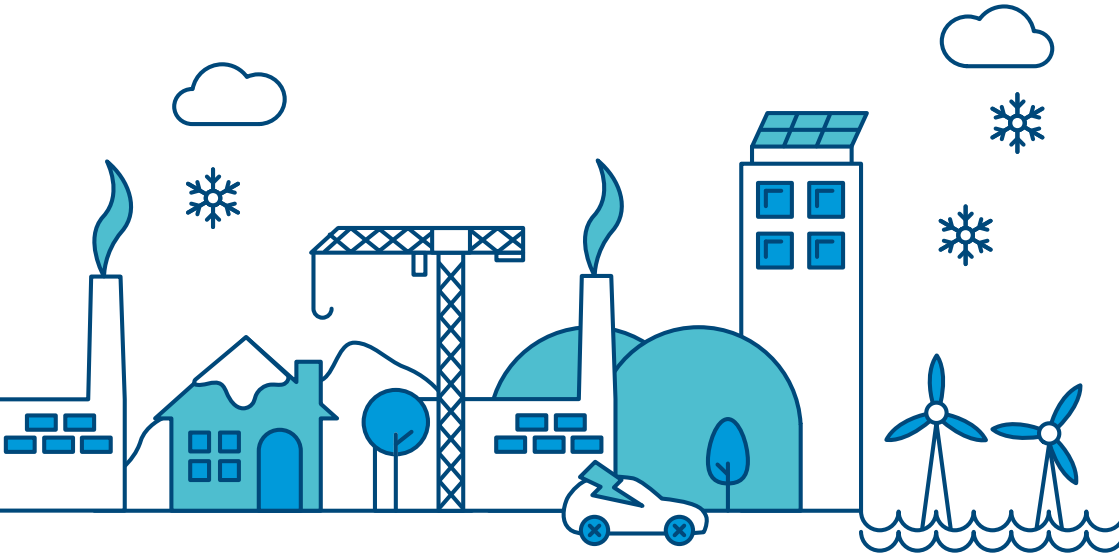
nationalgrid

Winter **Consultation**

2016



July 2016

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To help you find the information you need quickly and easily we have published the *Winter Consultation* as an interactive document.

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Click on the arrows to move backwards or forwards a page.

Hyperlinks
Hyperlinks are highlighted in bold throughout the report. You can click on them to access further information.

Foreword

Cordi O'Hara
Director,
UK System Operator

Welcome to our *Winter Consultation*, where we seek your views on gas and electricity supply and demand for the winter ahead.

Your responses to the consultation will underpin the development of our analysis for winter 2016/17 and help us to provide a well-informed outlook for the industry. Your views are valuable, whether you are able to respond to the full survey or choose to answer one question.

Our *Winter Consultation* includes a preliminary supply outlook for gas and the anticipated generation margin for electricity. We hope this information helps to shape the debate and provide an early view of what we might expect next winter.

Our analysis suggests that electricity margins will be similar to our forecast for winter 2015/16. To make sure we are prepared for this winter, we have already completed a successful tender for contingency balancing reserve services. We are confident that we have taken the appropriate steps to support the operation of the electricity system while continuing to ensure value for money for consumers.

Demand side response has an increasingly significant impact on how we operate the electricity system. We saw higher levels of demand management during winter 2015/16, which contributed to a decrease in transmission system demand compared to the previous year. To help us to more accurately reflect demand response in our analysis, we would like to hear from you about how you plan to manage your demand this winter.

We expect Great Britain to be well supplied with gas for winter 2016/17, from highly diverse and flexible sources. Although this supply diversity benefits Britain's gas security, it can reduce the predictability of flows and present us with new challenges in operating the system. We would like to understand more about your flexibility requirements via the consultation.

We hope you'll take the time to provide your views on winter 2016/17, before the consultation closes on 5 August. You can email your responses to us at **marketoutlook@nationalgrid.com**, complete the survey **online**, or talk to us at one of our upcoming events. You can also join the debate on Twitter using **#NGWinterOutlook** or on our **LinkedIn Future of Energy** page.

Thank you for taking the time to read this year's consultation. We look forward to hearing your views.

National Grid's role

National Grid owns and manages the gas and electricity networks that connect homes and businesses to the energy they need.

