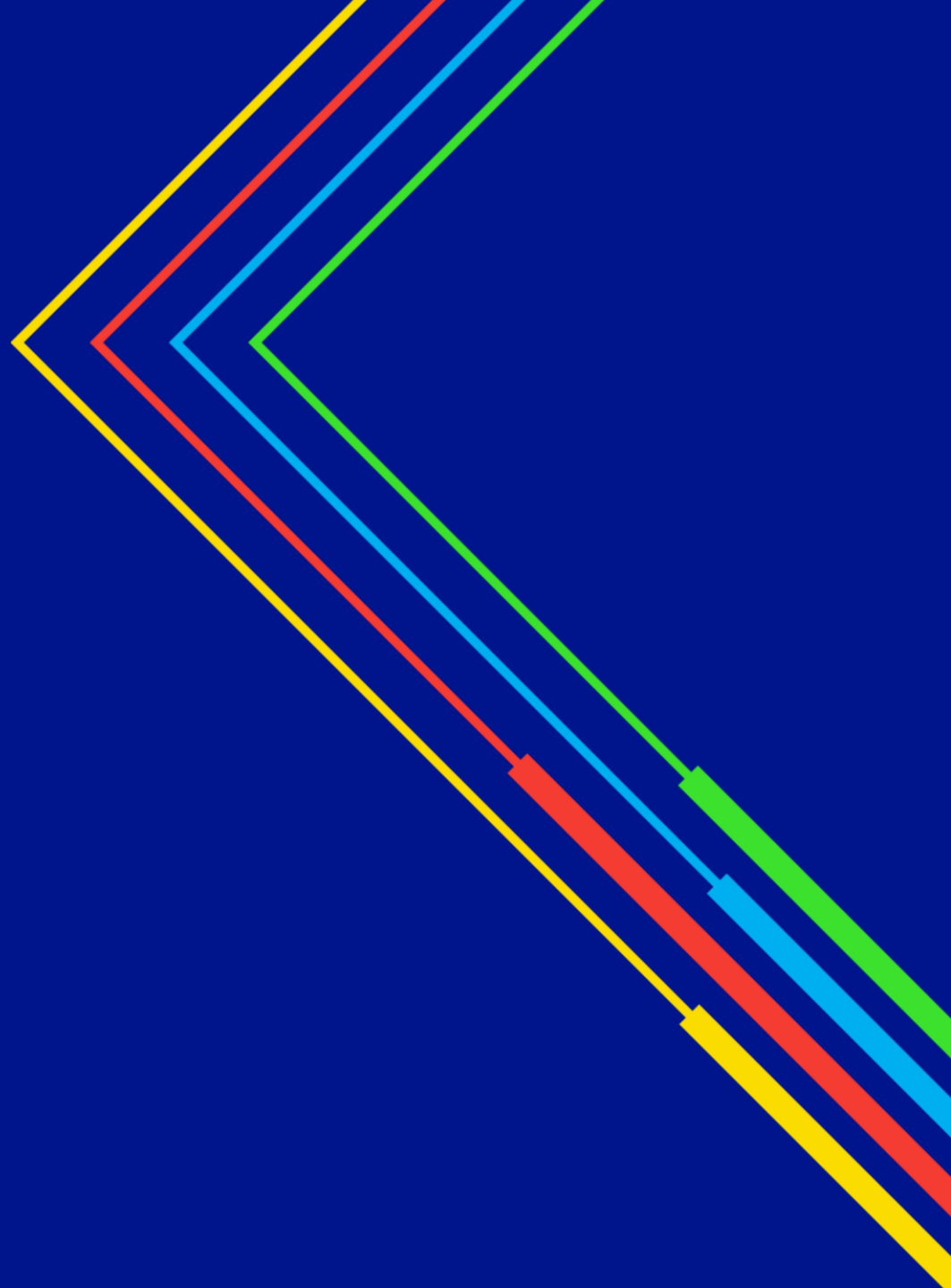


Early engagement on this year's Gas Winter Outlook

July 2022

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Welcome

Welcome to this new publication which has been designed specifically to seek your early engagement on this year's Gas Winter Outlook.

