Data Classification: Public

Gas Supply Security Assessment

Assessing gas supply security for winters 2031/32 and 2036/37

November 2026



Whole Energy System Resilience

NESO
National Energy System Operator

Welcome

Security of gas supply remains fundamental to Great Britain's (GB's) energy resilience. Although gas demand is expected to decline as we decarbonise, ongoing supply will be crucial, particularly in the near term, to provide power, heat our homes and support industry.

As the National Energy System Operator (NESO), we are guided by our primary duty to support reliable and secure energy for current and future consumers, identifying security of supply risks as they emerge and as we transition away from widespread gas use. The government has shown its commitment to maintaining security of supply through the recent consent for the Jackdaw gas field, and Ofgem through its support for maintaining the gas import capacity of Interconnector Ltd for the next five years.

Last year, we published our first *Gas Supply Security Assessment* (GSSA),[1] which set out an emerging risk to gas supply security for winters five and ten years ahead. This independent advice proposed potential options to manage these risks. Alongside that assessment, the Department for Energy Security and Net Zero (DESNZ) launched a consultation seeking views from industry on long-term gas supply security.[2]

This year's GSSA begins its analysis in winter 2031/32, following the expected end of the multi-year agreement with Interconnector Ltd. Our updated analysis shows that the risk identified in our 2025 assessment remains, and that there is an ongoing need for an enduring solution to secure future gas supply. DESNZ has committed to setting out its preferred position in due course.[3]

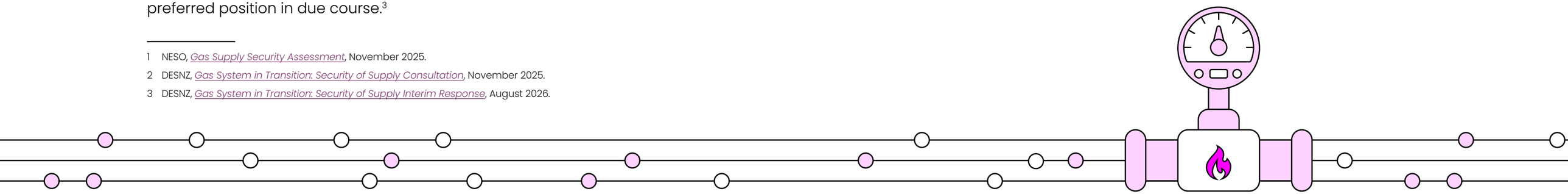
To assess the emerging risk for which DESNZ is developing options, this year's GSSA evaluates the entire winter period, rather than the isolated days assessed last year. Combined with updated supply analysis, this gives a more complete picture of GB's supply security. We also propose that, from next year, the assessment includes the one- to four-year time horizon. This would allow us to monitor changes to the gas system closer to real time, support policymaking and provide analysis across the full 1- to 10-year time horizon. Discussions with Ofgem relating to this proposal are ongoing.

Delivering effective mitigation will require coordinated action across the four organisations responsible for gas supply security: NESO, government, Ofgem and National Gas Transmission plc (NGT). We will continue to work closely with our partners and the wider energy industry.

We welcome further engagement and feedback on this year's GSSA and will continue to develop our methods, processes and publications to maintain resilient, reliable energy supplies for GB. Please send it to box.gassupplysecurity@neso.energy.



Dr Debs Petterson
Director of Whole Energy System Resilience,
National Energy System Operator (NESO)



1 NESO, *Gas Supply Security Assessment*, November 2025.

2 DESNZ, *Gas System in Transition: Security of Supply Consultation*, November 2025.

3 DESNZ, *Gas System in Transition: Security of Supply Interim Response*, August 2026.

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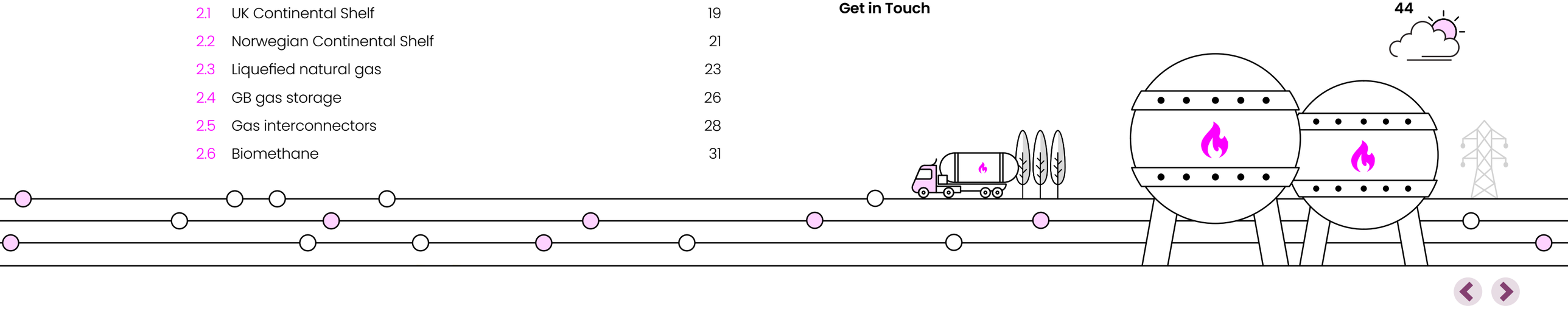
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Executive Summary

Under NESO's responsibilities and licence obligations for security of supply, we produce the Gas Supply Security Assessment (GSSA) each year, considering the gas supply and demand horizon five and ten years ahead (winters 2031/32 and 2036/37 in this assessment).[4]

Our analysis suggests that risks to supply security are low where gas supply assets and network infrastructure are available (an intact network[5]). This indicates that, under normal system operating conditions, GB has sufficient supply to meet demand in most circumstances, including the 1-in-20-year[6] peak demand. Only against the most extreme demand outcomes would negative gas supply margins (a potential shortfall) occur.

Our modelling shows that gas supply shortfalls are more likely in winters 2031/32 and 2036/37 if the largest piece of gas supply infrastructure is lost. When we assess single-day outages in line with the N-1 test[7], GB narrowly passes in winter 2031/32 and fails in winter 2036/37 using our best understanding of future demand. The risk is more pronounced under the slowest decarbonisation pathway, where GB fails the N-1 test in winter 2031/32 and winter 2036/37.

We reached these conclusions by considering a range of decarbonisation scenarios, with the 2026 Ten Year Outlook[8] as the base case, and by continuing to assess the effect of faster and slower decarbonisation through the Future Energy Scenarios (FES) 2025 Holistic Transition and Falling Behind pathways.

In this year's GSSA we have updated our modelling to provide a view of possible outcomes on every winter day. We produce 1,400 demand simulations of each winter, informed by historical weather data while accounting for our changing climate.

The 'de-rated' maximum level of gas supply is then combined with all 1,400 winter demand simulations to calculate margins and assess GB's gas supply security for an entire winter.

De-rating[9] means we calculate the daily maximum deliverable volumes from each supply source, based on availability, reliability and deliverability, rather than maximum technical capacity, which is not always achievable. This approach allows us to calculate the likelihood, duration and magnitude of potential shortfalls, supporting a more comprehensive and robust assessment of GB gas supply security.

Over the assessment period, we continue to expect declining production from both the UK and Norwegian Continental Shelves, resulting in lower delivery volumes to Great Britain's (GB's) supply terminals. Overall, total supply capability remains similar to last year as expected capacity reductions have been offset by increases in projected supply capability from other sources. Some commercial operators have reduced capacity following lower use than in the past, as market trends have changed and annual GB demand has fallen, even though forecast peak demand remains high.

Any negative gas supply margins would be managed in real time by National Gas Transmission in its role as gas system operator and, in extreme cases, could require demand disconnections to help balance both the gas and power systems. The mitigations we first published last year remain options to improve gas supply margins. As many of these formed part of DESNZ's *Gas System in Transition: Security of Supply Consultation*[10], launched last year, we have not repeated them in this assessment.

4 Ofgem, *Annex G – Gas System Planner Licence Conditions* (Condition C4), March 2024.

5 Where all gas supply infrastructure – including onshore assets (National Transmission System, terminals and sub-terminals) and upstream infrastructure – is operational.

6 The 1-in-20-year peak-day gas demand is the level of gas demand statistically expected to occur once every 20 years. It can vary year to year and is sensitive to the assumed structure of gas demand, such as how many homes use gas-fired boilers for heating.

7 The loss of the largest piece of gas supply infrastructure on a 1-in-20-year peak demand day.

8 NESO, FES documents.

9 As defined in DESNZ, *Gas Supply Security Assessment: Proposed methodology for assessing medium range gas supply security*, December 2023.

10 DESNZ, *Gas System in Transition: Security of Supply Consultation*, November 2025.

Key Messages

Gas supply margins are likely to remain positive under an intact network

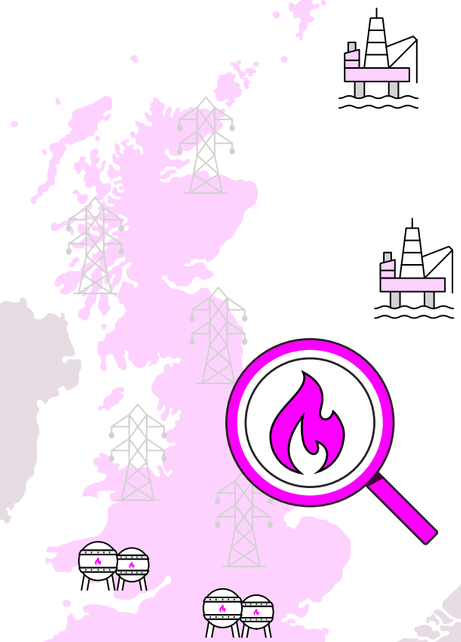
- If the system maintains its current diversity of gas supply and responds to demand signals as expected, GB gas supply is sufficient at almost all levels of gas demand in winters 2031/32 and 2036/37.
- In our faster decarbonisation and base case scenarios, the risk of negative gas supply margins (where supply is insufficient to meet demand) is very low. If GB's pace of decarbonisation slows, the likelihood of negative margins increases.
- None of our scenarios for future winters show domestically produced gas (from the UK Continental Shelf and biomethane) and gas from the Norwegian Continental Shelf meeting demand on their own. As a result, GB will continue to rely on imports and flexible supply sources such as LNG.

The likelihood of negative gas supply margins increases if the largest piece of supply infrastructure is lost

- Should the largest supply source be lost during the two periods assessed (winters 2031/32 and 2036/37), the likelihood of negative margins under our base case (NESO's Ten Year Outlook) is present, but low. The risk is materially higher under the slowest decarbonisation pathway, NESO's FES 2025 Falling Behind. The likelihood of negative margins is considered negligible if GB achieves faster than expected decarbonisation, as set out in the FES 2025 Holistic Transition.
- When we assess single-day outages in line with the N-1 test, GB narrowly passes in winter 2031/32 and fails in winter 2036/37 under the Ten Year Outlook, which reflects our best understanding of future demand. Under the slowest decarbonisation pathway, GB fails the N-1 test in both assessment winters.
- This emerging risk is lower than in the 2025 GSSA due to our updated modelling. The revised methodology and updated supply assumptions reduce, but do not remove, the assessed level of risk.

Mitigations remain important for improving gas supply margins, which are sensitive to future market changes

- Mitigations first identified in last year's GSSA remain potential options to reduce the risk of negative gas supply margins. They are being explored through DESNZ's *Gas System in Transition: Security of Supply Consultation*, with its preferred position expected in due course.
- Reducing gas demand remains an important mitigation to limit supply security risks in future winters, and there is value in considering a new standard to assess gas supply security in the longer term.
- Gas supply security will become more sensitive to any future supply reductions, whether structural, market-driven or caused by infrastructure disruption. Our supply margins are sensitive to our assumptions and indicate the ongoing need for flexible supply from interconnectors or GB's underground storage sites.



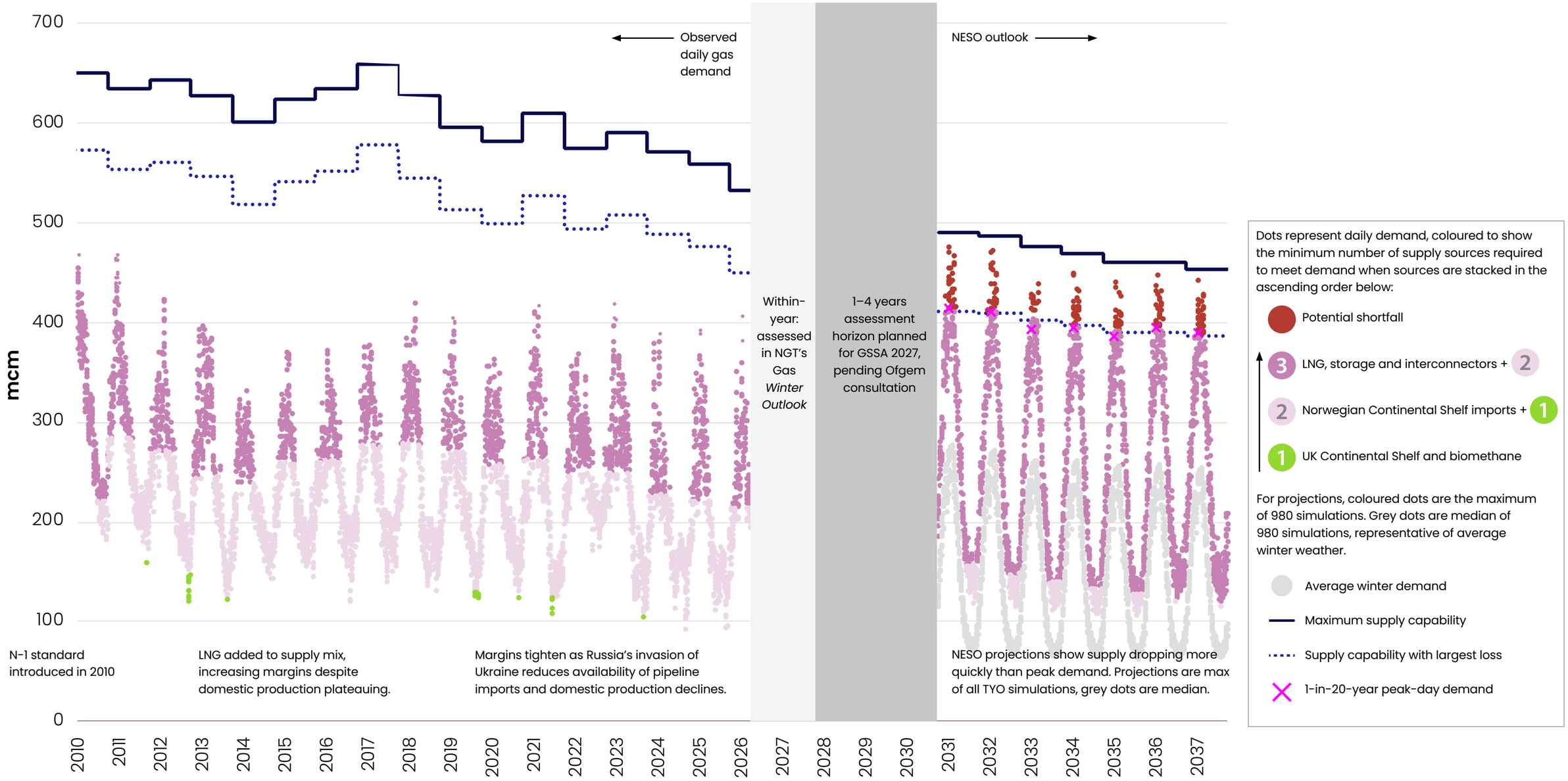


Figure 1: Daily gas demand actuals (2010–2026) and future gas supply security projections (2031–2037), showing that under average winter weather in NESO's Ten Year Outlook (TYO), gas supply margins are expected to remain positive, with potential negative margins if the largest piece of supply infrastructure is lost

Stakeholder Engagement

To further develop our assessment of gas supply security, we have continued to work with stakeholders throughout the gas industry.