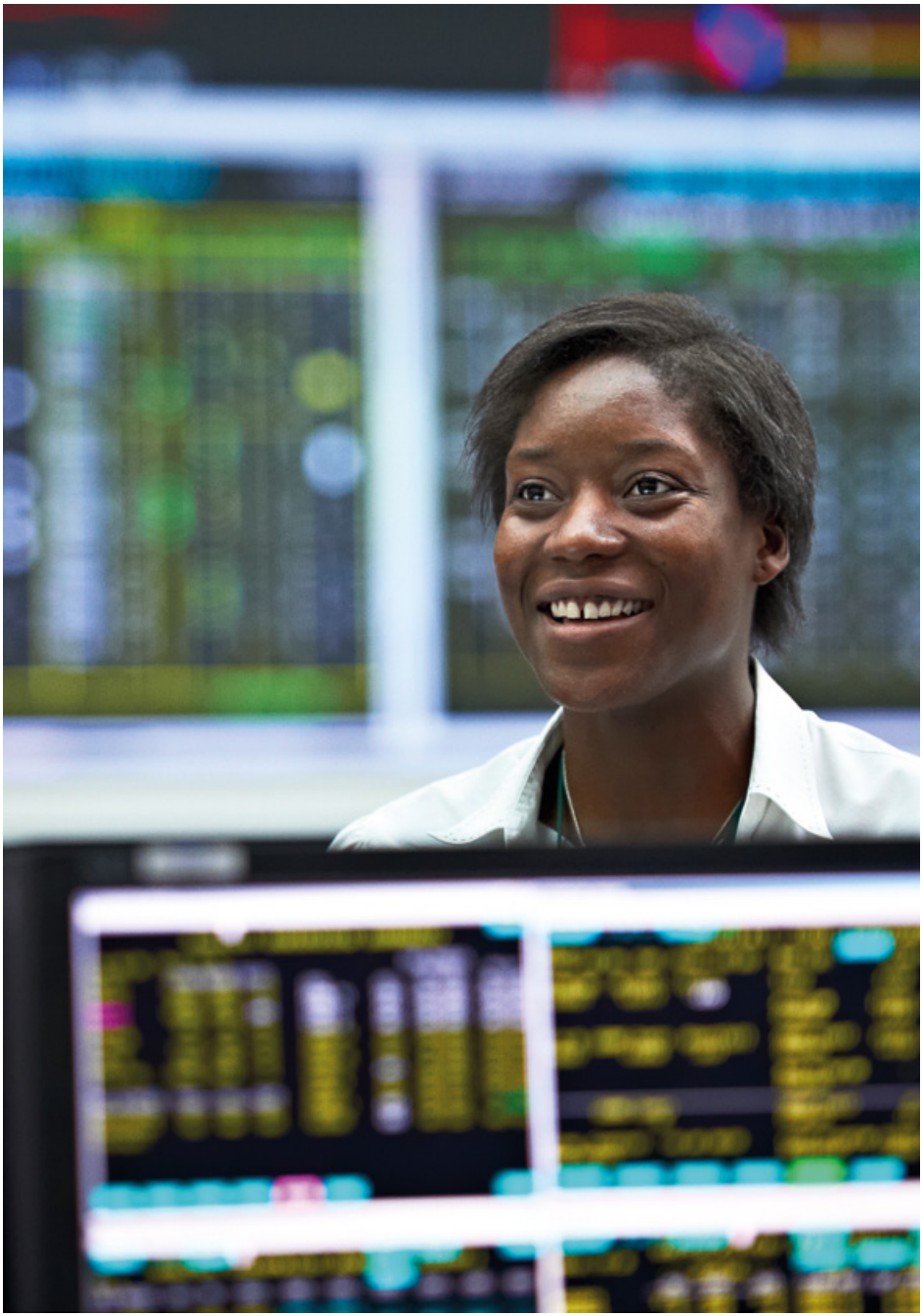
We own and manage the high voltage electricity transmission network in England and Wales. We are also the System Operator of the high voltage electricity transmission network for the whole of Great Britain, balancing the flows of electricity to homes and businesses in real time.

We don't generate electricity and we don't sell it to consumers. It is the role of energy suppliers to buy enough electricity to meet their customer's 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 are balanced on a second-by-second basis.

On the gas side, we own and operate the high pressure gas transmission network for the whole of Great Britain. We are responsible for managing the flow of gas to homes and businesses, working with other companies to make sure that gas is available where and when it is needed.