Our customers and stakeholders have told us that you would value earlier engagement ahead of this year's Gas Winter Outlook publication in October. We recognise and understand the considerable interest relating to Britain's gas supplies and what they could look like for this coming winter period, particularly after Russia's invasion of Ukraine and the subsequent uncertainty around future Russian gas flows to mainland Europe.

In response to your feedback, this document outlines our proposals to approach the Gas Winter Outlook differently this year. We welcome your thoughts and feedback on these proposals.

What's changing?

Our intention, which we outline further in this publication, is to produce a Gas Winter Outlook that illustrates the extent to which flexible sources of supply could be required to balance the National Transmission System (NTS) for differing levels of demand. This will compliment the assessment of peak supply and demand network capability that previous outlooks have focussed on.

We hope that this early engagement will result in a Gas Winter Outlook that helps you feel more informed and prepared as we enter the winter period by ensuring we're sharing the information that matters most to you.

A second publication, planned for 5th September, will build upon the information shared in this document and provide you with a further opportunity to provide feedback prior to the publication of the full Gas Winter Outlook on 6th October.

A webinar will be available for you to attend after the second release, where we will provide you with a walkthrough of both early engagement documents. Contact details for providing your feedback on this document, and to register for our webinar in September, are set out towards the end of the pack in the 'contact us' section.

I hope you find this document useful and we look forward to continuing the discussion with you over the coming months.



A handwritten signature in black ink, appearing to read 'Ian', written in a cursive style.

Ian Radley
Director System Operations

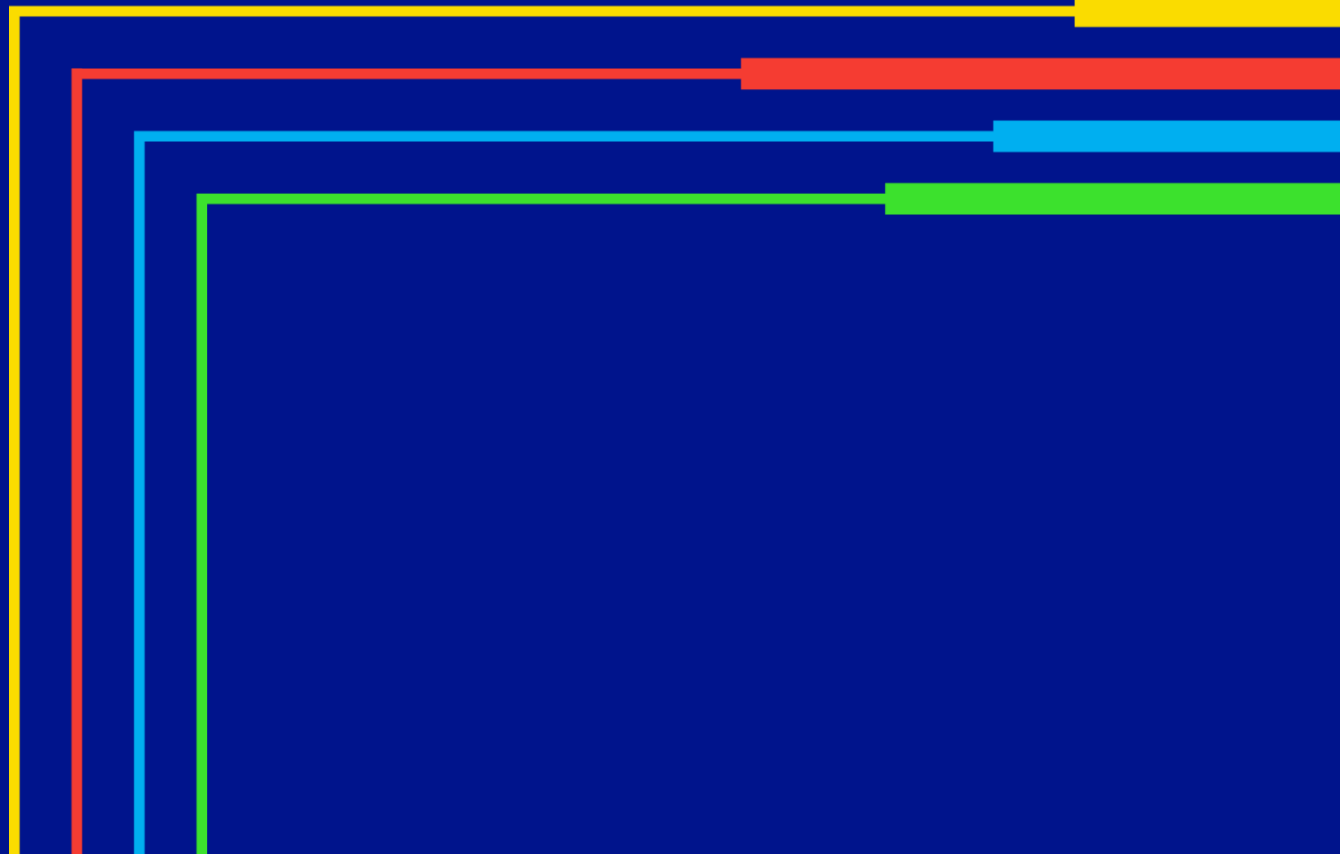
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Scenarios

