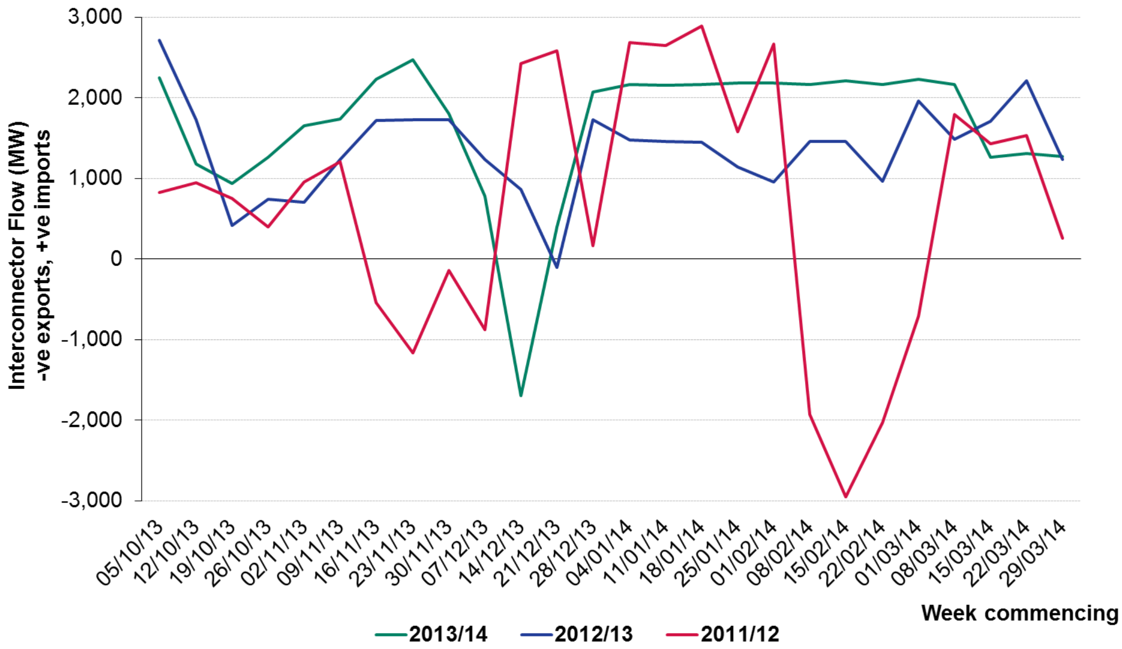
74. EWIC[9] has a maximum capability of +500/-530, and operated at this level for the majority of the winter. The Moyle Interconnector[10] has a reduced capability of +/-250MW from +/-500MW due to a fault with one of the cables. This is anticipated to be

[7] IFA (Interconnexion France-Angleterre) connects GB with France
[8] BritNed connects GB with The Netherlands
[9] EWIC (East-West Interconnector) connecting GB with Ireland
[10] The Moyle Interconnector connects GB with Northern Ireland

repaired in four to five years' time. Irish prices have, on average, been higher than prices in Britain causing power mainly to be exported into Ireland.

75. **Figure E6** shows the combined interconnector flow for the last three winters at the GB weekly demand peak. In general, the pattern from last year of full import from the Continent and full export to Ireland was followed this year, with the exception of the month of December which saw unusually high French energy prices, due to an exceptionally low level of plant availability in France, and corresponding swings outwards. Dips in imports in mid-October and at the end of March are due to technical limitations on IFA.

Figure E6 – Combined Interconnector Flow[11] at Weekly GB Peak Demand[12]