Our wider stakeholder programme across the gas sector includes insights gathered while developing our Future Energy Scenarios (FES)[11] and through the Gas Advisory Council (GAC).[12] Table 1 details our GSSA-specific engagement, through which we work with stakeholders to expand our understanding of existing operational processes and technical supply capabilities.

We continue to work with Ofgem and the Department for Energy Security and Net Zero (DESNZ), particularly to support the next steps of the *Gas System in Transition: Security of Supply Consultation*,[13] which was launched alongside our first GSSA. We welcome DESNZ's interim response to this consultation, published in August 2026,[14] which signalled the government's intention to set out its preferred position on all the potential options for intervention in the gas system. We will continue to provide DESNZ, Ofgem and National Gas Transmission (NGT) with the technical expertise and impartial advice needed to inform final decisions and any associated action.

We have also engaged with Ofgem on delivering this GSSA and future editions, including on the proposal to extend our gas supply security analysis to the nearer term. This would provide analysis 1 to 4 years ahead, in addition to our existing 5- and 10-year winter analysis. We have recommended carrying out this analysis from next year (see 'Mitigations and Next Steps').

Table 1: Summary of stakeholder engagement

Stakeholder Group	Number of Participants
Government departments and regulators	4
Network operators	7
UKCS operators	2
NCS import operators and regulators	2
LNG import operators	3
Interconnector import operators	2
Storage operators	9
Academic institutes, weather forecasts and industry representatives	5

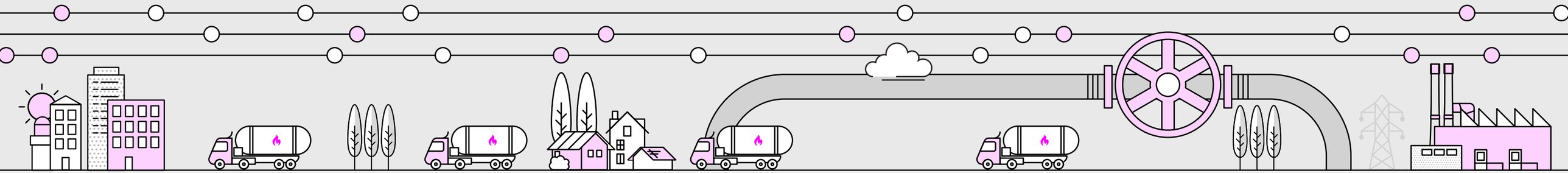
11 NESO, *What is the Ten-Year Outlook 2026?*.

12 NESO, Gas Advisory Council (GAC).

13 DESNZ, *Gas System in Transition: Security of Supply Consultation*, November 2025.

14 DESNZ, *Gas System in Transition: Security of Supply Interim Response*, August 2026.

1. GSSA and Future Demand



In November 2025, we published our first *Gas Supply Security Assessment* (GSSA).[15] It assessed the ability of Great Britain's (GB's) gas supply infrastructure to meet varying levels of gas demand 5 and 10 years ahead (winters 2030/31 and 2035/36).

We assessed gas supply security under NESO's Future Energy Scenarios (FES) to evaluate decarbonisation's influence on supply security. Alongside the 2025 GSSA, the Department for Energy Security and Net Zero (DESNZ) published its *Gas System in Transition: Security of Supply Consultation*,[16] seeking views on priorities for gas supply security.

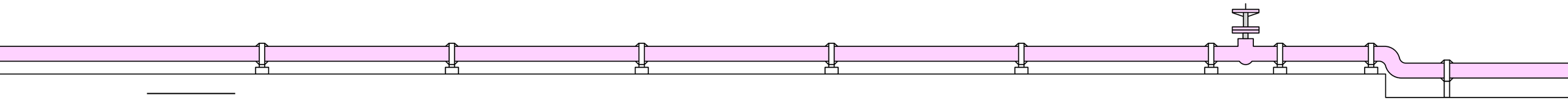
The 2025 GSSA assessed supply security against two 11-day demand profiles – seasonal normal and peak – occurring in late February. The seasonal normal profile reflected a level of demand that would be considered normal for the time of year. The peak demand profile reflected a 'cold snap' weather event,[17] defined in collaboration with the Met Office. Late February was identified as the 'period of least resilience', when GB gas supply infrastructure would be least capable of meeting a period of elevated demand during the winter.

The main feature of the peak demand profile was that it included the industry benchmark of 1-in-20-year peak-day gas demand.[18] The difference between de-rated supply and demand (the gas supply margin) was calculated on each day of the 11-day profiles. The margin on the 1-in-20-year peak day allowed us to test whether, for a given decarbonisation pathway and assessment year, GB was on track to pass or fail the N-1 test for infrastructure adequacy in the corresponding gas year.

Our 2025 assessment concluded that, in the event of the loss of the single largest piece of supply infrastructure,[19] there was a high likelihood that negative gas supply margins would occur in the assessment years. At the five-year horizon, negative margins were observed on a 1-in-20-year peak day under all decarbonisation pathways. As a result, we concluded that the N-1 test would fail in winter 2030/31 under all pathways, though faster decarbonisation could reduce the impact. At the 10-year horizon, the N-1 test again failed under the slowest decarbonisation pathway and the base case, but decarbonisation under the faster net zero pathways was sufficient to maintain positive margins on the 1-in-20-year peak day.

Since these publications, there have been no structural changes to the gas supply or demand market, and no major market entries or exits. As a result, this year's GSSA largely reflects the same gas system and market conditions while the government prepares its full consultation response. The government has committed to fully assessing the options and setting out its preferred position on an enduring solution.[20]

The FES pathways continue to underpin our gas demand modelling. The 2026 Ten Year Outlook[21] (previously the Ten Year Forecast) remains our base case. We also consider the fastest net zero decarbonisation pathway (Holistic Transition) and the slowest decarbonisation pathway (Falling Behind) to assess decarbonisation's influence on gas supply security. We consider only one net zero pathway, as Holistic Transition sufficiently captures the potential reduction in gas demand under Hydrogen Evolution and Electric Engagement.



15 NESO, Gas Supply Security Assessment, November 2025.

16 DESNZ, *Gas System in Transition: Security of Supply Consultation*, November 2025.

17 A cold snap is a period when weather conditions place more stress on the gas supply system than normal seasonal weather. NESO, *Gas Supply Security Assessment*, November 2025.

18 The 1-in-20-year peak-day gas demand is the level of gas demand statistically expected to occur once every 20 years.

19 This adequacy test is based on the N-1 standard, a principal gas system resilience standard which assesses whether the gas supply system can still meet 1-in-20-year peak-day demand if the largest piece of supply infrastructure is lost.

20 DESNZ, *Gas System in Transition: Security of Supply Interim Response*, August 2026.

21 NESO, FES documents.

1.1 Probabilistic whole-winter demand

To give the government and industry a more complete assessment of GB's future gas supply security, this year's GSSA takes a new approach. It uses simulations of gas demand that could occur on each day of a 182-day assessment winter.[22] As in the 2025 GSSA, gas demand comprises GB demand – Local Distribution Zones, power generation, and industrial and commercial (I&C) – plus exports through the Moffat interconnector.

For each winter season, we develop a range of weather outcomes informed by 50 years of historical weather data, adjusted to reflect our current climate. Our modelling captures the relationship between weather conditions and gas demand, simulating 1,400 demand values for each day of the 182-day assessment winter (1 October to 31 March) consistent with this weather history. The base case median and 1-in-20-year peak-day demand projections shown in Figure 1 (in grey and pink, respectively) are derived from these simulations.

We carry out this modelling for each of the three pathways listed above and for each assessment year. For each pathway and year, this generates 1,400 simulated winters and around 250,000 simulated daily demands. For each assessment winter – 2031/32 and 2036/37 – we calculate a realistic maximum level of gas supply using our de-rating methodology.[23] We then combine the de-rated supply with the demand simulations to assess GB's gas supply security.

This approach provides a more complete and robust analysis of supply security than the 11 days covered by the cold snap scenarios in our 2025 GSSA. Through this updated methodology, this year's GSSA shows the likelihood, frequency and magnitude of negative gas supply margins across entire winters. These metrics are defined and discussed in 'Supply security metrics' later in this section.

1.2 Demand under Future Energy Scenarios

The 2025 GSSA set out that, as GB progresses towards its Clean Power 2030 and 2050 net zero goals, natural gas will remain critical to meeting GB's heating, power generation and I&C requirements into and beyond the 2030s. We also expect GB's supply sources to continue enabling gas exports to Ireland, Northern Ireland, the Isle of Man and mainland Europe.

NESO's 2026 Ten Year Outlook[24] shows annual gas demand declining over the next 10 years due to decarbonisation, based on known and planned projects, existing policies, market evidence and current sector trends. Like last year's equivalent (the 2025 Ten Year Forecast), gas demand levels in the Ten Year Outlook are generally higher than those in the FES 2025 net zero pathways, but lower than those in the FES 2025 Falling Behind scenario (which does not meet net zero by 2050). The Ten Year Outlook is updated annually to give our best view

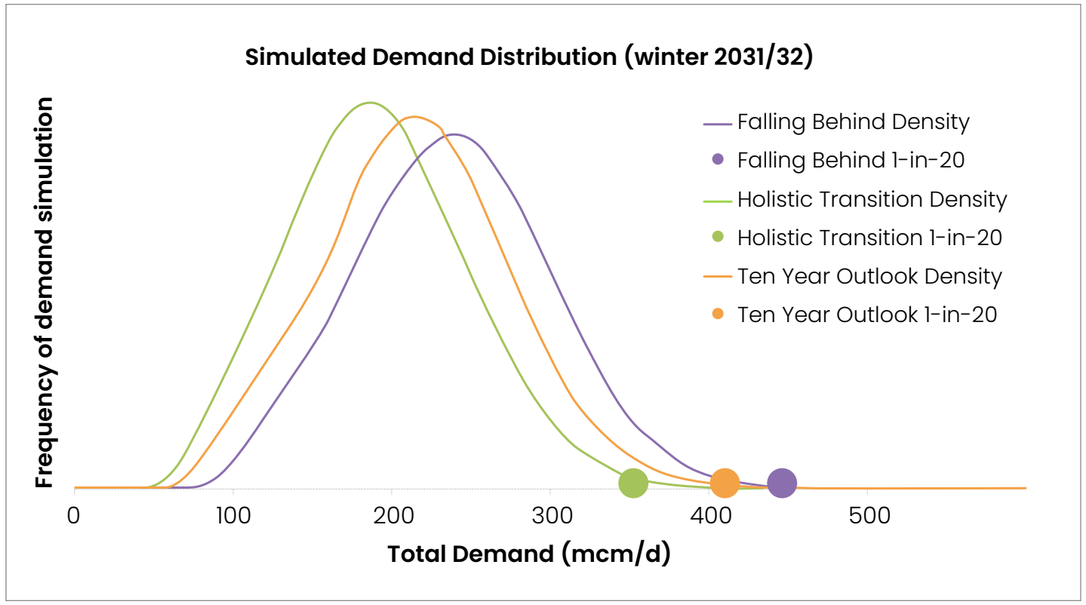


Figure 2: Distribution of daily gas demand in winter 2031/32, adjusted for climate change, under the Ten Year Outlook, Falling Behind and Holistic Transition, including the 1-in-20-year peak demand day

22 183 days in a leap year. As 2032 is a leap year, our 5 years ahead assessment comprises 183 days.

23 NESO, *Gas Supply Security Assessment*, November 2025.

24 NESO, *What is the Ten-Year Outlook 2026?*

of annual and peak gas demand over the next 10 years. For this year's GSSA, we have used the 2026 Ten Year Outlook as our base case to reflect this updated analysis.

We also assess supply security against demand simulations under the FES 2025 Holistic Transition pathway, which meets net zero through a mix of electrification, hydrogen around industrial clusters and a higher uptake of biomethane. This is a high-renewables pathway with lower unabated gas-fired generation and faster decarbonisation than our base case.

We also use the FES 2025 Falling Behind scenario to represent an outcome where net zero is not met by 2050. It represents the slowest credible rate of decarbonisation and acts as a counterfactual to both the base case and Holistic Transition, allowing us to test the highest credible future gas demand in our margins assessment. The net zero pathways and Falling Behind scenario are published once every three years, with the next update expected in 2028.

The same number of demand simulations is produced under each of these pathways for winters 2031/32 and 2036/37. The probability distribution of all winter 2031/32 demand simulations captures the range of demands against which we assess gas supply security (Figure 2).

In this assessment, we have introduced a climate change adjustment methodology so that our demand simulations reflect weather conditions that would be considered feasible at the 5- and 10-year horizons. To capture a sufficiently large range of possible weather outcomes, our gas demand modelling uses a 50-year weather history, and the weather data is adjusted to reflect our current climate.

1.3 Identifying peak demand conditions

Under Licence Condition C4 of NESO's Gas System Planner Licence,[25] each annual GSSA must consider a peak demand scenario, based on a 1-in-20-year analysis. In the 2025 GSSA, this scenario was defined as an 11-day cold snap that included the 1-in-20-year peak-day demand for the corresponding assessment year. The 1-in-20-year peak-day gas demand remains the statistical benchmark used in gas system planning and supply security analyses. As a result, we continue to calculate the 1-in-20-year peak-day gas demand for each pathway and assessment year.

Unlike in the 2025 GSSA, the 1-in-20-year peak-day gas demands are now adjusted to reflect our current climate. Average winter temperatures have risen over the 50-year weather history used in our modelling. Without adjustment, the 1-in-20-year peak-day demand figures would be inflated, because they would assume GB experiences the same climate as in previous decades.