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Introduction

We publish the Gas Winter Outlook to help gas market participants prepare for winter. This winter, we recognise the desire for us to provide additional insight and information given the geo-political situation, market volatility and the feedback we have received from you to date.

As mentioned in our welcome statement, we will be exploring the use of various NTS supply and demand scenarios to provide you with more information ahead of the winter period. We will explore the role flexible supplies could play in meeting varying NTS demand levels, and we hope this will help you to understand the requirements on these flexible supplies and therefore allow you to better prepare for the winter period.

It's important to note that these scenarios are just that – scenarios, not forecasts.

There is no way to accurately predict the likelihood of a specific scenario occurring. We hope that, by exploring a range of possibilities, we can provide you with a greater level of understanding of the extent to which flexible sources of supply would need to play a role in balancing the NTS under differing demand scenarios.

In this first early engagement publication of the Gas Winter Outlook, we share our initial thoughts on potential supply and demand scenarios. In our next publication (early September), we plan to look at how these supply and demand scenarios could be combined.

Take a look at our 'useful information' section for an outline of the key milestones we have planned.

The Electricity System Operator (ESO) has produced an early version of their Winter Outlook, you can find it on their website [here](#).

Context for the GB market:

- The UK benefits from a diverse supply position, with strong reliable supplies from the UKCS and Norwegian fields, coupled with flexible supplies from LNG and the two EU interconnectors
- Flows across the two EU interconnectors are driven by the price differential between EU and GB markets. While the current price differential remains in favour of EU, supplies will be expected to continue to arrive in GB to meet the associated NTS demand, which would result in sustained exports to the EU
- UK Medium-range storage (MRS) is used to address short term supply and demand imbalances, not large seasonal demand variations as bulk European storage does

Base demand scenarios

The demand scenarios we are proposing to use as the basis of this year's Gas Winter Outlook, along with why we are proposing to use them, are outlined below.

Scenario	Rationale	Highest daily demand (mcm/d)
Mild winter (2019/20)	We've chosen this scenario as it is representative of the highest daily demand we would experience in a mild winter.	363
Beast from the East (2017/18)	We've chosen this scenario due to it containing some of the highest daily demand levels seen in the last 5 years and it is representative of demand levels during an extreme cold snap.	418
Cold winter (2010/11)	We've chosen this scenario due to it containing the highest-ever daily gas demand level seen on the National Transmission System (NTS).	465

If you have any comments or feedback on the scenarios we are proposing, please let us know via the contact details provided at the end of this publication

Demand assumptions

Outlined below are the four demand assumptions we are proposing be applied to the base demand scenarios listed on the previous page, along with the rationale for why we've chosen them.

Please note that there is some overlap between our demand and supply scenarios, however we have chosen to outline all points fully in the interest of completeness.

Assumption	Rationale
Sustained maximum Combined Cycle Power Plant (CCGT) power demand for gas	Power generation demand does not share a strong correlation to heat demand. This sensitivity would show what impact maximum gas-fired power generation levels would have on overall NTS demand
Sustained gas interconnector exports to Europe	To explore the potential impact on overall NTS demand, if the interconnectors continue to export to Europe
Combined maximum Combined Cycle Power Plant (CCGT) power demand and continued gas interconnector exports to Europe	To understand how the scenarios listed above, if combined, could potentially impact overall NTS demand
Reduced domestic demand	To understand the effect of a reduction in domestic demand, such as may be caused by the record high UK gas prices

Supply assumptions

Below are the supply assumptions we are proposing be applied to the base demand scenarios, along with a rationale for why we have chosen them.