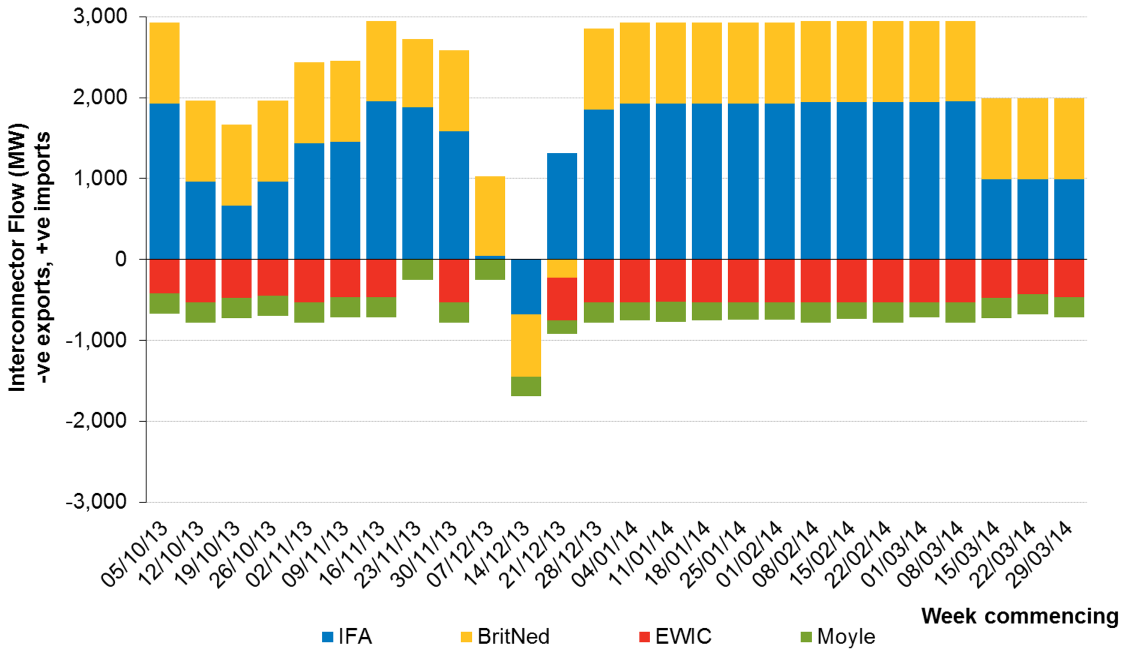


[11] EWIC commenced commercial operation on 21 December 2012

[12] Annual demand peaks were in mid-February in 2011/12, mid-December in 2012/13, and mid-December in 2013/14

76. **Figure E7** shows the breakdown by interconnector of the flows at the weekly demand peaks during winter 2013/14. It shows net imports from the Continent and net exports to Ireland. Limitations in peak imports on IFA are generally due to reductions in the interconnector's capacity for technical reasons rather than market effects, except for two weeks in mid-December 2013.

Figure E7 – Interconnector Flows at Weekly GB peak Demand 2013/14



Transmission System Development

77. The relevant Transmission Owners continue to develop their transmission systems[13] in Scotland and north of England in parallel with the ongoing connection of new generation. This brings forward the decarbonisation benefit of the renewable generators being connected, but means that it is likely that wind generation output will continue to need to be curtailed[14] going forwards. The historic amount of output and historic estimated curtailment of large[15] wind farms is shown in **Table E2** and **Table E3**.

Table E2 – Metered Wind Farm Output

GWh	Apr – Sep 2012	Oct 2012 – Mar 2013	Apr – Sep 2013	Oct 2013 – Mar 2014
NW Scotland (B1[16])	673	1,040	966	981
Remainder of Scotland	1,769	2,837	2,120	5,283
England and Wales	3,048	5,152	4,300	7,912
Total wind output	**5,491**	**9,030**	**7,386**	**14,177**

Table E3 – Estimated[17] Volume of Wind Farm Curtailment

GWh	Apr – Sep 2012	Oct 2012 – Mar 2013	Apr – Sep 2013	Oct 2013 – Mar 2014
NW Scotland (B1[16])	41	15	77	65
Remainder of Scotland	8	10	180	0
England and Wales	0	0	2	158
Total wind curtailment	**49**	**24**	**260**	**223**

78. Wind farm load factor last winter has increased significantly on the previous year, with increases in both Scotland, and England and Wales. Curtailment volumes in the north west of Scotland (B1[16]) have increased while curtailment in the rest of Scotland has decreased over the winter period. In England and Wales, there has been a significant increase in wind farm capacity that has driven the increase in curtailment seen last winter.

[13] The Electricity Ten Year Statement illustrates the future development of the National Electricity Transmission System: http://www2.nationalgrid.com/uk/Industry-information/Future-of-Energy/

[14] Please see paragraphs 223 and 224 of the 2012/13 Winter Outlook for a description of how transmission constraints affect wind output. This can be found at: http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/FES/Winter-Outlook/

[15] Large as defined by the Grid Code is >100MW in England and Wales, >30MW in Southern Scotland and >10MW in Northern Scotland. Apart from a few exceptions, wind farms that are not large are not included in these figures

[16] Boundary B1 is described on page 60 in the Electricity Ten Year Statement: http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Electricity-ten-year-statement/Current-statement/

[17] The volume of wind curtailment is an estimated figure as there is currently no metered measure of the lost opportunity. A combination of Physical Notification data and forecast output is used to estimate this volume.

Winter Consultation 2014/15

79. We have revised the consultation section of this report this year. This section is now focused on obtaining your views. We have included a wide range of questions to encourage your participation. Your feedback will then be used to develop our forecast for this coming winter which will then be published in the Winter Outlook Report.

Gas

Gas Demand

80. This section covers the gas demand outlook for the forthcoming winter.

81. The 2014/15 winter demand forecasts are produced in line with our Future Energy Scenarios process and our forecast will be published as part of our Winter Outlook in October.

82. Gas demand is comprised of residential, commercial and industrial demands, exports to Ireland and mainland Europe, and demand related to gas fired power generation. Our forecasts are based on a weather corrected basis with a range to indicate the potential deviations from the forecast to possible levels over the period.

83. Residential demands, in aggregate and on a weather-corrected basis, are not expected to change significantly from year-to-year and are subject to changes in efficiency of both properties and appliances.

84. Commercial and industrial demands are also influenced by energy efficiency trends but also subject to wider economic developments. Significant within year changes are possible but generally associated with economic shocks that remain challenging to forecast and not considered in our analysis.