We do not own the gas we transport and neither do we sell it to consumers. That is the responsibility of the energy suppliers and shippers.

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



Winter overview

This report looks ahead to winter 2016/17 and presents a first look at security of supply for the electricity and gas systems. To provide the most relevant information to the industry, we have presented the gas and electricity sections differently.

The consultation is designed to gather valuable stakeholder insight, in order to inform our analysis for the 2016/17 *Winter Outlook Report*. The consultation closes on 5 August.

Electricity

Our electricity analysis presents a probabilistic assessment of security of supply for winter 2016/17. We have procured contingency balancing reserve services to make sure we have the right tools in place to balance the system. This means that we have secured a de-rated margin of 5.5%, with a loss of load expectation of 0.9 hours per year. This is similar to the margin we forecast for winter 2015/16.

5.5%

De-rated capacity margin

Gas

Our analysis presents a preliminary view of gas supplies for winter 2016/17. Based on this analysis we expect there to be sufficient gas available, from a wide range of sources, to meet demand.

Diverse gas supplies

A first look at electricity for the coming winter

Our electricity analysis presents our assessment of security of supply for winter 2016/17. Based on this analysis, we expect electricity margins to be tight but manageable for this winter. We believe we have the right tools in place to help us to balance the system.

Key messages

- **The de-rated margin for winter is 5.5%, with a loss of load expectation of 0.9 hours/year.**
- **Our assessment of the de-rated margin includes the 3.5 GW of contingency balancing reserve services that we have procured to help us balance the system.**

Key terms

- **Generation margin:** the sum of generation declared as being available during the time of peak demand, minus the expected demand at that time and basic reserve requirement. This is presented as a percentage.
- **Loss of load expectation (LOLE):** used to describe electricity security of supply. It is an approach based on probability and is measured in hours per year. It measures the risk across the whole winter of demand exceeding supply under normal operation. It does not mean that there will be a loss of supply for x hours per year. It gives an indication of the amount of time across the whole winter that the System Operator may need to call on a range of emergency balancing tools to increase supply or reduce demand. In most cases, LOLE would be managed without significant impact on end consumers.
- **De-rating factors:** these account for breakdowns, planned outages and any other operational issues that may result in power stations not being able to generate at their normal level. They are based on the historic availability of plant during peak periods.
- **Contingency balancing reserve:** these services have been developed to support system balancing by enabling National Grid to access additional reserve, held outside of the market. There are two types of reserve services; demand side balancing reserve (DSBR) and supplemental balancing reserve (SBR).

Overview

Our electricity analysis is an assessment of security of supply for winter 2016/17. It is the starting point for our assessment of LOLE and de-rated margin. Our analysis is based on our Future Energy Scenarios (FES) 2016 and a wider credible range of sensitivities. The analysis for winter 2016/17 uses the No Progression scenario. This is our base case as it is the scenario that has a LOLE closest to the average of all four scenarios; it is not the scenario that we think is most likely to occur.

Our assessment includes 3.5 GW of contingency balancing reserve that we procured in December 2015. These services allow National Grid to access additional capacity to help balance the system.

De-rated margin and loss of load expectation

The results of our analysis show that the provisional de-rated capacity margin for winter 2016/17 is approximately 2.9 GW, or 5.5% with a LOLE of 0.9 hours/year. This is similar to our forecast for winter 2015/16.

This includes the contingency balancing reserve services that we procured for the winter, following the conclusion of the SBR tender on 30 November 2015. If we had not procured these services, the de-rated capacity margin for winter 2016/17 would have been 0.1%, with a LOLE of 13.7 hours/year.

Our analysis is based on a de-rated generation capacity of 54.7 GW. The capacity margin assumes an average cold spell (ACS) peak demand of 52.7 GW and net interconnector imports of 1.8 GW.

Procurement of contingency balancing reserve

To make sure we have the right tools to help us balance the system, in December 2015 we identified a requirement to procure contingency balancing reserve services for winter 2016/17. This was determined in accordance with the Volume Requirements Methodology[1] using our FES and a range of sensitivities approved by Ofgem[2].

On 29 February 2016 we confirmed that we had procured 3.5 GW (de-rated) of SBR and that all contracts were signed following the SBR tender round. We are currently evaluating the responses to the DSBR tender, which closed on 9 June.