The climate-adjusted 1-in-20-year peak-day demand (Table 2) falls between winters 2031/32 and 2036/37, reflecting decarbonisation across all scenarios. For context, the maximum demand observed in winter 2025/26, 407 mcm/d, would represent a 1-in-3-year event in winter 2026/27. With further decarbonisation, under the Ten Year Outlook the same demand would represent around a 1-in-20-year event in winter 2031/32 and a 1-in-60-year event in 2036/37.

Our peak demand scenario for each pathway and assessment year includes more than a 1-in-20-year peak day. In the 2025 GSSA, we developed an 11-day profile that included the 1-in-20-year peak day. This year, our peak demand scenario is the entire simulated winter in which the 1-in-20-year peak-day gas demand occurs. This reflects a series of weather conditions observed over a 182-day period in the 50-year weather history. The 1-in-20-year peak-day gas demand is the highest demand in this simulated winter.

25 Ofgem, *Annex G – Gas System Planner Licence Conditions* (Condition C4), March 2024.

The historical weather conditions behind this simulated winter are extreme enough to produce the 1-in-20-year peak-day gas demand. As a result, we refer to the peak demand scenario as a 'severe' winter. Like the 1-in-20-year peak-day gas demand, the 'severe' winter is different for each pathway and assessment year.

We currently rely on historically observed weather to model future outcomes, as we have done in this publication and in other publications including the Future Energy Scenarios. However, the recorded weather history does not reflect the full range of weather outcomes that were possible. The Unprecedented Simulated Extremes using ENsembles[26] (UNSEEN) weather data package, developed by the Met Office, addresses this limitation. UNSEEN generates unobserved weather histories, allowing us to better understand the range of future weather conditions and likelihood of extreme events.

We intend to use the UNSEEN weather data in our gas demand modelling for subsequent GSSA publications. As UNSEEN captures a greater range of weather, the corresponding range of demands we consider may change. This may affect the 1-in-20-year peak-day gas demands reported in subsequent publications.

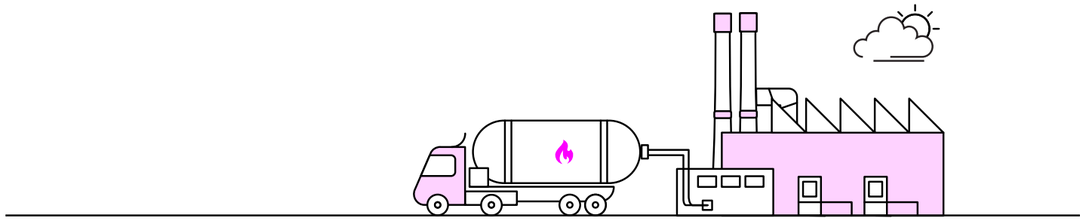


Table 2: Future climate-adjusted 1-in-20-year peak-day demand compared with winter 2025/26 maximum demand and historical maximum demand, showing the likelihood (1 in X years) of the weather conditions needed for each demand to occur (N/A indicates that the demand exceeds all future demand simulations).

Pathway	Winter	Future 1-in-20-Year Peak-Day Demand (mcm/d)	Likelihood of 2025/26 Maximum Demand (407 mcm/d)	Likelihood of Historical Maximum Demand (460 mcm/d)
Ten Year Outlook	2026/27		1-in-3	1-in-37
	2031/32	410	1-in-18	1-in-200
	2036/37	390	1-in-58	N/A
Falling Behind	2026/27		1-in-3	1-in-32
	2031/32	447	1-in-3	1-in-44
	2036/37	423	1-in-8	1-in-78
Holistic Transition	2026/27		1-in-12	N/A
	2031/32	353	N/A	N/A
	2036/37	285	N/A	N/A

26 Met Office, Predicting extreme weather.

1.4 Supply security metrics

We assess gas supply security by calculating the likelihood, frequency and magnitude of negative gas supply margins under each pathway and assessment winter. The conclusions drawn from these metrics rely on the reasonable assumption that the 50-year weather history and associated demand simulations capture a sufficiently complete distribution of possible demand volumes under each pathway in each assessment winter. Because these metrics are new to our gas supply security work, we define each one below, with examples of how we apply it.

Likelihood reflects the probability of observing at least one day of negative gas supply margins under a given pathway and assessment year. It is calculated as the proportion of all 1,400 simulated winters that have at least one day of negative gas supply margins. For example, if 10% of all simulated winters have at least one day of negative gas supply margins, we conclude that there is a 10% chance of at least one day of negative margins in that winter.

Frequency captures how often negative margins may occur. It is measured in shortfall days, which are simulated days on which demand exceeds supply. The average number of shortfall days across all 1,400 simulated winters gives the expected frequency: the number of shortfall days expected in a 'typical' winter. Where supply security risk is low for a given assessment year and pathway, expected frequency may be less than one.

The frequency of negative margins is also evaluated under the peak demand scenario for each assessment year and pathway. This is the number of shortfall days in the 'severe' winter: the simulated winter in which the 1-in-20-year peak-day gas demand occurs.

Magnitude captures the size of negative margins that may occur, measured in million cubic metres (mcm). As with frequency, the average total margin shortfall across all simulated winters gives the expected magnitude: the total margin shortfall expected in a 'typical' winter.

We also evaluate the magnitude of negative margins for the peak demand scenario under each pathway and assessment winter. This is given by the total margin shortfall observed during the 'severe' winter. We use the magnitude of negative margins on the 1-in-20-year peak day in the 'severe' winter to assess whether the N-1 supply security standard is met. This is discussed further in the next section.

We previously published our *Gas Supply Security Assessment Methodology Statement* alongside our first GSSA. We plan to update it after publishing this year's GSSA to reflect the change to demand modelling.

1.5 How we assess system stress

We have also assessed the loss of the largest piece of supply infrastructure, sustained throughout the entire simulated winters of 2031/32 and 2036/37. This gives us a complete picture of how resilient the gas system would be if a major outage affected the availability, reliability or deliverability of total gas supply on each of the 182 days assessed in each winter. After a major infrastructure outage, we calculate the likelihood, frequency and magnitude of negative margins in each assessment winter: whether negative margins occur, how often they might occur and how large the supply shortfall might be.

As outlined in the previous section, we calculate the gas supply margin on the 1-in-20-year peak demand day, the industry benchmark for exceptional demand. For each winter and pathway, the 1-in-20-year peak-day gas demand is the 95th percentile of the maximum single-day demands across the 1,400 winter simulations. In other words, the 1-in-20-year peak day is the 70th highest winter maximum demand in the sample. Assessing gas supply margins against this benchmark aligns the GSSA with existing supply security legislation, as it covers the single-day N-1 supply security test.

The N-1 standard is set out in European Union Regulation (EU) 2017/1938. Following the UK's departure from the EU, it was incorporated into UK law by the Gas (Security of Supply and Network Codes) (Amendment) (EU Exit) Regulations 2019.[27] The infrastructure standard set out in the regulation requires GB's gas supply infrastructure to be capable of meeting a 1-in-20-year peak-day gas demand in the event of disruption to the single largest piece

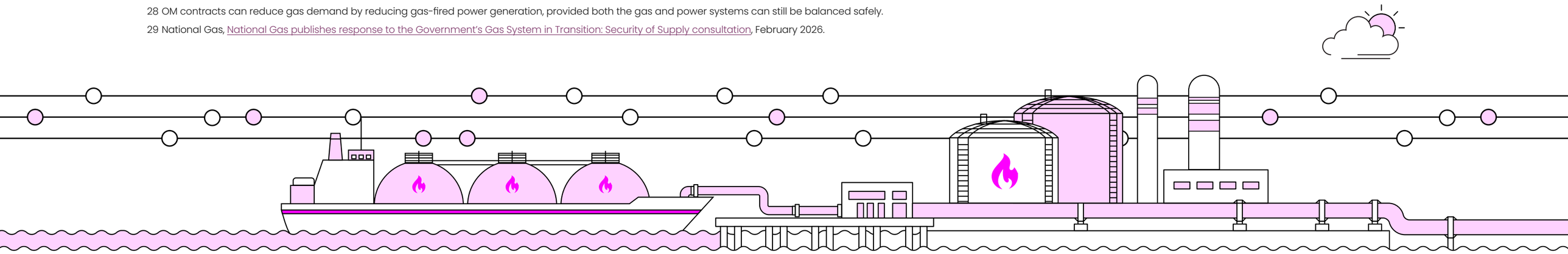
27 legislation.gov.uk, *The Gas (Security of Supply and Network Codes) (Amendment) (EU Exit) Regulations 2019*.

of gas supply infrastructure. The N-1 standard only tests 1-in-20-year peak-day demand against the maximum supply the remaining sources can deliver. This scenario is very rare, as it requires two low-likelihood, high-impact events to coincide: a major supply disruption and unusually high gas demand. However, as the system's supply flexibility and maximum deliverability decrease, the potential impact of losing any part of the gas supply system increases.

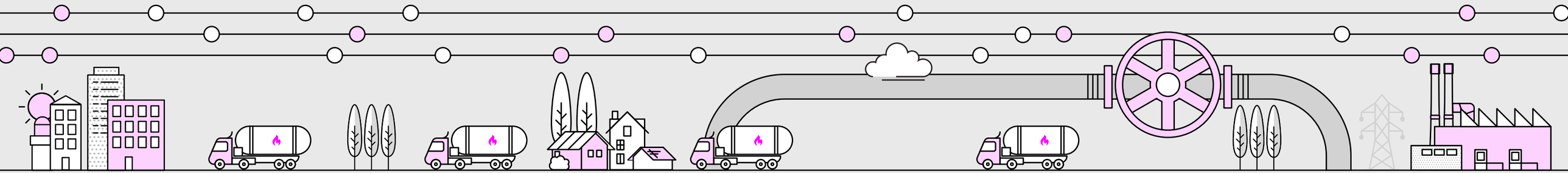
N-1 is a valuable test of how sensitive GB's gas supply security is to major supply disruption. However, because it assumes that several low-likelihood events coincide, and any part of the system could experience an outage at any time, the true level of risk is hard to quantify. The test's binary pass-or-fail result cannot account for the flexibility built into the gas network to absorb short periods of elevated system stress. This flexibility comes from operational tools such as linepack and the safe use of contracts for Operating Margins (OMs).[28] National Gas Transmission (NGT) highlighted this in its response to the *Gas System in Transition: Security of Supply Consultation*. It indicated that some negative margins could be managed for a short time and recommended a supplementary risk assessment or a reconsideration of how N-1 is applied.[29] We agree that reconsidering how risk is accounted for in the N-1 standard could better support future gas supply security. We will continue to work with NGT, DESNZ and Ofgem on a new legislative basis for gas supply security. We discuss this further in the 'Mitigations and Next Steps' section.

28 OM contracts can reduce gas demand by reducing gas-fired power generation, provided both the gas and power systems can still be balanced safely.

29 National Gas, National Gas publishes response to the Government's Gas System in Transition: Security of Supply consultation, February 2026.



2. Gas Supply



Great Britain (GB) has benefited from a diverse gas supply mix, which will still be needed in every winter to 2037. None of our scenarios for future winters show domestically produced gas – from the UK Continental Shelf (UKCS) and biomethane – and gas from the Norwegian Continental Shelf (NCS) meeting demand on their own. Winters 2031/32 and 2036/37 will require additional interconnector flows, liquefied natural gas (LNG) and storage to meet within-year and peak-day gas demand.

To test GB's gas supply security, we assess it against an intact network (where compressors and gas system assets are available) and against the loss of the single largest piece of supply infrastructure. This requires us to calculate the supply we expect from each source in both scenarios for winters 2031/32 and 2036/37.

To do this, we continue to apply a de-rating approach[30] to calculate the maximum daily volumes each supply source can deliver throughout each assessed winter. This approach shows where gas volumes could realistically come from and be transported onto the National Transmission System (NTS), and gives a better estimate of the availability, reliability and deliverability of each of GB's supply sources. It is based on three criteria:

Availability	Reliability	Deliverability
Are the physical quantities of gas that GB will need available from supply sources?	**Can these quantities be purchased by, and delivered to, GB market participants?**	**Is there sufficient infrastructure capacity to receive and transfer the quantities of natural gas required onto the NTS?**

For this publication, we tested additional market-based sensitivities reflecting possible scenarios that affect specific market participants, including minimum volumes required from gas storage and interconnectors to avoid negative margins. This recognises that, while we can make assumptions about storage fullness and interconnector import availability for a single-day test, both will fluctuate over a 182-day winter.

We have also updated our analysis of supply fundamentals using new data and ongoing stakeholder engagement, but there are no major net changes to overall supply availability that alter the main messages of our 2025 GSSA. De-rated supply projections remain similar to last year's (Table 3, Figure 3). Baseload sources that must be delivered to GB, including the UKCS and parts of the NCS network, continue to decline,[31] and reliance on more flexible sources, including LNG, interconnectors and GB storage sites, is increasing.[32] The GB market will need to offer prices high enough to attract flexible volumes, as these volumes could be delivered to multiple competing markets. The required price can vary from day to day, depending on domestic and international factors such as weather, expected weather and supply shocks.

Table 3: Observed maximum gas supply in winter 2025/26 compared with de-rated supply projected in the 2025 and 2026 GSSAs (mcm/d)

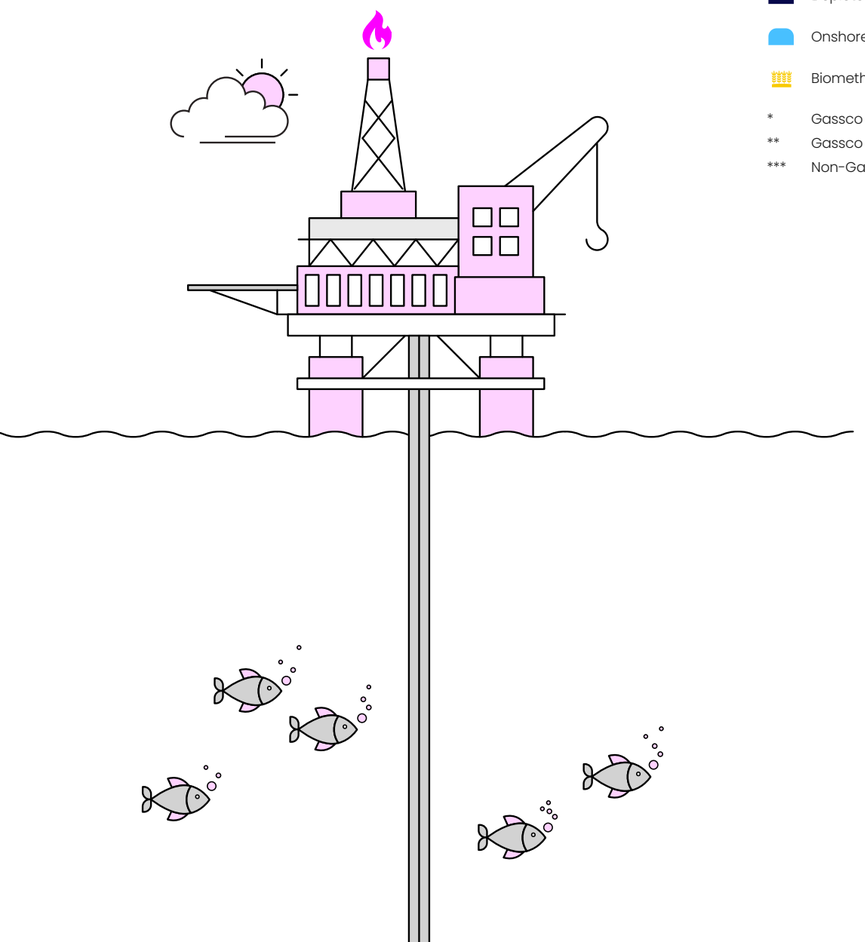
mcm/d	Observed Maximum	GSSA 2026		GSSA 2025	
Supply Source	**2025/26**	**2031/32**	**2036/37**	**2030/31**	**2035/36**
UKCS	83	32	16	30	15
NCS	123	112	97	104	89
LNG	132	180	180	164	164
Storage	86	101	100	102	102
Interconnectors	7	58	58	82	82
Biomethane	2	3	5	3	5

The following sections set out our understanding of each supply source.