85. Residential, commercial and industrial demand (NDM and DM) represented 73% of the 2013/14 winter demand.

86. In excess of 90% of gas consumed in the Republic of Ireland, Isle of Man and Northern Ireland currently passes through Great Britain's National Transmission System. There are further indigenous Irish gas supplies associated with a new gas field scheduled for commissioning during 2015 that could significantly reduce the flows from Great Britain, however, we are not anticipating a material change during winter 2014/15[18].

87. Exports to Europe are dependent on numerous factors including Continental prices, winter weather, storage availability and operational flows in Great Britain and other markets. Exports may be further influenced by political tensions around the Ukraine region and this is discussed later in the section 'Potential Disruption due to Russia/Ukraine Dispute'.

88. Gas demand for generation has remained relatively low since 2011 and, during winter 2013/14 represented just 16% of demand, with exports, storage injection and shrinkage gas making up the remaining 11% of demand.

[18] For further information, please see section 4.43 'Exports: Ireland and Europe' in National Grid's UK Future Energy Scenarios Document:
http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Future-Energy-Scenarios/

89. **Figure F5** shows gas versus coal comparing 2013 prices with 2014 prices. The prices for 2013 are from 2 July 2013 and the prices for 2014 are from 2 July 2014.

90. The change to the Carbon Price Support (CPS) on 1 April 2014 has made a significant difference to the price comparison.

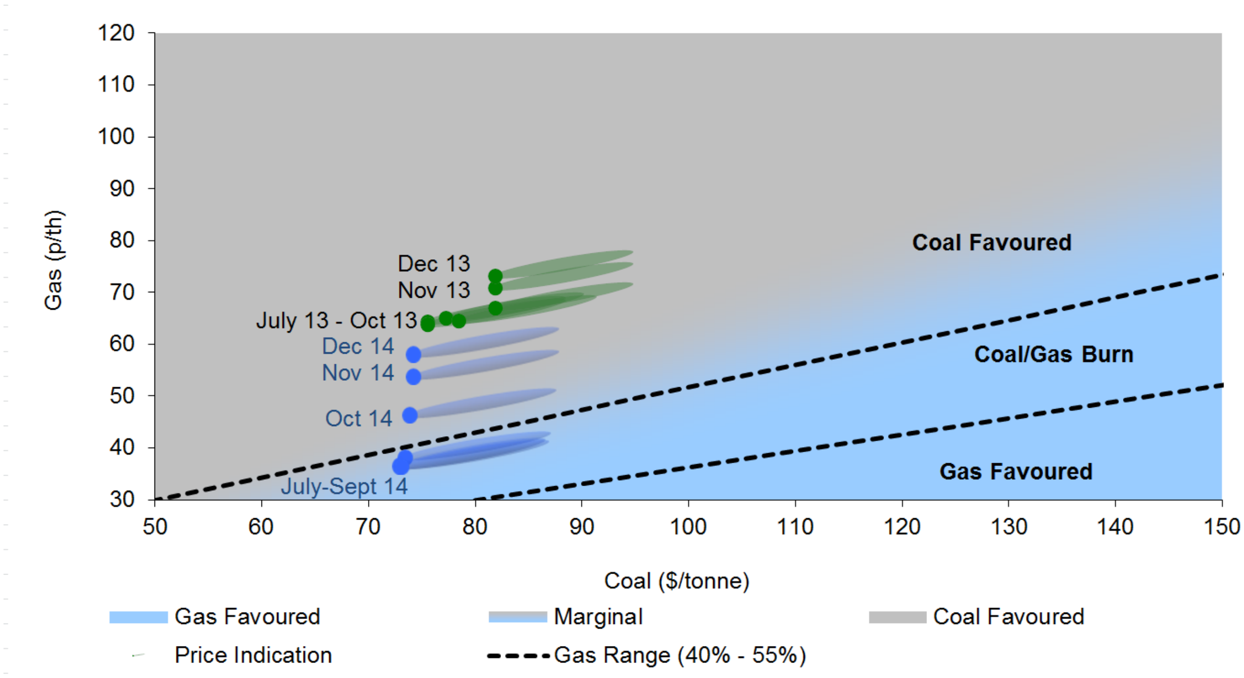
91. The CPS price was increased from £4.94 to £9.55 /tonne CO_2 on 01 April 2014.

92. Gas prices have decreased from 65-75 p/therm in 2013 to ~39-59p therm in 2014.

93. Summer coal prices (2013 vs 2014) have increased slightly but winter prices have decreased slightly.

94. Fuel prices have generally favoured coal to gas burn for power generation over the previous winter. However, recent gas prices have been in decline and coal prices, coupled with increased carbon prices, have been reducing the economic differences between coal and gas for generation. We will continue to review fuel prices and the impact this has had since June when setting our forecast over the winter period.