Contingency balancing reserve services are additional tools that can be procured to help National Grid balance the system. They allow National Grid to access additional capacity that is held outside of the market. Full details of these services, including the units that have been awarded SBR contracts for winter 2016/17, are available on our **website**.

Assumptions

Demand

The ACS peak demand is expected to be 52.7 GW for winter 2016/17. In order to cover the largest in-feed loss, we add 0.9 GW of reserve to the peak demand. The total demand, including reserve, for winter 2016/17 is expected to be 53.6 GW. This demand excludes any interconnector exports.

Over the last few years we have seen higher levels of customer demand management over peak demand periods, and an increase in the output of generation connected to the distribution networks. As discussed in our recently published *Winter Review*, these factors contributed to transmission system demand being lower than our forecast for winter 2015/16. To reflect this, we have revised our demand forecast for winter 2016/17.

We are continuing to promote demand side opportunities through our Power Responsive programme and expect further growth in this area. We are also working with the industry to better understand the behaviour of distributed generation, which is not directly visible to us, and to understand how we can better incorporate this in our analysis.

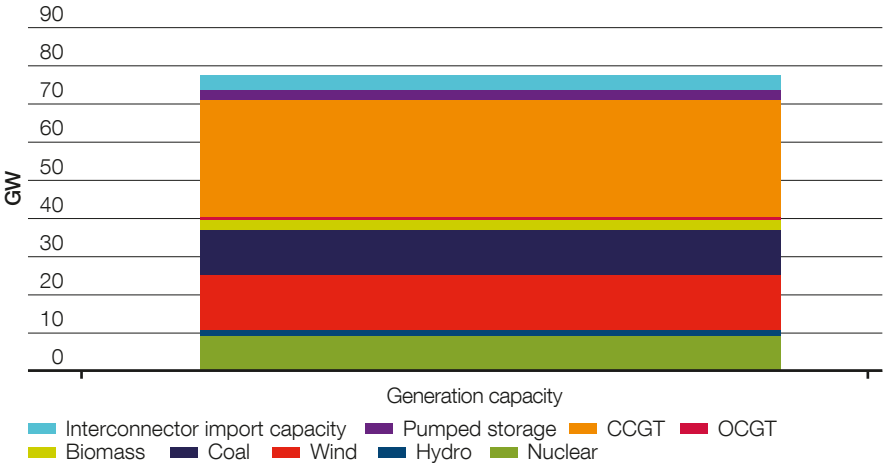
[1] **http://www2.nationalgrid.com/UK/Services/Balancing-services/System-security/Contingency-balancing-reserve/Methodologies/**
https://www.ofgem.gov.uk/publications-and-updates/decision-201617-sbr-procurement-methodology-and-2016-18-volume-requirement-methodology

[2] **https://www.ofgem.gov.uk/electricity/wholesale-market/market-efficiency-review-and-reform/system-operator-incentives**

Generation

We have assumed a total maximum technical capacity of 73.2 GW of generation. This includes all of the plant expected to be generating in the market, plant with SBR contracts and distributed wind capacity. Interconnectors, which are discussed in more detail in the next section, are excluded from this total. Figure 1 shows the breakdown of this capacity by fuel type, plus interconnector import capacity.

Figure 1
Generation capacity for winter 2016/17



The economics for coal-fired power stations are currently challenging. As a result, we have assumed a decrease in coal capacity of 4.7 GW compared to the end of last winter. The decrease in coal capacity has been mostly offset by increases in both gas and wind generation capacity. The impact on the transmission system of the growth in capacity of combined cycle gas turbines will be discussed in our 2016/17 *Winter Outlook Report*.

Our analysis allows for a reduction in capacity by applying a de-rating factor to the generation plant. This accounts for breakdowns, planned outages and any other operational issues that may result in plant not being able to generate at their normal level. The de-rated generation capacity is 54.7 GW.

The de-rating factors for conventional generation are calculated based on historic availability on high demand days during the winter peak period[3]. The de-rating factor for wind is based on its equivalent firm capacity (EFC). The EFC is a measure of its overall contribution to security of supply over an entire winter[4]. Table 1 shows the assumed availabilities for each type of power station.