30 This approach was first proposed in DESNZ, *Gas Supply Security Assessment: Proposed methodology for assessing medium range gas supply security*, December 2023.

31 Baseload sources also include biomethane, which, like the UKCS and parts of the NCS, must be delivered onto GB's gas network first and so cannot respond to price or choose between markets.

32 Storage is increasingly filled by these flexible sources. On only a small number of summer gas days is demand lower than baseload supply, which would allow storage to be refilled from the UKCS, biomethane and inflexible NCS alone.



- Gas site
- Offshore gas fields
- LNG jetty
- UKCS (UK Continental Shelf) (peak capability mcm/d)
- NCS (Norwegian Continental Shelf) (peak capability mcm/d)
- Interconnectors (peak capability mcm/d)
- Depleted gas field storage (volume capacity mcm)
- Onshore storage (volume capacity mcm)
- Biomethane

* Gassco report as 'St Fergus'
** Gassco report as 'Fields into SEGAL'
*** Non-Gassco reported

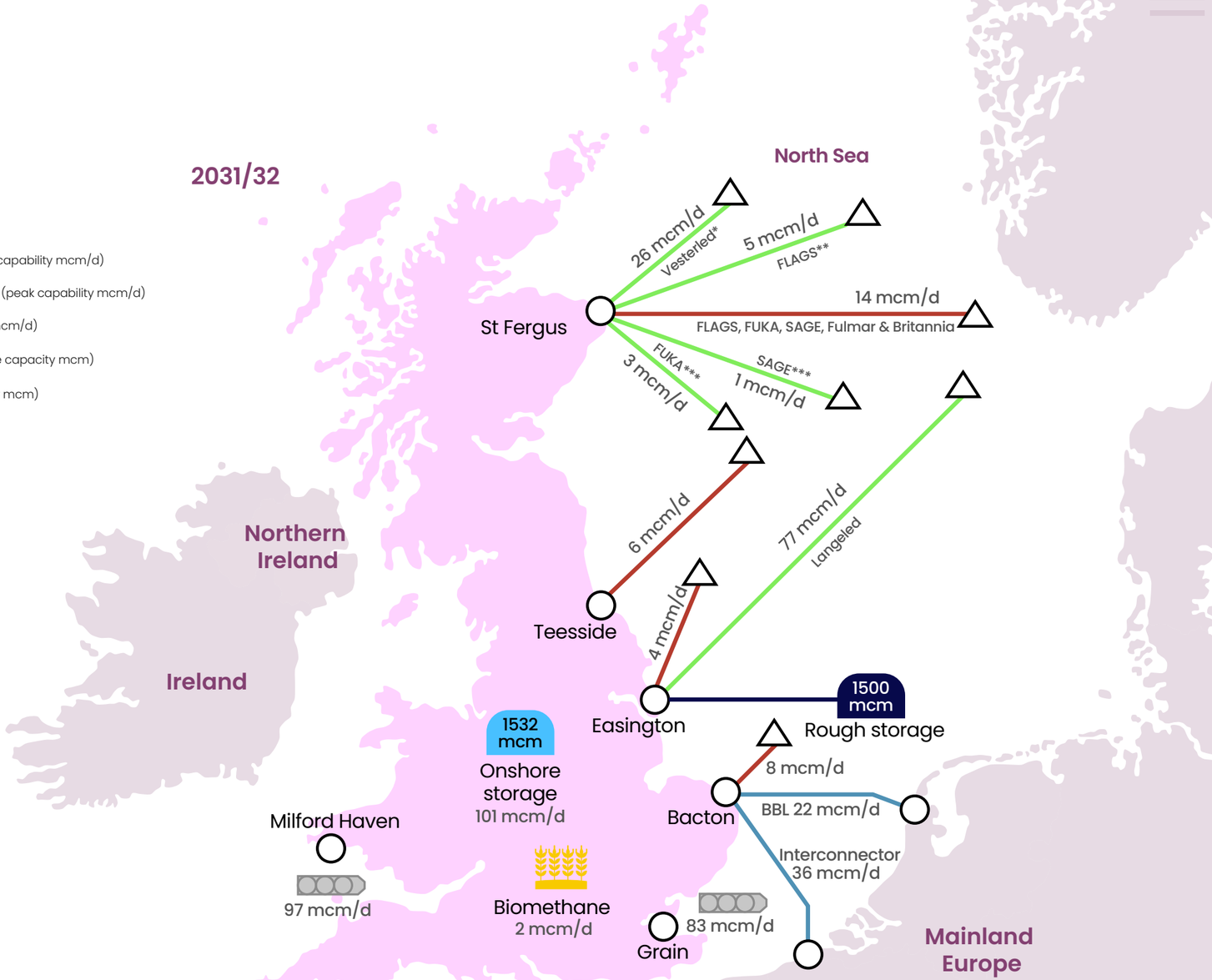


Figure 3: Map of GB showing realistic ('de-rated') maximum volumes expected to supply the gas network on a 1-in-20-year peak day in winter 2031/32

2.1 UK Continental Shelf

The UK Continental Shelf (UKCS) is made up of gas reserves in fields under the North Sea and other waters surrounding the UK. Gas produced from the UKCS flows into terminals at Bacton, Barrow, Easington, St Fergus and Teesside, and is described as a baseload supply source.

What we said (2025 GSSA)

We assessed the UKCS as a reliable supply source, with a high level of certainty that it would flow to help meet peak demand during a cold snap. However, we highlighted the projected reduction in gas availability from the UKCS compared with present-day volumes, using the North Sea Transition Authority (NSTA) projection of a 78% reduction in gas availability between 2025 and 2035. Given the reduction in availability and technical capacity of the UKCS pipeline network, we expected the UKCS to deliver 30 mcm/d in winter 2030/31 and 15 mcm/d in winter 2035/36.

Updated insight

The UKCS delivered below-average volumes on the highest-demand day in each of the past two winters: 70 mcm on 10 January 2025 and 63 mcm on 5 January 2026 (Figure 5). Throughout winter 2025/26, the UKCS delivered between 60 and 83 mcm/d. This included daily variation in output, which we attribute to planned and unplanned outages. These falling daily volumes, shown in Figure 4, reflect the continued decline in production as reservoir pressures fall.

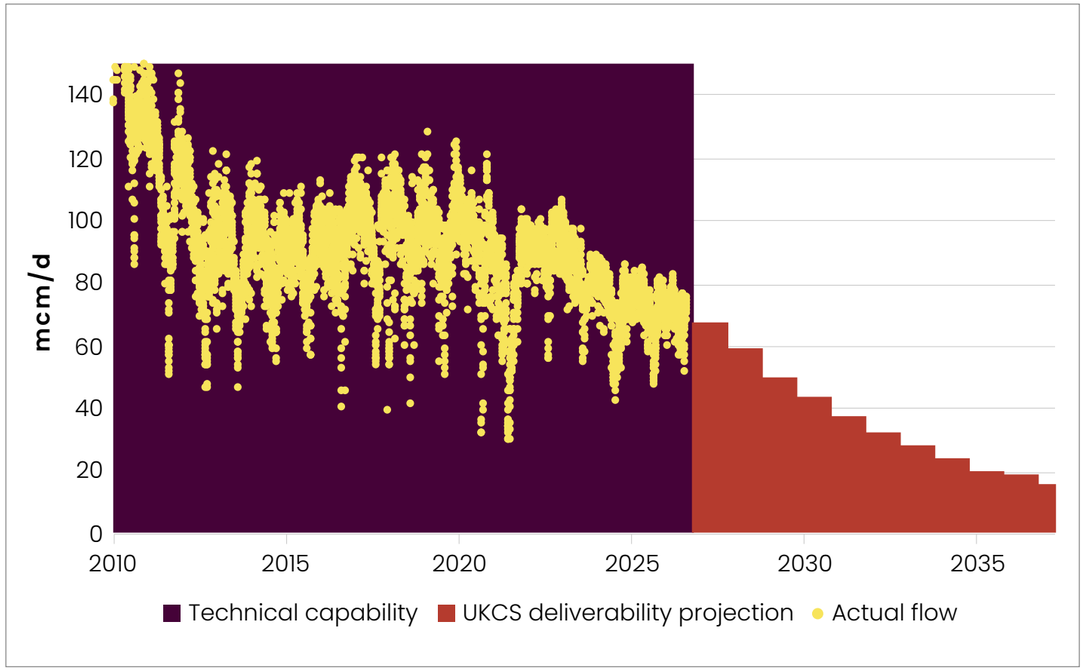
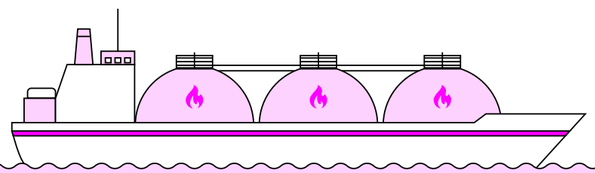


Figure 4: UKCS historical capability and deliverability, with our future de-rated supply projections



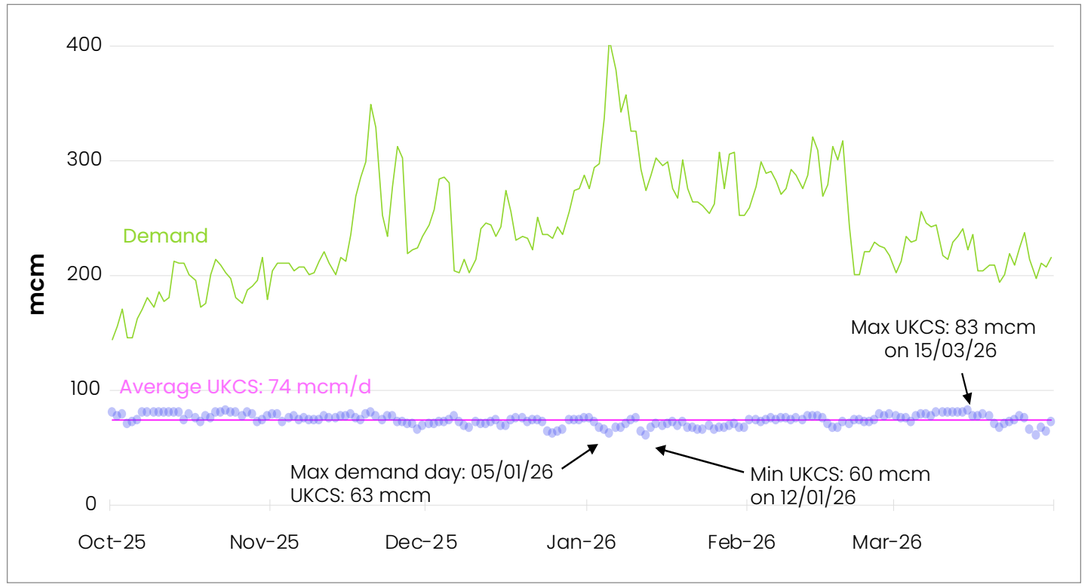


Figure 5: Winter 2025/26 UKCS deliveries against GB demand, showing limited variation in deliverability despite demand fluctuations

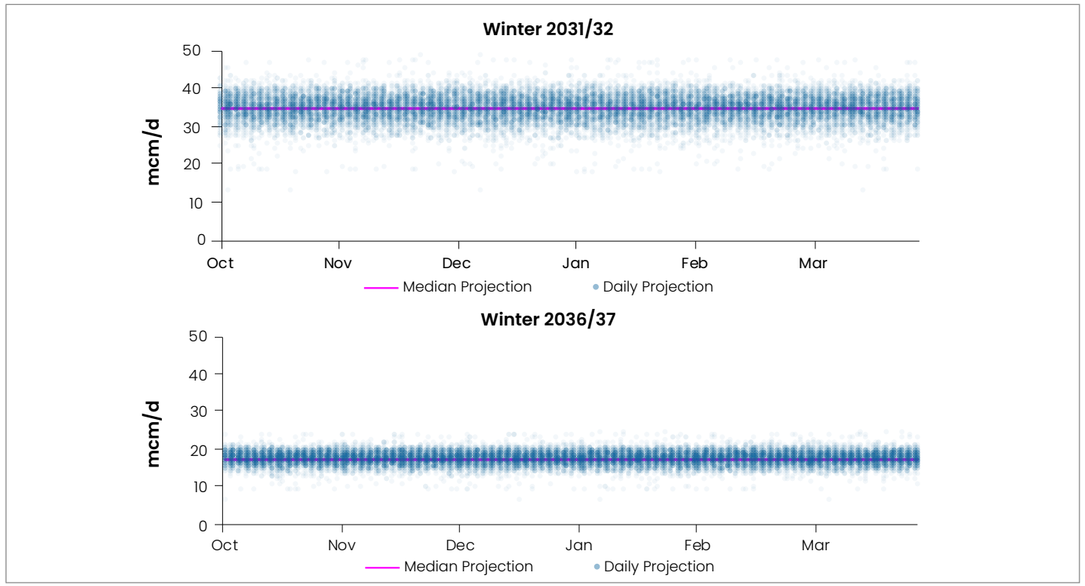


Figure 6: Simulated daily UKCS supply across winters 2031/32 and 2036/37

We have modelled daily variation in UKCS supply using observed production over the last 30 winters to create 100 simulations of each future day. This captures the decline in UKCS production since its peak in the early 2000s. Figure 6 shows an example for winters 2031/32 and 2036/37: on any given day, UKCS production can be above or below our baseline projection. However, UKCS production has limited capacity to respond to within-season demand. In winter 2025/26, for example, daily output averaged 74 mcm/d. The highest-output day fell during a period of lower NTS demand, while the lowest-output day fell in January, when cold weather had pushed demand up.