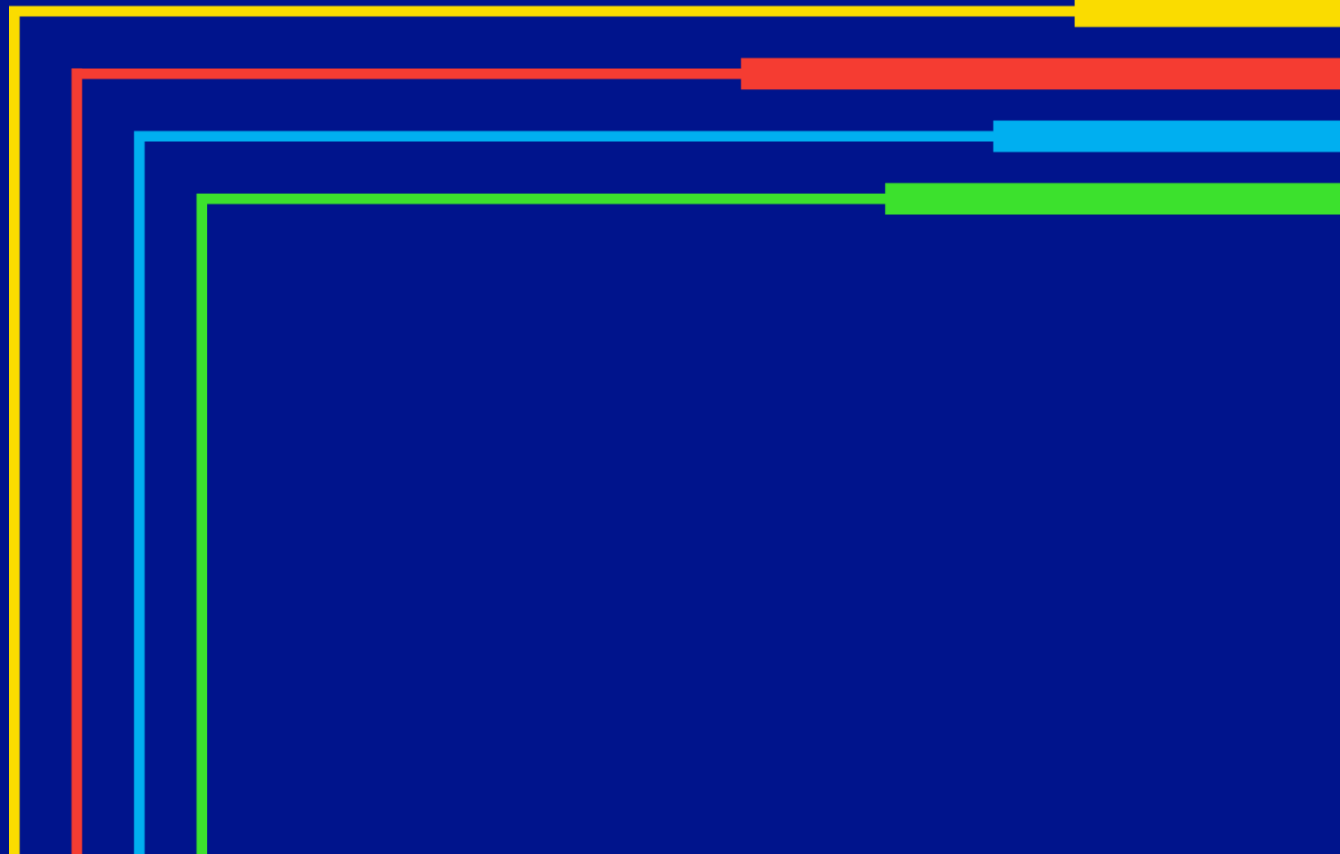
Please note that there is some overlap between our demand and supply scenarios, however we have chosen to outline all points fully in the interest of completeness.