[3] The winter peak period is between 7am and 7pm, Monday to Friday between December and February.
[4] The wind EFC represents the amount of conventional capacity with an availability of 100% that could theoretically replace the entire wind fleet and leave LOLE unchanged. It is expressed as a percentage of the installed wind capacity.

Table 1
Assumed availability for each type of power station

Power station type	Assumed availability
CCGT	88%
Coal and biomass	87%
Hydro	86%
Nuclear	84%
OCGT	94%
Pumped storage	96%
Wind EFC	22%

Interconnectors

We have assumed a total of 3.8 GW of interconnector capacity available for imports and 4 GW for exports. This reflects the Moyle interconnector returning to its full capacity in February 2016.

Based on our analysis of GB and neighbouring energy markets, we have assumed 1.8 GW of net imports to GB for winter 2016/17. This is made up of 2.5 GW of imports from Continental Europe and 0.75 GW of exports to Ireland.

A first look at gas supplies for the coming winter

Based on our preliminary analysis, we expect there to be sufficient gas supplies available to meet demand for winter 2016/17. GB's gas demand is expected to be met from a wide range of supply sources.

Key messages

- **Our analysis indicates that there will be a wide range of potential supply sources to meet demand for winter 2016/17.**

Key terms

- **UK Continental Shelf (UKCS):** made up of the areas of the sea bed and subsoil beyond the territorial sea over which the UK exercises sovereign rights of exploration and exploitation of natural resources.
- **BBL:** a gas pipeline running between Balgzand in the Netherlands and Bacton in the UK.
- **IUK:** the Interconnector (UK) Limited is a gas bi-directional pipeline connecting Bacton in the UK and Zeebrugge in Belgium.
- **Liquefied natural gas (LNG):** natural gas that has been converted to liquid form for ease of storage or transport. It is formed by chilling gas to -161 °C so that it occupies 600 times less space than in its gaseous form.

Overview

GB's gas demand is expected to be met from a wide range of supply sources. The analysis presented here should be regarded as provisional; it is intended to encourage discussion and comment. The analysis may be revised for the *Winter Outlook Report*, to reflect the responses we receive to this consultation and ongoing market changes.

Gas supplies

Our preliminary view of gas supplies for winter 2016/17 is shown in table 2. This shows the ranges within which we expect all of the supply types to flow. The observed ranges from winter 2015/16 are shown for comparison, along with the flows on the four days when demand exceeded 350 mcm.

The ranges for the different supply types represent the minimum and maximum that we might expect to occur. The maximum values could not all occur simultaneously but reflect experience in recent years. The ranges are very wide, reflecting the considerable uncertainty in supply patterns. For example, on the day of peak supply in winter 2015/16, IUK was exporting, LNG provided its winter average of 35 mcm, while storage provided its highest supply of the winter at 98 mcm.

Table 2 also shows the forecast for a cold day. Historically, the cold day has been defined as a day with total demand over 400 mcm/day. However, demand has not reached this level for the last four winters. As a result, we now use a slightly lower threshold. The cold day is taken from the average load duration curve. Load duration curves are published every year in our *Gas Ten Year Statement*.

The non-storage supply (NSS) total for the cold day forecast is used to determine the trigger levels for a Margins Notice[5]. A Margins Notice is a day-ahead notification to inform transmission system users of a potential supply and demand imbalance, highlighting it in sufficient time for market participants to take effective action.

The NSS threshold, of 352 mcm, is 7 mcm higher than the value used in winter 2015/16. This reflects increased UKCS supply following the start of production in the west of Shetland area. The other NSS elements are unchanged.

Table 2
Preliminary view of supplies for winter 2016/17

	2015/16		2016/17	
(mcm/d)	Observed range	350 + range	Forecast range	Cold day
UKCS	73–118	104–112	70–118	107
Norway	55–118	99–109	60–136	110
BBL	0–33	22–31	0–45	40
IUK	0–14	0–0	0–74	45
LNG	6–59	33–35	5–100	50
Storage	0–98	82–98	0–132	N/A
Total NSS				**352**