Key update: availability

We have continued to use NSTA data for this year's analysis. The NSTA's February 2026 figures[33] still show a longer-term decline in gas availability from the UKCS, but with marginal increases compared with its March 2025 figures, which we used in last year's GSSA. Both projections assume that the Rosebank and Jackdaw oil and gas fields start production at the end of 2026. The Energy Secretary and the regulator have recently agreed that consent can be granted for gas to be produced from the Jackdaw gas field.[34] We expect this field to produce a maximum of 4 mcm/d, with 3 mcm/d in winter 2031/32 and potentially less than 1 mcm/d in winter 2036/37. The inclusion of Rosebank in the NSTA's figures does not imply that the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) or the NSTA will grant development consent.

As a result, we project that the UKCS can deliver a maximum of 32 mcm/d in winter 2031/32 and 16 mcm/d in winter 2036/37. These are slightly higher than last year's projections of 30 mcm/d and 15 mcm/d, but do not materially change our conclusions about GB's increasing reliance on imported gas.

33 NSTA, *Production and expenditure projections*, February 2026.

34 DESNZ, Jackdaw gas field gets green light, October 2026.

2.2 Norwegian Continental Shelf

The Norwegian Continental Shelf (NCS) is expected to continue providing gas to terminals in GB and Europe from reserves in the North Sea, Norwegian Sea and Barents Sea into the 2030s (Figure 7). NCS gas fields are connected to five receiving terminals, through the Langeled pipeline into Easington, and three routes into the St Fergus sub-terminals: the Vesterled pipeline, the Shell Esso Gas and Associated Liquids (SEGAL) system, and non-Gassco fields delivering into the Scottish Area Gas Evacuation (SAGE) and Frigg UK Association (FUKA) pipelines.[35]

What we said (2025 GSSA)

The NCS is a major source of gas supply. In 2024, it reached record annual production of 124 bcm and a single-day maximum of 359 mcm. We expected deliveries to GB to peak in 2027, at 36 bcm a year and 146 mcm/d (Figure 7). This compares with a maximum of 123 mcm/d in winter 2025/26. We expected annual and peak single-day supply into all receiving terminals to fall from these record levels by the assessment years.

We also identified potential limitations and uncertainty about the future deliverability and reliability of NCS supply, and the specific characteristics of each Norwegian pipeline that can affect future supply. Supply through FUKA, SAGE (non-Gassco) and the SEGAL system can be considered baseload, while gas through the Langeled and Vesterled pipelines flows flexibly in response to price signals, as both pipelines connect to wider transport systems that can deliver to multiple European terminals. 'Minimal optionality' in Figure 7 is the volume from SEGAL and non-Gassco fields, plus any flows that must come to GB through Langeled and Vesterled because of constraints on Norwegian export routes to mainland Europe.

Updated insight

Although we have revised our projections up (Figure 7) because more volume is available from existing fields through both the Vesterled pipeline and the SEGAL system, maximum daily supply is still expected to fall from historical levels. We calculate that around 112 mcm/d will be available in winter 2031/32 with an intact network. In winter 2036/37, this is expected to fall to 98 mcm/d.

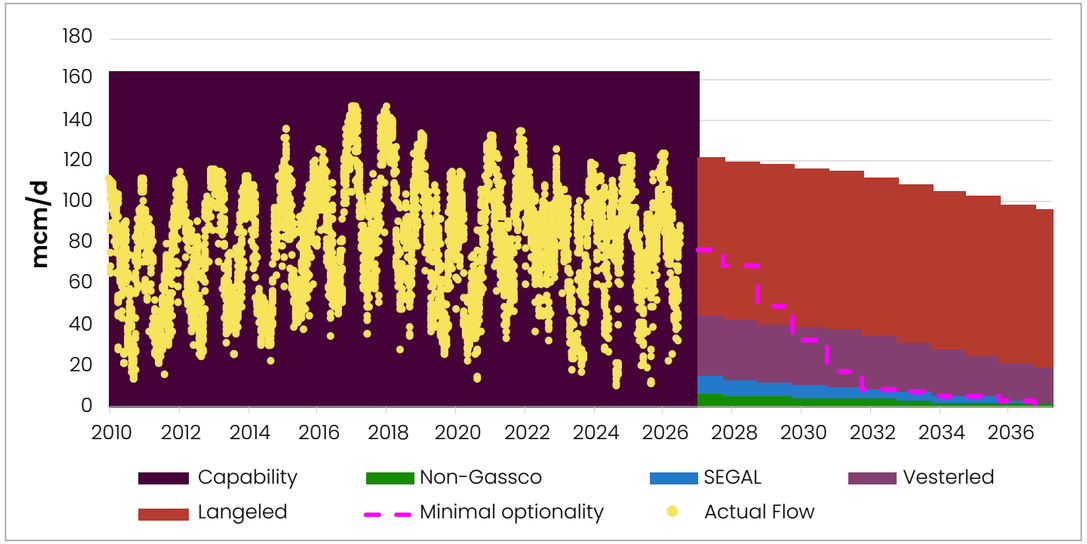


Figure 7: Historical GB imports of NCS production against total NCS capability, with our future projections ('minimal optionality' is the remaining volume that must come to GB if all other Norwegian export routes are maximised)

This includes updated analysis of how the Vesterled pipeline would operate under certain conditions. We have assumed 26 mcm/d of deliverability from Vesterled into the GB market, even though its full technical capacity of 37 mcm/d would be achievable given the large gas reserves available from Oseberg. This is because we expect competition from European buyers for gas from Oseberg, which flows through the Oseberg Gas Transport system to multiple terminals in Europe. This is consistent with the trend over the last five years.

35 SAGE and FUKA are not operated by Gassco, the Norwegian state operator. They carry both UKCS and NCS flows and are treated as a single route in this assessment.

If the largest piece of supply infrastructure is lost, we would expect the full technical capacity of the Vesterled pipeline (37 mcm/d) to be used to meet as much of GB's demand as possible. As a result, we project that 123 mcm/d of NCS supply would be available on the peak day in winter 2031/32, and 116 mcm/d in winter 2036/37.

Key update: availability

While we still project NCS supply to decline by 2% a year,[36] we have revised our NCS estimates up for future winters compared with last year's GSSA. The projected decline is based on the Norwegian Offshore Directorate's own reporting, which in August 2026 highlighted that 'growth levels [in field discoveries or well expansion] are too low to maintain current production levels over time'.[37] It also draws on our own field-by-field analysis. This shows Vesterled's capability to be higher, because recoverable reserves in the Oseberg fields supplying Vesterled have increased from 61 bcm to 78 bcm,[38] slowing the overall decline.

Updated field-level capability[39] has also increased gas availability from fields that can be tied back to the Gjøa platform supplying the SEGAL system. These discoveries could supply an additional 19 bcm, nearly doubling the existing estimate of 20 bcm.

Norway is one of several gas-producing countries in north-west Europe. It began producing gas later than the others, and its production is also expected to start declining later (Figure 8).

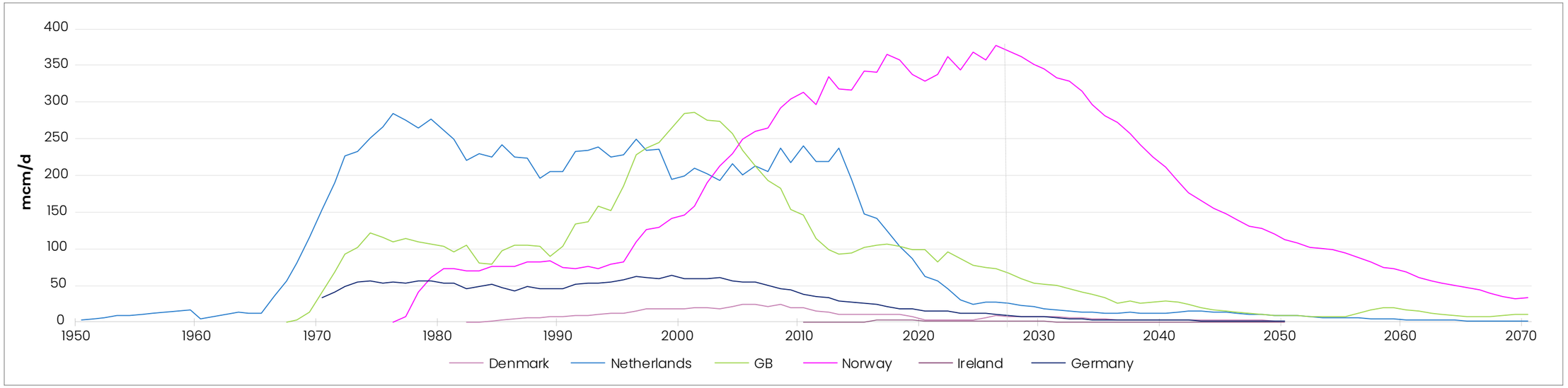


Figure 8: Historical and projected north-west European annual gas production, showing falling production from all sources[40]

36 NESO analysis of reserve data published by the Norwegian Offshore Directorate, Field: Reserves.

37 Norwegian Offshore Directorate, Production outpaces resource growth on the NCS, August 2026.

38 Norwegian Petroleum, Fields on the Norwegian continental shelf.

39 Vår Energi, Press releases and stock exchange announcements.

40 Rystad Energy, UCUBE Exploration (subscription), September 2026. Data for Germany before unification is from Statbase's Germany Federal Republic and Germany gas production datasets, which are available only from 1970 onwards.

2.3 Liquefied natural gas

LNG is imported through three terminals connected to GB's NTS: one on the Isle of Grain in Kent, and two in Milford Haven, South Wales. LNG is natural gas cooled to -162°C, which reduces its volume by a factor of 600. It is shipped as cargoes and then unloaded and regasified at entry terminals.

What we said (2025 GSSA)

LNG deliveries to GB are driven by international competition. Historically, GB has attracted sufficient volumes to meet demand, and these will continue to be needed as domestic production falls. Based on updated supply analysis, LNG, including LNG used to fill GB storage sites and LNG delivered through interconnectors, could meet as much as 69% of peak-day demand in winter 2031/32.

LNG stored at GB's terminals provides a buffer between demand and arriving cargoes. Combined, the three LNG terminals can store 14.9 TWh (1,350 mcm gas equivalent), almost as much gas as GB's underground storage sites (1,532 mcm). Boil-off[41] is either delivered to the NTS or a Local Distribution Zone (LDZ), or reliquefied, depending on each terminal's assets. Deliverability in winters 5 and 10 years ahead depends on NTS network capability.

Updated insight

Over the past year, conflict in the Middle East has affected global LNG supply. However, we still expect GB to secure the LNG volumes it needs 5 and 10 years ahead, and its gas supply to remain largely unaffected by any direct effects of regional instability. This is supported by continued growth in global LNG supply. By the end of 2027, LNG supply growth is expected to come from projects ramping up in the United States, Canada, Senegal and Mauritania, new capacity additions in the United States, Congo, Mexico and Australia, and higher output from some existing facilities (Figure 10).[42]

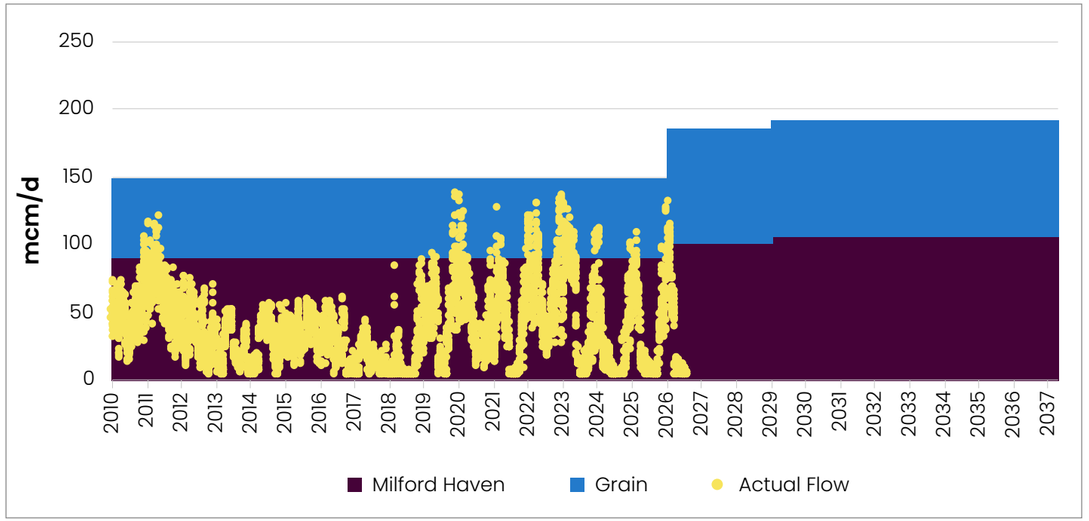


Figure 9: LNG volumes delivered onto the NTS against historical and future terminal availability, showing how terminal upgrades are increasing deliverability onto the NTS

LNG remains an international market. Cargoes are delivered to terminals depending on whether trade routes are open and on price spreads, which are driven by domestic and international competition and by seasonal requirements such as storage refilling, European winter heating and Asian summer cooling. These variables have created three supply basins – the Atlantic, the Pacific and the Middle East[43] – each containing its own supply and demand markets. For example, export hubs on the east coast of the United States deliver to import terminals in Western Europe. The Panama and Suez canals act as bottlenecks, but cargoes can reach any terminal by taking longer routes around the Cape of Good Hope or Cape Horn.

41 The continuous evaporation of LNG during storage, which maintains the -162°C temperature by preventing pressure from increasing.

42 NESO analysis, set out in the accompanying workbook, and Oxford Institute for Energy Studies, *Hormuz, The Hotel California Phase*, August 2026.

43 Atlantic Basin: United States, West Africa, Algeria, Trinidad and Tobago, and the east coast of South America. Middle East Basin: Qatar, United Arab Emirates and Oman. Pacific Basin: Australia, Malaysia, Indonesia, Papua New Guinea and the west coast of South America.

In winter 2025/26, around 76% of LNG supply into GB came from the United States, with additional volumes from Algeria (6%), Qatar (6%), Trinidad and Tobago (3%), and Angola, Nigeria, Peru, Norway, Equatorial Guinea, Brazil and Mexico (1–2% each).[44] We now assume that LNG can deliver a maximum de-rated supply of 180 mcm/d in winters 2031/32 and 2036/37. We continue to find that the NTS will remain unconstrained at these volumes during peak demand periods.

Key update: availability

We have improved our assessment of global LNG supply availability using new data and analysis. This shows that GB should be able to receive the LNG it needs to meet demand in the assessment winters. Our findings in the 2025 GSSA predated the Middle East conflict involving Iran. However, as in last year's GSSA, we still expect GB to attract the LNG volumes it needs in future winters. We anticipate continued growth in global LNG markets, particularly in the United States. GB has had limited direct exposure to LNG from the Middle East over the last two winters, but we continue to monitor how events in the region and elsewhere could affect future LNG availability.