Supply	Assumption	Rationale
United Kingdom Continental Shelf (UKCS)	<ul style="list-style-type: none"> Maximum supply capability 	To show how import dependency (Norway, EU interconnectors and LNG) changes between the two scenarios
	<ul style="list-style-type: none"> 3-year average 	
Norway	<ul style="list-style-type: none"> Maximum supply capability 	To show how import dependency changes for the more flexible supplies, if Norway was incentivised to maximise flows to Europe
	<ul style="list-style-type: none"> Maximum supply of 100mcm/d due to price differentials favouring flows to Europe over the UK 	
UK Storage	<ul style="list-style-type: none"> Full storage 	To show how UK Medium Range Storage (MRS) can support high demand days based on stock levels
	<ul style="list-style-type: none"> 50% storage 	
	<ul style="list-style-type: none"> Empty storage 	
Liquefied Natural Gas (LNG)	<ul style="list-style-type: none"> Maximum supply capability 	To show a range of contribution that LNG could make to the overall supply position
	<ul style="list-style-type: none"> 3-year average 	
	<ul style="list-style-type: none"> Minimum supply levels (boil-off) 	
EU Interconnectors	<ul style="list-style-type: none"> Maximum import capability 	To show how NTS demand can be met through interconnector supplies and highlight the potential alternatives if there are no supplies, or exports continue
	<ul style="list-style-type: none"> No supply into the UK 	

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Useful information

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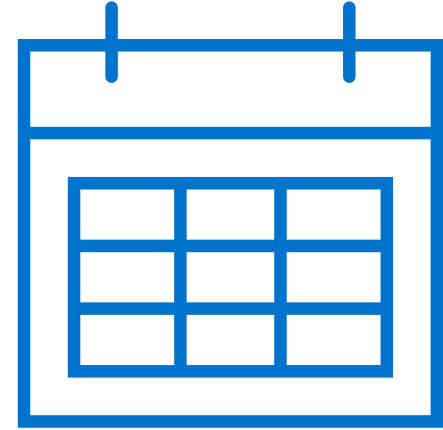


Dates for your diary

Here's a timeline of the publications and engagement we plan to undertake ahead of the winter period.

In our next publication we will share an illustration of how we might present the scenarios we have outlined here, along with some further scenarios on how supply could meet varying demand levels. This will be followed by a webinar to walk you through both documents and provide you with a further opportunity to share your feedback.

Please note that the main Gas Winter Outlook publication in October will still contain our assessment of capability and all the standard Gas Winter Outlook content that you're used to receiving.



July	September	October
Early engagement on this year's Gas Winter Outlook	Developing the Gas Winter Outlook Publication & Gas Winter Outlook early engagement Webinar	Gas Winter Outlook
<i>Now live!</i>	<i>Scheduled for 5th September</i>	<i>Scheduled for 6th October</i>

Preparing for Winter

There are risks and uncertainties this winter as a direct result of possible shortfalls in Europe's gas supply. As noted elsewhere, while we are not reliant on Russian gas to the extent that the rest of Europe is, it is clear that the cessation of flows of gas into Europe could have knock-on impacts, for instance very high prices. As a prudent system operator, we are working closely with BEIS, Ofgem and National Grid ESO to assess the potential scenarios that may arise, and taking steps to ensure we are well prepared to maintain safe and secure operation of the gas transmission system. Specific areas of work include:

1. Engagement

We have, and continue to, engage widely ahead of this coming winter to share information and seek feedback.

Key stakeholders include:

- Customers
- ESO
- EU TSOs / ENTSOG
- BEIS
- Ofgem

The proposals in this early engagement document have been informed by feedback received to date.

2. Market Facilitation

We have undertaken various activities to ensure we are supporting the wider Market and its operation. Some of our key outputs in this area include:

- Ongoing review and provision of [real-time information](#) to the market.
- Enhancements to existing margins notice processes for this winter to provide longer-range forecast information to the market.
- Facilitated physical trials, and subsequently an industry code modification, to maximise EU interconnection capability.