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

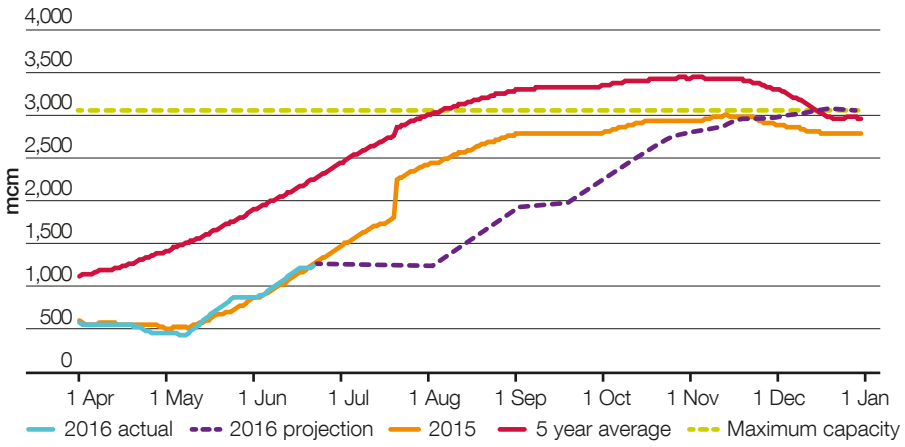
In the 2015 *Winter Review and Consultation* we asked our stakeholders for their views on imports through BBL, following the restrictions at the Groningen field in the Netherlands. Responses suggested that gas might be expected to flow under cold conditions. As a result, our BBL cold day forecast remained at 40 mcm/day, which is the same as previous years. Overall, supplies via BBL in winter 2015/16 were lower than in previous years. However, despite the mild weather conditions and lower demand, the maximum flow observed was 33 mcm/day. In view of this, we propose leaving the BBL value at 40 mcm/day for winter 2016/17.

Gas flowed from GB to Continental Europe via IUK for most of winter 2015/16. The maximum import flow was only 14 mcm/day. Nevertheless, in the winter of 2012/13, in a period of high demand and limited supply from other sources, gas was imported at the maximum physical capacity of 74 mcm/day. We propose to use 45 mcm/day for the IUK NSS level.

The NSS values for Norway and LNG both fall within the range of flows experienced last winter and so are not discussed further here.

Rough is a long-range storage site on the national transmission system. In March 2015 Centrica Storage Limited announced a reduction to the capacity of the facility for up to six months as a precautionary measure while some investigative work was undertaken. In June 2016 an additional issue was discovered[6] and as a result all injections and withdrawals were suspended for at least 42 days. Our analysis, shown in figure 2, indicates that if injection starts again after 42 days, at a rate similar to last year, the facility should reach its current maximum capacity before the end of November. If Rough is not completely filled before winter, or if it is not returned to normal operation, our analysis of available supplies suggests that there will still be sufficient capacity available to the market to meet demand.

Figure 2
Rough stock inventory



[6] **http://www.centrica-sl.co.uk/regulation/remit/2015-33**

Consultation questions

Your responses to the consultation questions will underpin the development of our 2016/17 *Winter Outlook Report* and help us to make sure we provide a well-informed and accurate outlook to the industry.

To guide you to the sections where we feel you could add the most value, we've divided the consultation questions into sections. Below is a summary of what each of these sections covers and a guide to who might want to respond. We welcome feedback from all of our stakeholders so this should only be considered as a guide.

Please email your response to **marketoutlook@nationalgrid.com** or complete the survey **online**. Please make sure that you share your views before the consultation closes on 5 August.

	Section	What this section covers	Who might respond
	General	How we can improve the 2016/17 *Winter Outlook Report*	All of our stakeholders
Electricity	Demand	How our analysis is used and participation in demand management	Industrial and commercial customers, and demand aggregators
Electricity	Operational view	Generation capacity and operating strategy	Generators and industry commentators
Electricity	Interconnected markets	Interconnector flows and European markets	Electricity interconnectors and industry commentators
Gas	Fuel prices	Trends in fuel prices	Industry commentators
Gas	Demand	Expected trends in gas demand	Industrial and commercial customers, generators and suppliers
Gas	Supply	Our gas supply projections	Gas shippers, producers and infrastructure operators
Gas	System operability	Operability of the gas transmission network	Industrial and commercial customers, gas shippers, producers and infrastructure operators

General

Number	Question
1.1	What aspects of the *Winter Outlook Report* are important to you? What do you use this information for?
1.2	What further analysis, detail or scenario work do you think would be useful in the *Winter Outlook Report*? Why is this information important to you?
1.3	The energy landscape is evolving at a rapid rate. To help you understand the implications for your company or the wider market, are there any changes you would like us to cover in an educational piece within the *Winter Outlook Report*?
1.4	In our 2015/16 *Winter Outlook Report*, we simplified the presentation of our demand analysis in response to your feedback. Is there anything we have removed that you still require?
1.5	What would you change about the *Winter Outlook Report* if you could?