Figure F5 – Relative power generation economics (2)



Supply Forecast

95. This section provides our preliminary views on supplies for the coming winter.

Preliminary View of Supplies Winter 2014/15

96. Our view of supplies for the winter, and in particular the Non Storage Supply (NSS) is used in the determination of the trigger levels for the Margins Notice[19], issued when there is a potential or actual risk to the end of day NTS physical system balance. **Table G3** summarises the supply range and our supply forecast for a 'cold day'[20]. Also shown are the actual 2013/14 ranges for the 6-month period. Historically, this table has contained the range for days when demand exceeded 400 mcm/d, or, in last year's Winter Outlook, demand over 350 mcm/d. As discussed in the winter review section, the very low demands of winter 2013/14 included no days higher than 329 mcm/d, so this column has been left blank this year. We should stress that these 2014/15 ranges and forecasts for supplies for a cold day should be regarded as provisional with the primary purpose of fostering discussion and comment.

Table G3 – Preliminary View of Non Storage Supplies Winter 2014/15

(mcm/d)	2013/14		2014/15	
	Range	350+ Range	Range	Cold Day[20]
UKCS	65 – 106		76 - 109	99
Norway	47 – 127		60 -130	110
BBL	3 – 45		10 - 45	40
IUK	0 – 27		0 - 74	45
LNG Imports	8 – 44		8 -100	50
Total				**344**
Storage	**0 – 86**		**0 - 136**	
Total inc. Storage	**123 - 435**		**154 - 594**	

97. **Table G3** suggests that the non-storage supply mix for next winter is again uncertain, notably in terms of deliveries of LNG and Continental imports and, to a lesser extent, Norwegian supplies.

[19] http://www2.nationalgrid.com/uk/industry-information/gas-transmission-system-operations/balancing/gas-deficit-warnings-and-margins-notices/

[20] A day approaching 0 degrees CWV

Preliminary Safety Monitor

98. The safety monitor is a mechanism for ensuring that sufficient gas is held in storage at all times to underpin the safe operation of the gas transportation system. The safety monitor defines the level of storage that must be maintained through the winter period. It is a requirement of National Grid's safety case that we operate this monitor system and that we take action to ensure that storage stocks do not fall below the defined levels.

99. The focus of the safety monitor is public safety and hence, it is prudent to ensure that the assumed level of NSS will be available throughout the winter, notably at times of high demand. Our assumption of NSS for calculation of the safety monitor is based upon a weighted rolling average of the last five years of NSS.

100. The demand background used for the analysis in this section is our 2013 demand forecasts for 2014/15. Our final view of demands and supplies for next winter will be detailed in our Winter Outlook Report document to be published in October; these levels will be used as the basis for setting the final safety monitor level by 1 October.

101. **Table G4** shows the total safety monitor space requirement on the basis of the assumptions outlined above. It represents less than 2% of total storage space.

Table G4 – Total Safety Monitor Space Requirement

	Space requirement (GWh)
Total	958

102. It is our responsibility to keep the safety monitor under review (both ahead of and throughout the winter) and to make adjustments if it is appropriate to do so on the basis of the information available to us. In doing so, we must recognise that the purpose of the safety monitors is to ensure an adequate pressure can be maintained in the network at all times and thereby protect public safety. Ideally the passage of time before next winter and the outcome of this consultation may provide further clarity on expected levels of supply for next winter.

Winter 2014/15 Update on Provision of New NTS Capacity

103. Every year, we perform a variety of activities on the gas NTS to maintain and develop the network. The work can take many different forms, including keeping our assets in good working order, replacing ageing assets with new equipment, inspecting assets and facilitating new connections and capacity requirements.

104. With respect to emissions related works, work continues on the new 35 MW electric drive compressor unit at Kirriemuir, the two 24 MW electric drive units at St. Fergus and the 35 MW electric drive unit at Hatton as part of National Grid's drive to reduce compressor station emissions. Technical issues prevented the full commissioning of these units during 2013/14; however, they are anticipated to become operational during winter 2014/15.

105. National Grid's maintenance plan includes the impact of network reinforcement, annual maintenance programme and supply outages. Published documents can be found on the National Grid website at: http://www.nationalgrid.com/uk/Gas/OperationalInfo/maintenance/

Consultation Questions – Gas – Outlook

Number	Question
GQ1.	Discounting for weather, do you expect any material changes in residential, industrial and commercial gas demand over the winter period compared with winter 2013/14?
GQ2.	How do you see gas prices trending over the winter period? Can you provide information to support your views?
GQ3.	What are your views on power generation gas demand: will it increase or decrease over the winter period and by how much relative to winter 2013/14?
GQ4.	What are your thoughts on our winter supply projections and, in particular, Non Storage Supply? Are they realistic?
GQ5.	Do you expect UK storage to be driven purely by short term price signals or could some volumes be held back strategically to cover, for instances, high demands towards the end of the winter.
GQ6.	What do you believe the key drivers are likely to be that would see large imports or exports through IUK (i.e. price differentials, low Continental demands, high stocks in European storage)?

Potential Disruption due to Russia/Ukraine Dispute

106. Given the recent political tensions between Russia and Ukraine, and the potential for them to reduce Russian gas exports to Europe, we have undertaken some analysis on the potential impacts to the UK market for winter 2014/15. The following section details some initial analysis along with areas we are seeking feedback on to allow us to incorporate the views and insight of our stakeholders into any further work in this area. Possible scenarios to consider range from the current interruption only to the market in Ukraine up to cessation of all Russian flows to Europe. In our consultation questions, we are seeking views on the level of disruption that we should be considering.