Key update: domestic deliverability

Following our advice,[45] Ofgem has funded the Western Import Resilience Project (WIRP) in its RIIO-3 price control,[46] improving network capability and reducing infrastructure constraints between the Milford Haven terminals and the wider NTS. We expect this to have minimal direct impact on peak demand days, as our network modelling shows that de-rated entry flows from Milford Haven are already unconstrained at peak demand. The upgrades are designed to increase capability, supporting baselines while also delivering greater capability at demand levels below peak. Modelling by National Gas Transmission (NGT) supports this.

Asset improvements at the Isle of Grain have also increased LNG regasification and storage capacity (Figure 9). The technical maximum regasification capacity at the terminal increased from 650 GWh/d (59 mcm/d) to 1,000 GWh/d (91 mcm/d) from July 2026, increasing de-rated supply to the NTS from 53 mcm/d to 78 mcm/d. A further 5 mcm/d is delivered to the LDZ as boil-off.

Like the WIRP, proposed upgrades to the Cambridge compressor station are expected to have minimal impact on peak demand days, as de-rated NTS entry flows from Grain (78 mcm/d) are unconstrained at peak demand with current Bacton flow rates. With interconnector capacity fully reinstated, these upgrades could prevent de-rated Grain NTS flows from becoming constrained at peak demand. In winter 2031/32, without the proposed upgrades, the combined interconnector capability could be reinstated to around 73 mcm/d without constraining de-rated Grain NTS flows. With the Cambridge upgrades, interconnector capability could rise to 93 mcm/d (similar to 2024/25 import capacity) without causing a constraint.

International deliverability

Alongside domestic infrastructure improvements, developments in the global LNG market will continue to influence the availability of LNG supplies to GB. Global LNG export capacity is projected to increase (Figure 10), driven largely by projects that are under construction or have reached a final investment decision (FID). Most planned capacity additions are concentrated in the United States and Qatar, with further expansion expected in Australia.[47]

Because of international events, the near-term delivery timelines for expansion projects in Qatar and the United Arab Emirates remain uncertain. Even without any production from this region, capacity growth in the United States and several other export markets is expected to offset the lost volume before 2029 (Figure 10).[48] Given the scale of planned capacity additions in the United States and its current role as the main supplier of LNG to GB, LNG from the United States is expected to remain an important source of GB supply over the coming years.

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44 DESNZ, *Digest of UK Energy Statistics (DUKES): natural gas*, updated September 2026.

45 NESO, *GT3 National Gas Transmission Business Plan for 2026 to 2031*, 2025.

46 Ofgem, *RIIO-3 Final Determinations – National Gas Transmission*, December 2025.

47 Based on announced projects and expected start-up dates, LNG export capacity additions by 2031 are estimated at around 113 million tonnes per annum (MTPA) in the United States, 49 MTPA in Qatar and 13 MTPA in Australia.

48 The next largest projected LNG export capacity additions from projects expected to be operational by 2031 are in the United Arab Emirates (9.6 MTPA), Russia (6.6 MTPA), Argentina (6.0 MTPA), Canada (5.4 MTPA) and Mexico (4.7 MTPA).

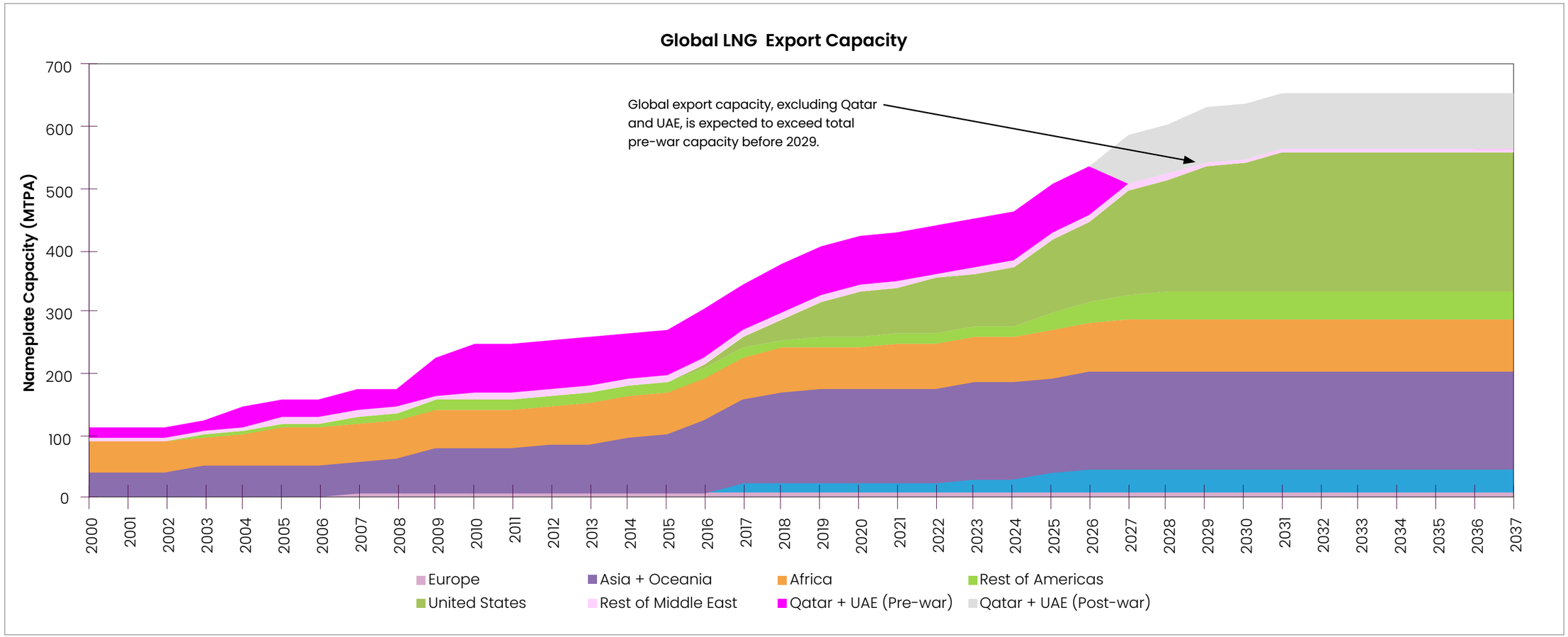
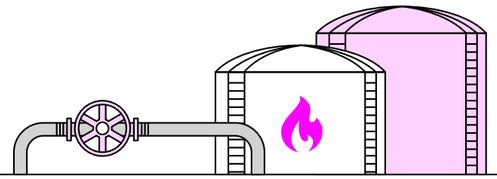


Figure 10: Global LNG export capacity by region (million tonnes per annum), showing planned increases in international availability, based on projects under construction and in development before a final investment decision



2.4 GB gas storage

The operational GB gas storage sites are all medium-range sites that cycle stocks within days, weeks or months and can refill multiple times a season. GB gas storage operates commercially, responding to market signals depending on the strategies of individual shippers. Each site's ability to deliver gas onto the NTS depends on its geological characteristics and compressor capacity. Winter 2025/26 was the first full winter since 2022 in which Rough, GB's only slower-cycling, long-range storage site, was unavailable.

What we said (2025 GSSA)

We identified the maximum technical deliverability of storage sites as 112 mcm/d from seven operational sites at optimal stock levels. Deliverability depends on each site's characteristics, including stock level, cavern pressure and maximum withdrawal rate. If all operating storage sites are 100% full, single-day deliverability is 95 mcm/d (Figure 11). This then changes as cavern pressure and fullness fall. The withdrawal rate could be maintained above 85 mcm/d for 7 days before declining.

Updated insight

The larger medium-range sites (Aldbrough, Stublach and Holford) withdrew 1.5 bcm in winter 2025/26, 19% less than in winter 2024/25, because of market forces rather than a lack of availability. As expected, storage shippers refilled ahead of forecast colder weather to meet higher demand. Before the early January 2026 cold snap, sites were collectively 76% full, above the 71% average ahead of the previous five cold snaps. This indicates that storage sites could deliver the same or greater volumes onto the NTS than during previous cold snaps, when demand was high, although actual deliveries depended on commercial decisions.

Our analysis of storage's potential future contribution assumes a fixed level of storage deliverability across the winter. This reflects our assumption that storage operators can and would increase deliverability in the days before a cold spell with high demand, at any point in the winter. Storage sites would then be ready to withdraw gas when prices rise because of this increased demand.

As a result, we expect a de-rated storage supply of around 50 mcm/d, which would meet demand on a seasonal normal day in winter 2031/32, with supply doubling to 101 mcm/d on a 1-in-20-year peak day. In winter 2036/37, storage supply remains broadly similar, at almost 54 mcm/d on a seasonal normal day and 100 mcm/d on a 1-in-20-year peak day. These figures rely on all currently operating sites remaining operational with minimal changes to their current capacity.

Key update: availability

We have included in our assessment of future winters an additional storage facility that was not in last year's GSSA. The Hole House Farm storage facility is being de-brined for operation in stages to return to its maximum capacity in 2027. The adjacent Hill Top Farm storage facility is likely to reduce its storage capacity and deliverability from 2026, which we have included in our analysis.

Key update: deliverability

The ability of GB storage to deliver gas during periods of peak demand still depends on starting stock levels. Deliverability is also affected by maintenance activities reported to us by stakeholders. If all storage sites were required to deliver at their maximum rate, they could maintain delivery of between 93 mcm/d and 103 mcm/d for at least 6 days. This is most relevant when consecutive days of extreme weather require a sustained high withdrawal rate.

Rough remains an asset that was able to provide up to 10 mcm/d between 2022 and 2025, and the operator plans to increase this to 50 mcm/d through an investment programme.[49]

49 NSTA, Rough consent granted, April 2026.

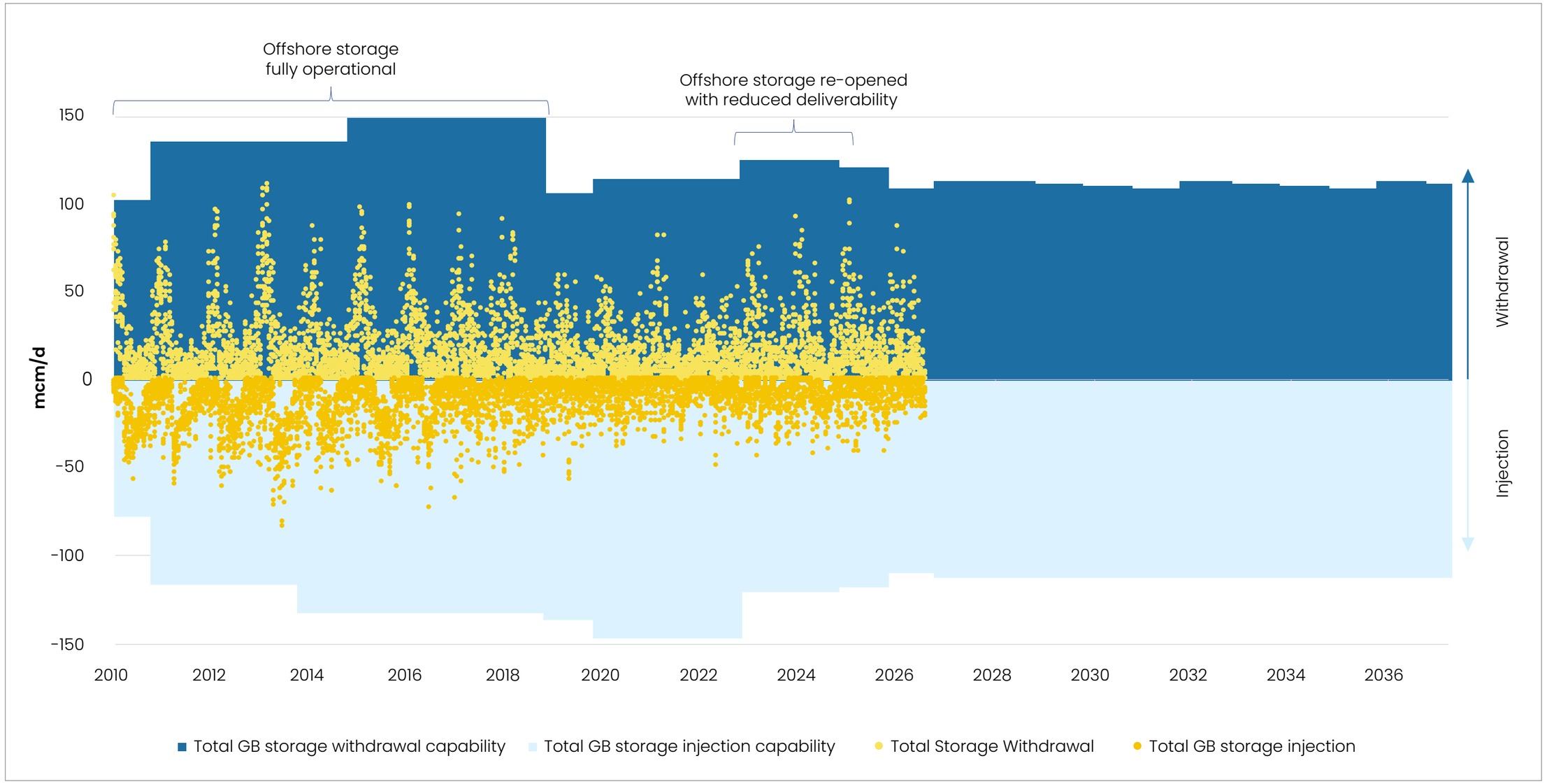


Figure 11: Maximum technical capacity and historical injection and deliverability patterns of onshore and offshore gas storage sites, and current and future technical deliverability

2.5 Gas interconnectors

Three gas interconnectors connect the GB gas system to other European markets. The Balgzand Bacton Line (BBL) and Interconnector Ltd (INT) are bidirectional pipelines connected to the Netherlands and Belgium, respectively, and Moffat is an export-only pipeline to the Republic of Ireland, Northern Ireland and the Isle of Man.

Interconnector flows between GB, the Netherlands and Belgium are driven by price differentials: gas flows to the market with the higher price. These price differentials are mainly driven by daily and seasonal gas demand, storage stocks and the time of year.

With GB and EU gas prices now largely being driven by global LNG prices, prices in the two markets are increasingly similar. As a result, price spreads are narrowing, which affects the commercial operation of the gas interconnectors.

In each of the last five winters, GB has exported gas to Europe on more days than it has imported (Figure 12, Table 4). This has reduced the incentive for operators to maintain import capacity to GB, even though it remains critical for security of supply at peak times. We discuss this further in the 'Gas Supply Margins' section.