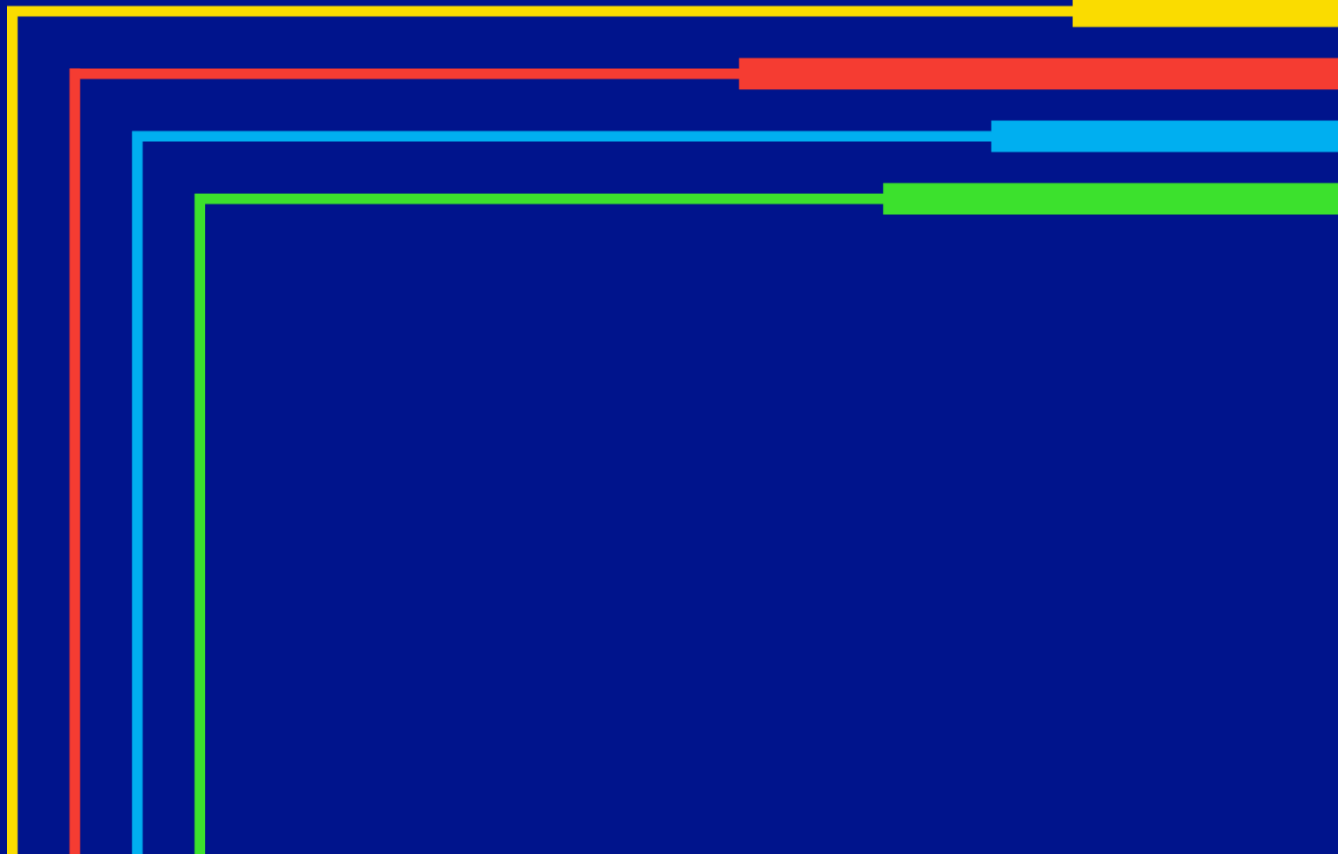
3. Balancing tools

We are leading an industry discussions on the value of enhancing existing Demand Side Response (DSR) market arrangements in order to encourage further availability of balancing tools within normal market operation.

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Contact us

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Contact us

If you would like to share your thoughts or ask any questions, please get in touch at:

.box.OperationalLiaison@nationalgrid.com

Register for our “Gas Winter Outlook – early engagement”
webinar [here](#)

This webinar will provide a walk-through of both of our early engagement publications, providing the opportunity to ask questions and provide feedback ahead of the full Gas Winter Outlook publication in October.



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