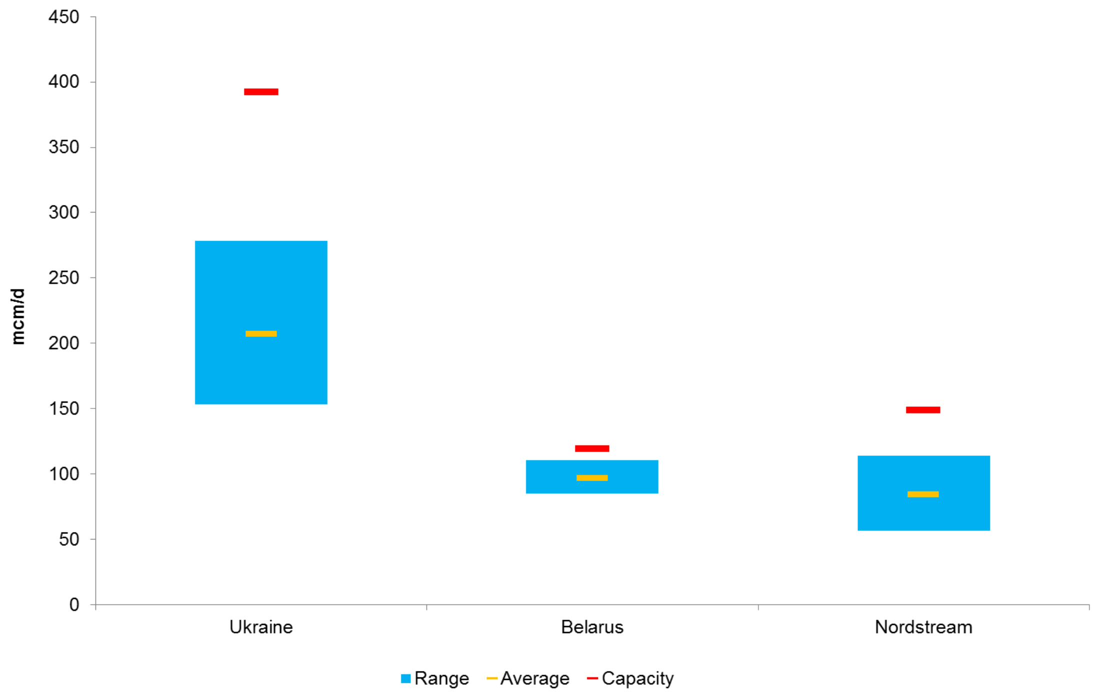
Potential for disruption

107. In Winter 2013/14, the flow from Ukraine into the EU was between 150 – 280 mcm/d with an average of 207 mcm/d, which was well below the pipeline capacity of almost 400 mcm/d.

108. There are several other routes that transport Russian gas into Europe, however we have focussed on the Yamal pipeline into Poland via Belarus and Nord Stream as these 2 pipelines are the most likely to impact the UK market.

109. Flows on the Yamal pipeline varied from 80 – 110 mcm/d with an average of 96 mcm/d in the previous winter, which is just over 80% of the 120 mcm/d capacity. Nord Stream was more variable with flows between 55 – 115 mcm/d at an average of 84mcm/d; which is significantly below the 149 mcm/d capacity.

Figure G10 – Russian Gas Imports to EU via Selected Routes



110. Given these flows, it would suggest that if transit of Russian gas through Ukraine were interrupted, the potential reduction to EU gas supplies would be 207 mcm/d; however, if 90 mcm/d could be re-routed via Yamal and Nord Stream, this would reduce the impact to 117 mcm/d.

Potential UK Impact

111. Although the UK does not receive significant quantities of gas from Russia, both our direct and indirect connections to European markets make it likely that UK gas supplies would alter as the market responds to any reduction of Russian imports.

112. In the event of a disruption, the UK could see some reductions in imports from Norway (Langeled/Vesterled) and The Netherlands (BBL), with exports to Belgium (IUK) likely. To balance the reduction in imports and increase in demand, LNG imports would be expected to increase to cover the majority of the shortfall, although increased withdrawals from storage sites could also be possible depending on the level of UK demand.