Table 4: Number of winter days with combined BBL and INT exports and imports since winter 2021/22, showing that GB exported on more days than it imported in each 182-day winter (days are counted where flows exceed 1 mcm; totals can exceed 182 because the interconnectors can flow in different directions on the same day[50])

Winter	GB to Europe Exports (Days)	Europe to GB Imports (Days)
2021/22	146	84
2022/23	177	12
2023/24	109	25
2024/25	85	81
2025/26	133	45

50 NESO analysis of Measurement (MST) files from NGT, covering more than 30 years of data.

What we said (2025 GSSA)

We found that on a GB 1-in-20-year peak demand day 5 and 10 years ahead, the Netherlands and Belgium could both meet their peak domestic demand and export to GB at each interconnector's maximum available capacity: 22 mcm/d through BBL and 60 mcm/d through INT. This gave a combined maximum peak-day import of 82 mcm/d in winters 2030/31 and 2035/36.

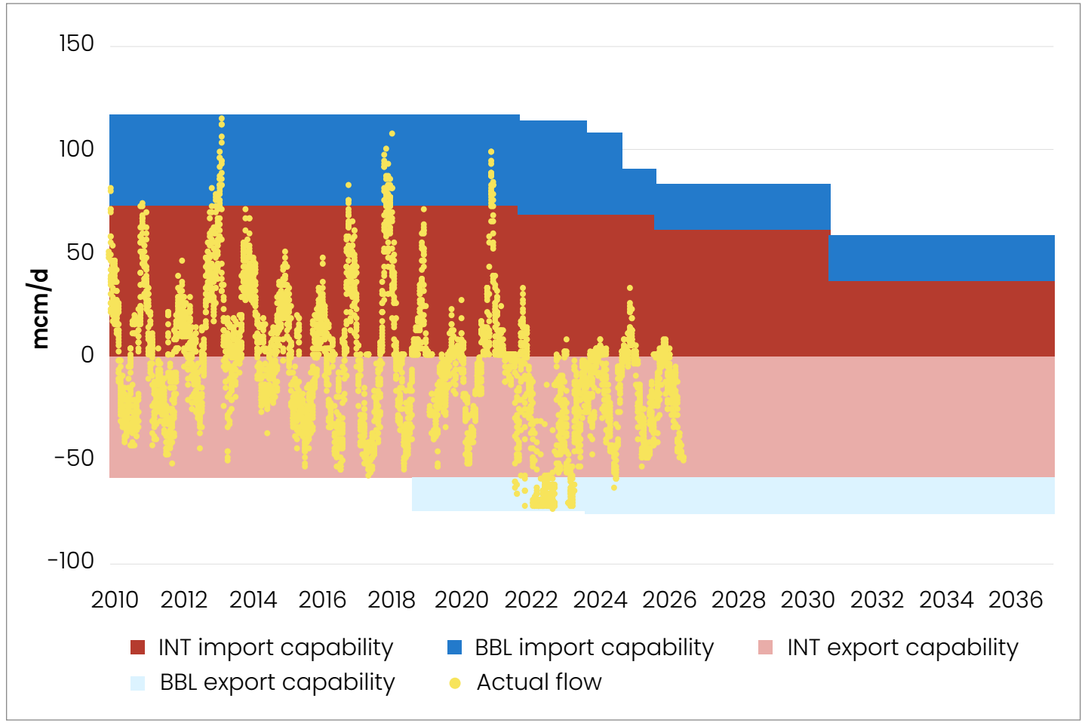


Figure 12: Interconnector actual flows and import and export capabilities for BBL and INT, showing historical performance and projected capability to 2037, including the announced multi-year reinstatement of INT capacity (our analysis of winters 2031/32 and 2036/37 assumes a return to 2026 commercial capacity)

Updated insight

In October 2026, an Ofgem statutory consultation[51] announced that NGT had entered into an agreement with Interconnector Ltd. For winter 2026/27, this will prevent the previously planned reduction in INT import capability and support investment to reinstate additional import capability in future winters. The consultation also indicated that a similar agreement could be developed with BBL in future. We understand the agreement will be time-limited, so our analysis assumes that, by winter 2031/32, both interconnectors will have reverted to their 2026 capacity.

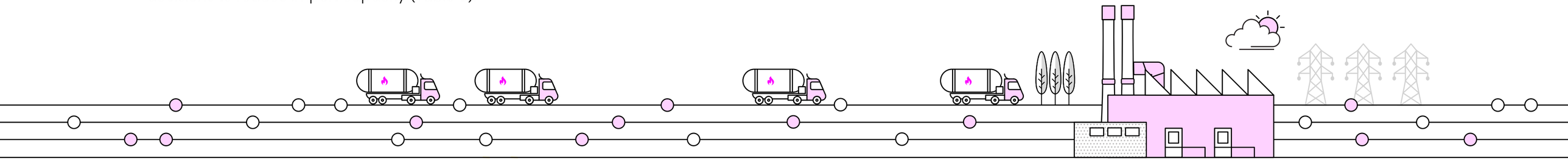
As a result, our assessment uses a combined maximum peak-day deliverability from the interconnectors of 58 mcm/d, down from 82 mcm/d in the 2025 GSSA.[52]

Changing interconnector deliverability

In November 2025, before Ofgem's consultation, Interconnector Ltd announced a 25 mcm/d reduction in technical capacity from winter 2026/27 (Figure 12). Because of this planned reduction[53], and outside the expected time-limited agreement to maintain capacity, we expect INT's maximum deliverability to still be only 36 mcm/d in winters 2031/32 and 2036/37. Our assessment of BBL's technical capacity remains unchanged at 22 mcm/d, but we will continue to monitor any further developments beyond the proposed changes. These reductions by both operators reflect an ongoing trend of commercial decisions to reduce import capacity (Table 5).

Table 5: Timeline of recent changes to interconnector import capacity to GB, showing capacity reductions and the planned retention of INT capacity

Update	Capacity Change
Jul 2021	INT forward flow technical capacity reduced from 72 mcm/d to 68 mcm/d
Jun 2024	BBL forward flow technical capacity reduced from 45 mcm/d to 39 mcm/d
Dec 2024	BBL forward flow technical capacity further reduced from 39 mcm/d to 22 mcm/d
Nov 2025	INT forward flow technical capacity reduced from 68 mcm/d to 61 mcm/d
Nov 2025	Planned further reduction in INT forward flow technical capacity from 61 mcm/d to 36 mcm/d from Oct 2026
Oct 2026	INT capacity to be retained at 61 mcm/d until 2031[54], following an agreement with NGT and an Ofgem consultation



51 Ofgem, *Gas interconnector import capability: proposed modifications to National Gas Transmission's licence*, October 2026.

52 An 11-day demand curve, similar to the one in our 2025 GSSA, is included in our workbook.

53 Fluxys, *Maximum Technical Capacity of the Interconnector*, November 2025.

54 Fluxys, Update to Interconnector's Belgium to GB Capacity Offering, October 2026.

Key update: availability

We assessed the peak-day gas surplus in mainland Europe to determine the availability of interconnector imports to GB. To do this, we compared expected peak demand in north-west Europe with expected peak supply. Our peak supply assessment includes declining production from Norway, Germany and the Netherlands (Figure 8), the continued loss of Russian imports, planned increases in LNG import capability in Germany and the Netherlands (Figure 13) by 2030, and imports from Spain. We use historical storage stock levels throughout each winter to determine expected maximum EU storage withdrawal rates during a cold snap. Our peak demand assessment is consistent with trends observed since Russia's invasion of Ukraine. Our modelled north-west European demand falls by 2% per year during the assessment period due to decarbonisation, but remains above the highest demand observed since 2022 (970 mcm/d).

We find a surplus of more than 58 mcm/d during periods of peak demand, meaning enough gas is available for maximum GB interconnector imports (Figure 13). This surplus increases over the assessment period as European demand falls.

We have also modelled flows between European hubs to account for any bottlenecks in our assessment. Peak demand in GB and the EU may also occur at different times because of weather patterns, providing diversity.

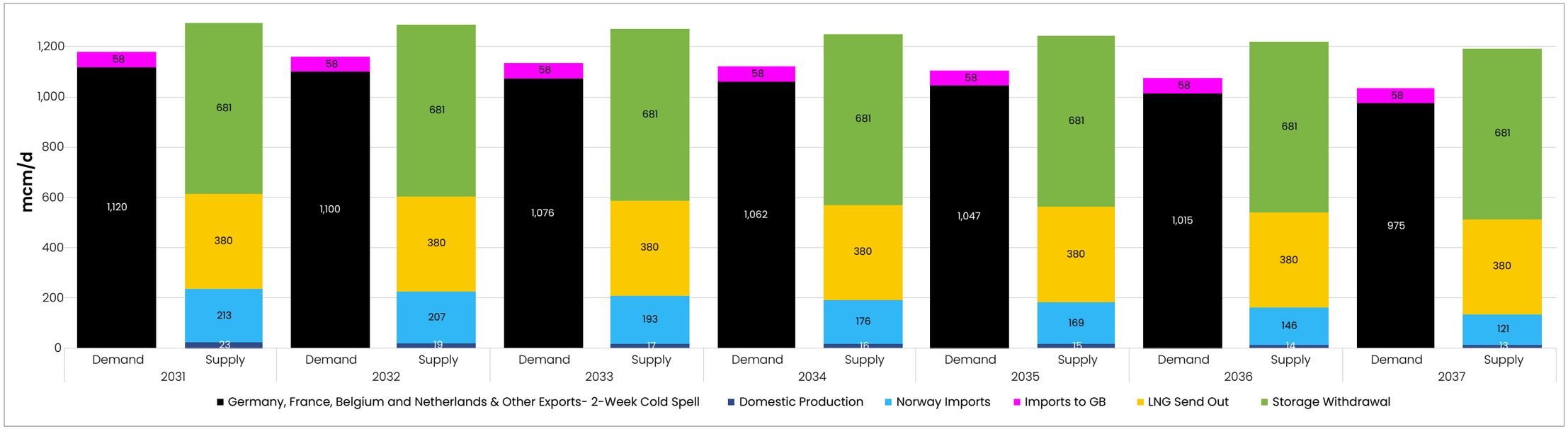


Figure 13: Supply capability of European hubs to facilitate imports to GB, tested against a two-week cold spell in northern Europe, showing that there could be enough spare capacity and gas to export through BBL and INT (our analysis using ENTSOG's *Winter Outlook 2025*[55] and Rystad data[56])

55 ENTSOG, Outlooks and Reviews.

56 Rystad Energy, GASMARKET CUBE (subscription), September 2026.

2.6 Biomethane

Biomethane is produced by anaerobically digesting biomass, such as food waste, crops and sewage. The resulting biogas is a mixture of methane and carbon dioxide (CO_2). The methane is then treated so that it can be injected into an LDZ or the NTS (with compression).

What we said (2025 GSSA)

We said biomethane sites could produce nearly 2 mcm/d for the GB gas market, and projected this to rise to 3 mcm/d and 5 mcm/d in 5 and 10 years, respectively (Figure 14). We highlighted more than 100 active biomethane sites in GB, which provide relatively consistent volumes throughout the year but have little flexibility to respond to short-term demand changes.

Updated insight

Our biomethane projections are slightly lower than last year's. We have updated our biomethane supply figures using the 2026 Ten Year Outlook,[57] with 2 mcm/d and 4 mcm/d maximum de-rated supply projected for winters 2031/32 and 2036/37. The slight decrease reflects uncertainty about future policy: the Green Gas Support Scheme (GGSS) closes to new applications in 2028,[58] and the framework that will follow remains unclear.

Key update: availability

In July 2026, we published a report on biomethane's future role to 2050. We identified its value for low-carbon dispatchable power and hard-to-decarbonise uses, such as hard-to-electrify industry and transport. We recognised that sustainable biomethane production could increase substantially beyond current levels by 2050, but that challenges and trade-offs grow with scale.[59] We concluded that cross-sector collaboration is needed to assess what level of biomethane production would strike the right balance between the benefits biomethane can bring to the energy system and the wider challenges of increasing feedstock availability.

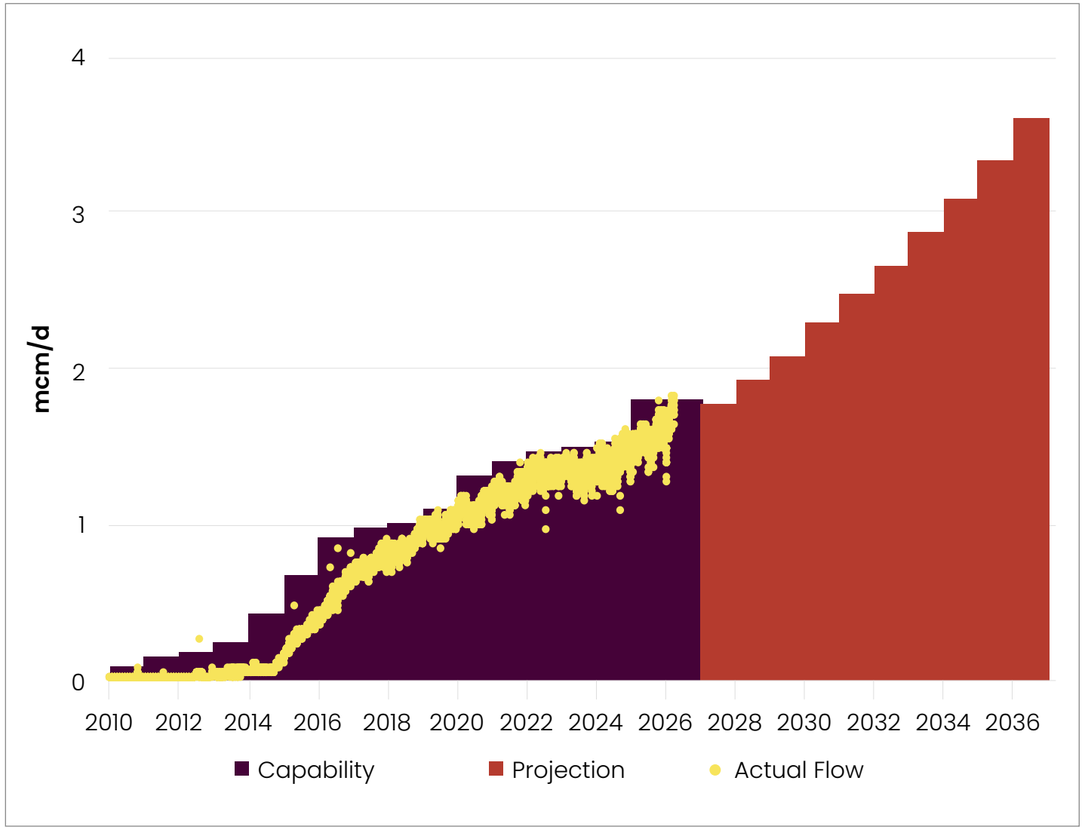


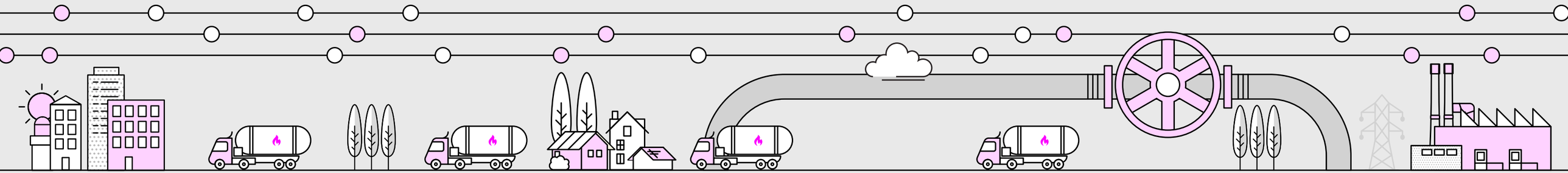
Figure 14: Biomethane capability, actual flow and projections of future deliverability to 2037, based on NESO's Ten Year Outlook

57 NESO, FES documents.

58 DESNZ, Green Gas Support Scheme (GGSS).

59 NESO, *Biomethane: Exploring the Role of Biomethane in the Energy System to 2050*, July 2026.

3. Gas Supply Margins



3.1 Supply margins assessment

As in last year's GSSA, we assess Great Britain's (GB's) gas supply security by calculating gas supply margins. Positive margins indicate that, on a given day, the realistic maximum level of total supply is higher than GB gas demand plus exports through the Moffat interconnector. Conversely, negative margins indicate a supply shortfall that, if large enough, could require activating emergency protocols to maintain the integrity of the gas and power systems. In last year's GSSA, we assessed margins over an 11-day period in each assessment winter under seasonal normal and peak demand conditions. This year, as described in the 'Supply security metrics' section, we calculate the margin on each day of the 1,400 simulated winters for each pathway and assessment year. This allows us to work out the likelihood, frequency and magnitude of negative margins. We consider how these results differ with an intact gas supply network and following the loss of the largest single piece of gas supply infrastructure. Likelihood indicates the probability of observing at least one day of negative margins under the corresponding pathway, assessment year and network status. This modelling demonstrates the headline supply security risk.