Electricity

Number	Question
	Demand
2.1	Do you use the demand analysis in the *Winter Outlook Report*? What do you use this analysis for?
	Demand management refers to industrial or commercial users changing their pattern of energy consumption. This may be to avoid using energy during peak times, in order to reduce charges for using the system. It may also be because they are providing contracted services, such as demand turn up or frequency control demand management. Providers of these services can earn a revenue by shifting their demand. In winter 2015/16, the typical level of demand management we saw ranged from 0.7 to 1.5 GW, and on the highest demand days reached up to 2 GW.
2.2	Did your organisation, either directly or as part of an aggregator group, participate in demand management in winter 2015/16? What factors influenced your decision to do this?
2.3	If you participated in demand management during winter 2015/16, did you do this by generating onsite or by shifting your demand?
2.4	If you participated in demand management during winter 2015/16, over what periods did you do this? What was the maximum amount that you reduced your demand by?
2.5	If you participated in demand management during winter 2015/16, did you shift your demand by more or less than in previous years?

Number	Question
2.6	Do you expect your organisation, either directly or as part of an aggregator group, to participate in demand management during winter 2016/17? What factors will influence your decision?
2.7	If you expect to participate in demand management during winter 2016/17, will you do this by generating onsite or by shifting your demand?
2.8	In comparison to winter 2015/16, do you think that the peak level of demand management in winter 2016/17 will increase or decrease? What makes you believe this?
	The Power Responsive programme brings together key stakeholders to address the challenges of, and drive growth in, demand side response on behalf of the whole energy industry.
2.9	Has the Power Responsive programme influenced your participation in demand management?
2.10	Have you been made aware of demand management opportunities via other information sources? If so, please tell us which ones.
	Operational view
	Our operational view analysis shows the difference between demand and the generation expected to be available, modelled for each week of winter. This information helps to identify the level of operational surplus available for each week.
2.11	Does our operational view analysis influence when you schedule outages?
2.12	If your company has transmission-connected generation that is currently unavailable to the market, what might lead you to return it to service and how long would it take you to do so? What generation type is this?
2.13	Long notice refers to generator units that have taken the commercial decision not to generate every day. These units may have a notice period of up to 48 hours before they can begin to generate. If your generator has a proportion of its capacity at long notice, do you expect to change this in the future? What factors would influence your decision?
2.14	What response from the market do you expect to occur in winter 2016/17 as a result of recent plant closures? What makes you believe this?
2.15	Do you think that there is any generation that may be at risk of being put into a mothballed state or decommissioned before the end of winter 2016/17? How significant do you believe this risk to be?
	Interconnected markets
2.16	How do you expect weather conditions in Continental Europe to impact on interconnector flows to GB in winter 2016/17?
2.17	How would you expect further changes to the generation mix in Continental Europe to affect the flow on the interconnectors to GB?

Number	Question
2.18	In its 2017 finance bill, France outlined plans to set a carbon price floor of approximately €30 per tonne. What impact do you think this might have on interconnector flows?
2.19	Our analysis typically assumes full interconnector exports to Ireland. However, during peak periods or windy conditions in Ireland, interconnector flows may switch to imports to GB. Do you expect this trend to continue in winter 2016/17?
2.20	Do you have any market intelligence on the expected market conditions in other European countries that may affect interconnector flows to or from GB for winter 2016/17?