113. Our initial assessment of the potential scope of changes to UK supply can be seen in **Table G5** below.

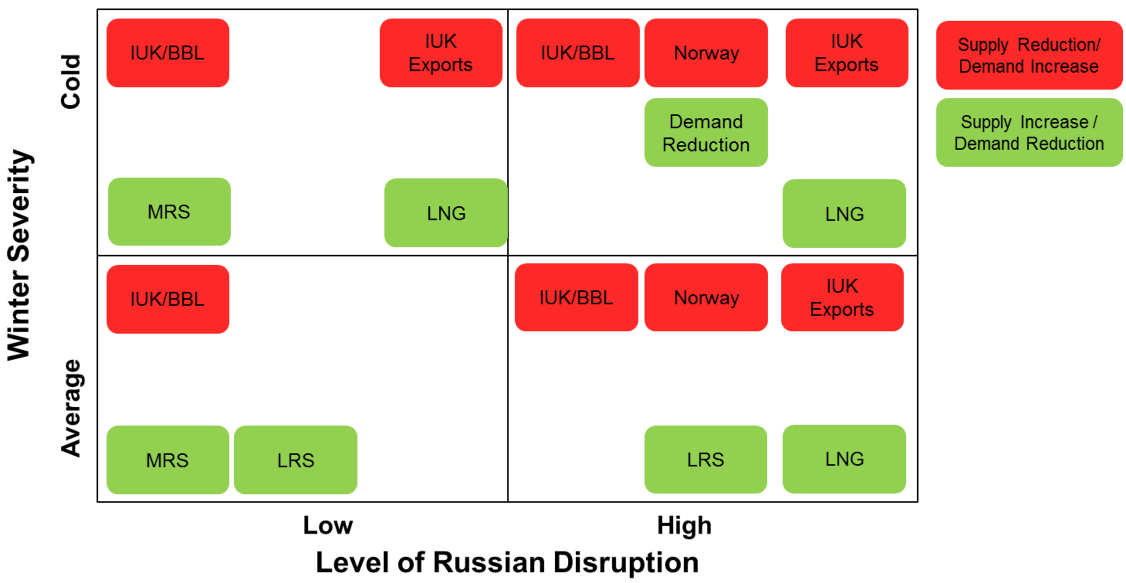
Table G5 – Initial Assessment of the Potential Impacts to UK Supply

(mcm/d)	Current 2014/15 Range	Initial Disrupted Range
UKCS	76 – 109	76 - 109
Norway	60 -130	60 - 100
BBL	10 – 45	0 - 30
IUK	0 – 74	0 (20 - 58 export)
LNG Imports	8 -100	8 - 130
Total	**154 – 458**	
Storage	**0 - 136**	
Total inc. Storage	**154 - 594**	

Further Analysis

114. As the situation evolves and as we get closer to the winter, more detailed analysis of the potential impacts to the UK market may be required, in **Figure G11** below illustrates our initial assessment of which elements are likely to be impacted in a range of disruption scenarios.

Figure G11 – Possible Response to Differing Disruption Scenarios



Consultation Questions – Gas – Russia/Ukraine Dispute

We would welcome any feedback on the above assumptions along with the following questions:

Number	Question
GQ7.	What level(s) of disruptions should be considered? ▪ Ukrainian disruption with volumes re-routed ▪ Ukrainian disruption with no re-routing ▪ Disruption to all Russian supplies
GQ8.	How would flows on IUK and BBL be impacted? ▪ Would IUK fully reverse? ▪ Could UK shippers accommodate that and still meet their demand? ▪ Could BBL nominate down to zero?
GQ9.	What restrictions are there on European grids that could impact the level of response that could come from the UK?
GQ10.	How would European buyers procure the additional LNG required? ▪ Is there sufficient spot LNG available or contractual re-diverts? ▪ Would this impact on UK market prices?
GQ11.	How else could the market respond? ▪ Additional Norwegian volumes ▪ Storage response ▪ Demand Side response
GQ12.	What additional measures have shippers taken to ensure supply obligations are met against this backdrop? ▪ Are contractual turn-ups available for existing supplies?

Electricity

115. Looking forward to the 2014/15 Winter Outlook Report, this section seeks views from industry on the analysis methods and assumptions made in previous Winter Outlook Reports. We are currently minded to harmonise security of supply analyses within the Winter Outlook Report with that within Ofgem's Electricity Capacity Assessment Report (ECAR)[21].

116. In addition, National Grid would welcome comments from industry on the differences between National Grid's Winter Outlook Report and Ofgem's Electricity Capacity Assessment Report.

Security of Supply Reliability Standard

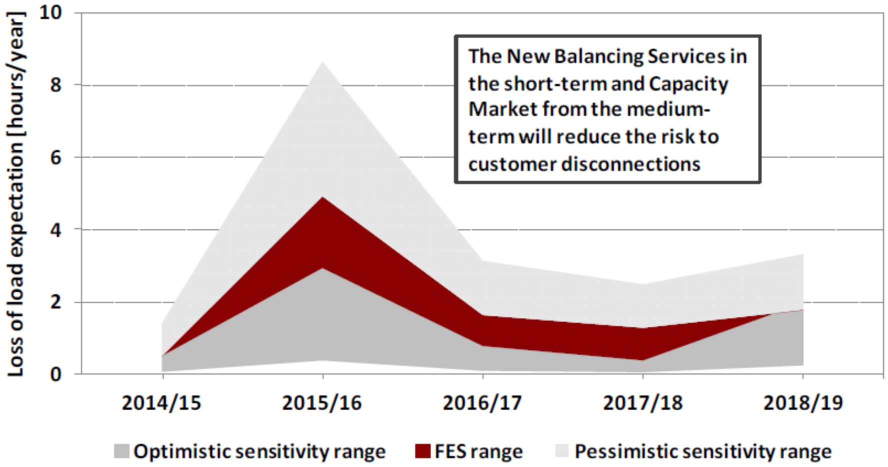
117. One of the key proposals from the Electricity Market Reform (EMR) is the establishment of a reliability standard for security of supply, as introduced by the Department of Energy and Climate Change (DECC) in the Delivery Plan.

118. Capacity margin calculations are a useful way to illustrate trends in the market, but this measure has limitations. The loss of load expectation (LOLE) represents the number of hours per year in which supply is expected to be lower than demand under normal operation of the system. This does not, however, mean that customers will be disconnected or that there will be blackouts for that number of hours a year. In circumstances when demand exceeds supply, the National Electricity Transmission System Operator (NETSO) can call upon a range of tools to mitigate the effects of unmet demand; for instance, reducing the voltage of electricity on the electricity system, calling upon generators to increase to their maximum possible output and/or accessing the new balancing tools.

119. Ofgem published their Electricity Capacity Assessment Report 2014 on 30 June 2014. The report contains assessments of the risks to the security of Britain's electricity supply over the winters 2014/15 to 2018/19.

[21] https://www.ofgem.gov.uk/publications-and-updates/electricity-capacity-assessment-2014

Figure E8 – Ofgem's Loss of Load Expectation for 2014/15 to 2018/19



120. **Figure E8** shows the loss of load expectation for the coming 5 winters from Ofgem's Electricity Capacity Assessment Report. It should be noted that the assessment of security of supply has not changed from that within Ofgem's ECAR.

121. We wish to understand whether stakeholders value the margin calculation we have historically included within the Winter Consultation, or whether we should adopt the methodology used within Ofgem's Electricity Capacity Assessment Report.

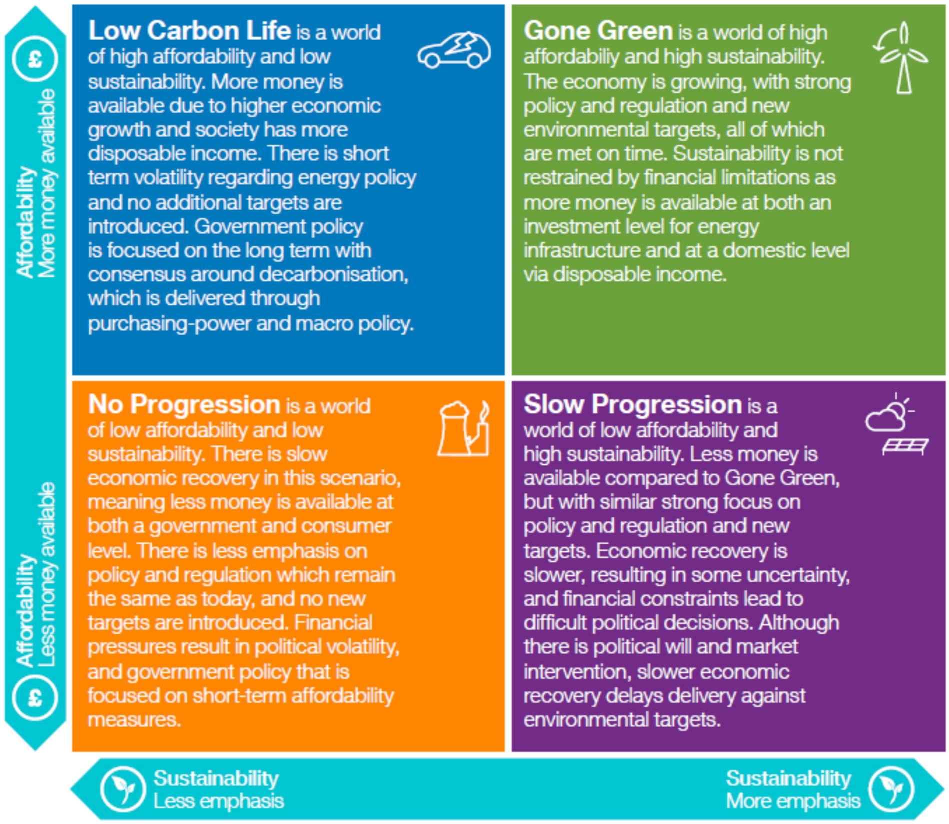
122. Ofgem's analysis used demand and supply figures from National Grid's four Future Energy Scenarios: Gone Green, Slow Progression, No Progression and Low Carbon Life, which reflect the energy 'trilemma' of sustainability, affordability and security of supply.

123. Our annual UK Future Energy Scenarios (UK FES) document[22], which was published on 10 July 2014, contains analyses on supply and demand for gas and power for each of the energy scenarios.

124. **Figure E9** summarises the 4 scenarios across two axes: sustainability and affordability. Gone Green is a future of high affordability and high sustainability. Slow Progression is a future of low affordability and high sustainability. No Progression is a future of low affordability and low sustainability. Low Carbon Life is a future of high affordability and low sustainability.

[22] National Grid's UK Future Energy Scenarios Document: http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Future-Energy-Scenarios/

Figure E9 – National Grid's UK Future Energy Scenarios Summary



125. **Table E4** shows the range of demand, installed capacity, de-rated capacity and LOLE for 2014/15 from Ofgem's report.