Gas

Number	Question
	Fuel prices
3.1	How do you expect gas prices will trend over winter 2016/17? How do you think this will compare to coal prices?
	Demand
3.2	Do you expect gas demand for power generation to increase or decrease in winter 2016/17, compared to winter 2015/16? What makes you believe this?
3.3	Do you expect there to be any significant changes in industrial and commercial gas demand for winter 2016/17, compared to winter 2015/16? What makes you believe this?
3.4	Discounting for weather, do you think there will be any significant changes in gas demand over winter 2016/17, compared to winter 2015/16? Why do you believe this?
	Supply
	Our preliminary gas supply projections for winter 2016/17 are provided on page 11. Here we show the ranges within which we expect all of the supply types to flow, as well as the forecast for a cold day.
3.5	What are your thoughts on our gas supply projections for winter 2016/17?
3.6	Production at the Groningen gas field was capped at 27 bcm last winter. For winter 2016/17 the cap has been reduced to 24 bcm. How do you expect this production cap to impact on the volumes of gas available to GB during periods of high demand?
3.7	Are there any issues related to European supply and demand which you feel could have an impact on gas flows to and from the GB market over winter 2016/17?
3.8	Do you expect GB to attract similar levels of LNG this winter, compared to levels in 2015/16? What makes you believe this?

Number	Question
3.9	How are you factoring the restrictions at the Rough storage site into your strategy for winter 2016/17?
3.10	Do you expect UK storage behaviour this winter to be driven purely by short-term price signals or might some volumes be held back, for instance to cover high demands towards the end of winter? What makes you believe this?
3.11	Are there any security of supply scenarios that you would like us to explore further in the *Winter Outlook Report*?
	System operability
	The way the transmission network is being used within day continues to change and presents new challenges in how we operate the system. Profiling refers to the rate at which gas is put into or taken off the transmission system during the gas day. A flat profile corresponds to a consistent rate across the day.
3.12	As discussed in our *Winter Review*, during winter 2015/16 we saw a reduction in supply and demand flow profiling, when compared to recent winters. What factors do you believe contributed to this reduction?
3.13	Do you expect the level of within day profiling for winter 2016/17 to increase or decrease in comparison to last year? What makes you believe this?
	Gas-fired power generation, particularly combined cycle gas turbines (CCGTs), is one of the tools used by market participants and the System Operator to manage day-to-day and within-day variation of demand and renewable output.
3.14	Do you expect the predictability of gas-fired power generation to increase or decrease this winter, compared to winter 2015/16? What factors do you think will influence this?
3.15	How do you expect CCGTs to behave in winter 2016/17 in response plant closures and increased wind generation capacity?
3.16	How do you expect this to impact on your demand profiles for gas for winter 2016/17?

Other documents from the System Operator

The *Winter Consultation* is one document in our suite of Future of Energy publications. You can see our other documents below, with their planned publication dates for 2016/17. You can find out more about any of the documents on our **Future of Energy webpage.**

Future Energy Scenarios
July 2016

A range of plausible and credible pathways for the future of energy from today out to 2050.

Winter Outlook Report
October 2016

Our view of the gas and electricity systems for the winter ahead.

Electricity Ten Year Statement
November 2016

The likely future transmission requirements on the electricity system.

Gas Ten Year Statement
November 2016

How we will plan and operate the gas network, with a ten-year view.

System Operability Framework
November 2016

How the changing energy landscape will impact the operability of the electricity system.

Future Operability Planning
November/December 2016

How the changing energy landscape will impact the operability of the gas system.

Network Options Assessment
January 2017

The options available to meet reinforcement requirements on the electricity system.

Summer Outlook Report
April 2017

Our view of the gas and electricity systems for the summer ahead.

Winter Review
May 2017

A comparison between the past winter's actual energy demand and supply and our forecast.

Winter Consultation
June 2017

An opportunity to share your views on energy demand and supply for the winter ahead.

Legal Notice
Pursuant to their respective licences, National Grid Electricity Transmission plc operates the electricity transmission and National Grid Gas plc operates the gas transmission network.

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National Grid has prepared this outlook document in good faith, and has endeavoured to prepare this outlook document in a manner which is, as far as reasonably possible, objective, using information collected and compiled by National Grid from users of the gas transportation and electricity transmission systems together with its own forecasts of the future development of those systems. While National Grid has not sought to mislead any person as to the contents of this outlook document and while such content represents National Grid's best views as at the time of publication, readers of this document should not place any reliance on the contents of this outlook document. The contents of this outlook document must be considered as illustrative only and no warranty can be or is made as to the accuracy and completeness of such contents, nor shall anything within this outlook document constitute an offer capable of acceptance or form the basis of any contract. Other than in the event of fraudulent misstatement or fraudulent misrepresentation, National Grid does not accept any responsibility for any use which is made of the information contained within this outlook document.

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