Table E4 – Demand, Capacities and LOLE for 2014/15 for all four scenarios

2014/15	Gone Green	Slow Progression	No Progression	Low Carbon Life
ACS peak demand (MW)[23]	54,200	54,110	54,092	54,110
Installed capacity (MW)[24]	76,323	76,323	76,323	76,323
De-rated capacity (MW)	57,790	57,779	57,775	57,779
Loss of load expectation (LOLE)	0.6	0.5	0.5	0.5

[23] ACS peak demand includes Irish interconnector exports but excludes Continental interconnector exports.
[24] Installed capacity excludes interconnectors but includes embedded (distribution-connected) wind.

126. Ofgem's report also includes a fuller range of sensitivities, some of which are less likely but still possible and relevant to analysis for the security of supply outlook. The fuller range of sensitivities covers wider possible outcomes for demand, plant closure and mothballing decisions by generators, and the level and direction of interconnector flows. These are available in Section 3 of Ofgem's report.

Demand Side Balancing Reserve and Supplemental Balancing Reserve

127. Ofgem's Electricity Capacity Assessment Report published in June 2013 highlighted a potential deterioration in electricity security of supply in the mid-decade period. In response, we developed two new balancing services, namely Demand Side Balancing Reserve (DSBR) and Supplemental Balancing Reserve (SBR), which were approved by Ofgem in December 2013.

128. Since then, we have been working closely with Ofgem to agree a set of methodologies by which we would determine how much of these products, if any, we should buy, and how we would go about procuring them. These methodologies are available on our website[25] and Ofgem published an open letter indicating their 'minded-to' approval of these methodologies. **Table E5** shows the maximum de-rated volume we require for winter 2014/15 to winter 2017/18.

Table E5 – Volume requirements for the next four years

Year	Maximum de-rated volume (MW)
2014/15	330
2015/16	1,800
2016/17	1,300
2017/18	800

Volume Requirement

129. National Grid assessed the security of supply outlook over the next four years and, by applying the agreed Volume Requirement Methodology, we have established a volume of DSBR and SBR that we wish to procure from the market over this period. This is based on the equivalent volume of additional capacity that would be required to achieve the Government's Reliability Standard of a 3 hours Loss of Load Expectation (LOLE), against a range of credible scenarios and sensitivities. This analysis was based on our updated Future Energy Scenarios.

[25] http://www.nationalgrid.com/uk/electricity/additionalmeasures

130. The maximum de-rated volume requirement determined for winter 2014/15 is 330 MW. The actual volume required will be that which delivers best value to consumers, balancing costs against the value of lost load in accordance with the methodology, and will depend on the prices submitted in the tenders for these services.

131. Note that these volume requirements are de-rated values, and the actual volume procured will depend on how individual DSBR and SBR resources are 'de-rated'. For example, if the 2014/15 requirement is met by DSBR which we propose to de-rate initially to 75%, the actual volume procured will be up to 440 MW in order to meet the 330MW de-rated requirement.

Meeting the 2014/15 Requirement

132. Given the modest requirement for 2014/15, this will be met by undertaking a trial of the new DSBR service. The learning from this trial will enable us to evolve the product and better understand its value, thus supporting the economic and efficient procurement and use of this service in the following winter when the volume requirement becomes more material as it is expected to in 2015/16, 2016/17 and 2017/18.

133. Bids will be subject to validation and economic assessment in accordance with the approved DSBR Procurement Methodology. Those offering best value to consumers will be awarded a DSBR contract under the trial, which will be effective over winter 2014/15.

Consultation Questions - Electricity - Outlook

134. National Grid would welcome comments on the analysis methods used in previous Winter Outlook Reports.

135. Comments on the following questions would also be most welcome.

Number	Question
EQ1.	There are multiple definitions of demand used within the Winter Outlook, what definition(s) of demand would you like to see in the Outlooks? How do you use the demands in the Outlooks?
EQ2.	What are your views regarding the value the margin calculation we have historically included within the Winter Consultation? Should we adopt the methodology used within Ofgem's Electricity Capacity Assessment Report?
EQ3.	What aspects of the Winter Review sections do you find useful? What else would you like to see in these sections?
EQ4.	What further analysis, detail and scenario work do you consider would be beneficial for the Winter Outlook?
EQ5.	What do you believe is the current expected trend in demand levels?
EQ6.	What levels of Demand Side Response do you expect will be delivered over the highest demand peaks by your customers?
EQ7.	If your company has generation in a mothballed state: what might lead you to return it to service and how long would it take to do so?
EQ8.	Do you consider there is any generation that may be at risk of being put into a mothballed state or decommissioned before the end of next winter and how great is this risk?
EQ9.	If your generator has a proportion of its capacity at long notice, do you expect any changes to this in the future?
EQ10.	If there were very cold conditions across Western Europe, what would you expect the flow on the Interconnectors to be over the GB demand peak?
EQ11.	Do you have the flexibility to run your CCGTs on distillate and, if so, for how long?

Number	Question
EQ12.	Could you provide an indication of the fuel stocks that are maintained at your power stations, and what would lead you to hold more?
EQ13.	What would encourage more investment in Black Start capability?
EQ14.	What is your view on the volume of 330 MW for Demand Side Balancing Reserve (DSBR) that has been set as a maximum level to procure for winter 2014/15?

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