Each winter simulation differs in daily demand, reflecting the different weather patterns in our 50-year weather history. To consider how demand affects supply security risk, we calculate the frequency and magnitude of negative gas supply margins in both a 'typical' and a 'severe' winter. As with likelihood, this is evaluated for each pathway, assessment year and network status. Frequency is the number of days on which demand exceeds supply, while magnitude is the total supply shortfall. The average frequency and magnitude across all 1,400 simulated winters indicate the risk level in a 'typical' winter: one without extreme demand. In contrast, a 'severe' winter is the simulated winter that produces the 1-in-20-year peak-day gas demand. By isolating the 'severe' winter, we can see on how many days demand exceeds supply (frequency) and the total supply shortfall (magnitude) for each pathway, assessment year and network status.

Supply margins when all gas assets are available (intact network)

- With an intact network, the risk of negative gas supply margins is low at the 5- and 10-year horizons. The simulations produce no shortfall days (days on which demand exceeds de-rated supply) in winters 2031/32 and 2036/37 under either the base case (Ten Year Outlook) or the faster decarbonisation pathway (Holistic Transition).
- Under the slowest decarbonisation pathway (Falling Behind), the risk of negative margins is higher but remains low. There is a 0.5–1.5% likelihood of at least one shortfall day in each winter. The expected frequency and magnitude of negative margins in a 'typical' winter are effectively zero.
- These results highlight the value of maintaining both storage deliverability and the remaining interconnector capacity: if these sources are unavailable, negative margins become more likely.

Supply margins if the largest piece of supply infrastructure is lost (largest supply loss and N-1)

- We continue to identify the emerging risk set out in the 2025 GSSA: if the largest piece of supply infrastructure is lost, margins could become negative at the 5- and 10-year horizons when demand is high.
- Rapid decarbonisation of the main sectors, particularly residential heating, can mitigate this risk. Under the faster decarbonisation pathway (Holistic Transition), no demand simulation produces negative gas supply margins.

3.2 Supply margins: intact network

Our analysis shows that GB maintains adequate gas supply security with an intact network in winters 2031/32 and 2036/37, provided the gas system keeps its diverse supply and responds to market signals in line with our expectations (Figure 15). Only under the slowest decarbonisation pathway, Falling Behind, do our demand simulations produce negative margins when combined with the corresponding de-rated supply, though the risk level is low. Our analysis identifies a 0.5–1.5% likelihood of at least one day of negative margins in each assessment winter under this pathway.

The analysis indicates that GB gas supply security is likely to be maintained in both a 'typical' and a 'severe' winter, even under the slowest decarbonisation pathway. The expected frequency and magnitude of negative margins in a 'typical' winter are effectively zero. No negative margins occur in the 'severe' winter (the simulated winter in which the 1-in-20-year peak-day demand occurs) in either assessment year. The gas supply margin on the 1-in-20-year peak day remains above 30 mcm in both assessment years. Even under the slowest decarbonisation pathway, positive margins occur against more than 99.8% of all demand simulations in both assessment years.

However, our assessment of gas supply security with an intact network depends on available gas supply infrastructure operating as we expect in operational timescales. The gas supply market is finely balanced, as shown by recent commercially driven capacity reductions being offset by capacity increases from other supply sources. Any decline in supply availability, reliability or deliverability before or during the assessed winters would be likely to reduce the gas supply margins in this assessment.

This includes the assumption that GB storage sites and the two interconnectors can simultaneously deliver gas in line with our de-rated calculations. As UKCS production declines between winter 2031/32 and 2036/37, the reliance on storage and interconnectors to meet elevated gas demand increases. Under the slowest decarbonisation pathway, a typical winter will require storage withdrawal on at least 18 days in winter 2036/37, up from 13 days in 2031/32. Even if every other source delivers their maximum de-rated figure within each winter, gas supply security will still require availability of interconnectors for some days in the two winters we assess.

In practice, both storage and interconnectors are likely to be needed more frequently than the analysis suggest. Both storage and interconnectors may need to deliver more consistently if LNG stocks are low or UK or Norwegian pipeline supply is below expectations. Similarly, interconnectors provide further insurance for when storage stocks are low.

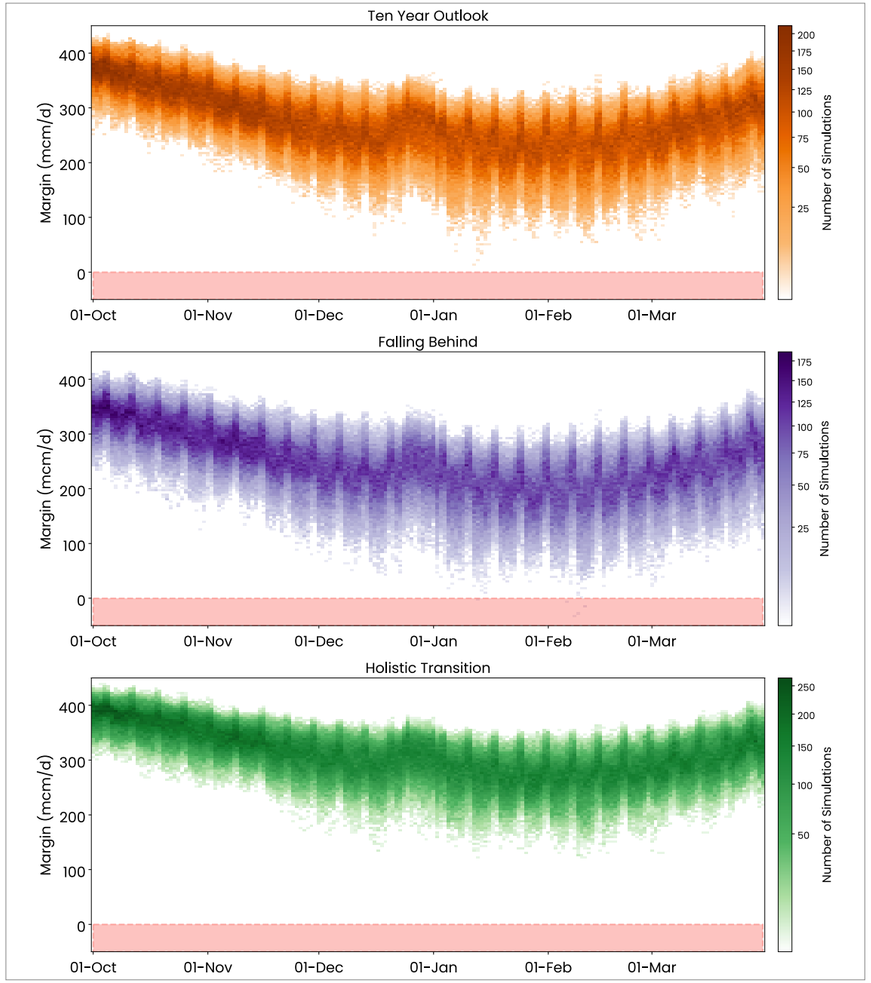


Figure 15: Gas supply margins with an intact network in winters 2031/32 and 2036/37 combined, showing a low level of risk under all pathways

3.3 Supply margins: largest supply loss

The risk of negative margins if the largest piece of supply infrastructure is lost is most pronounced under slower decarbonisation.

Assuming the loss of the largest piece of supply infrastructure lasts throughout each assessment winter, negative margins occur on a small proportion of simulated days under the base case and the slowest decarbonisation pathway (Figure 16). The likelihood, frequency and magnitude of negative margins are higher in this case than with an intact network, though the risk remains low provided all remaining supply infrastructure remains fully operational.

Under the base case, the likelihood of at least one day of negative margins is 4% in winter 2031/32 and 6% in winter 2036/37. In a 'typical' winter, this risk is very low, indicating that supply infrastructure is sufficient to meet normal levels of demand despite a major outage.

Under Falling Behind, the likelihood of negative margins is considerably higher in both winters, at 26%. Expected shortfall days in a 'typical' winter remain below one, while the expected total shortfall is around 10 mcm. If this shortfall were confined to a single day, it would fall within a range the gas system operator has indicated can be managed using operational tools.

As demand increases, supply security risk grows. Under the base case, the margin narrows to just 3 mcm on the 1-in-20-year peak day in winter 2031/32, and becomes negative (-3 mcm) on the equivalent day in winter 2036/37. A negative margin of this size is within the range that NGT's control room could manage if it occurred.

Under Falling Behind, a severe winter causes a total shortfall of 40–60 mcm in winters 2031/32 and 2036/37. On the 1-in-20-year peak day, the shortfall is more than 30 mcm in both winters. A negative margin this large could test the limits of NGT's operational tools, especially if it came before or after another day of negative margins.

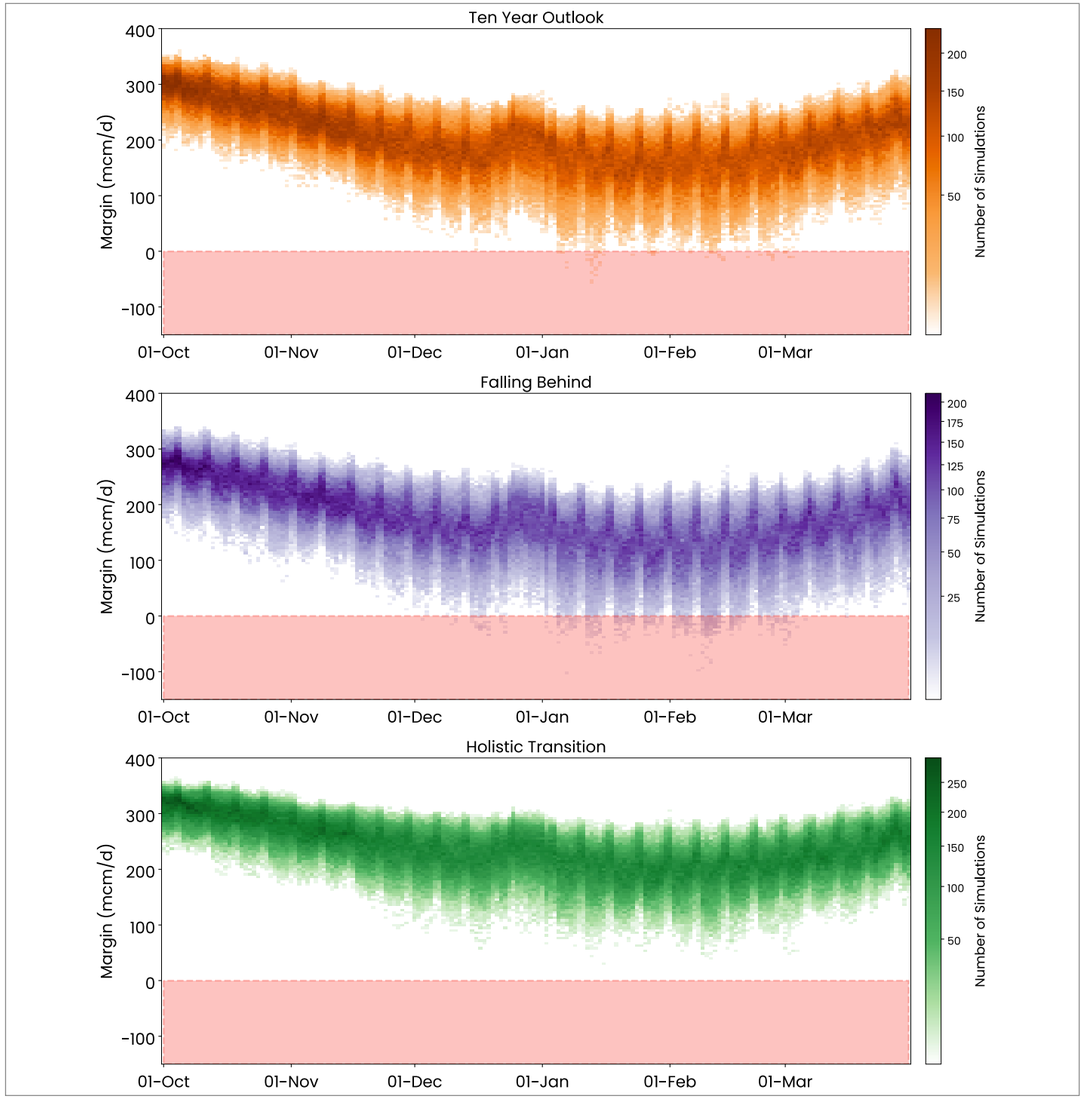


Figure 16: Gas supply margins with the largest supply loss, in winters 2031/32 and 2036/37

3.4 Supply margins: N-1 test

When we assess single-day outages in line with the legal N-1 test, GB narrowly fails in winter 2036/37 under the base case. Under the slowest decarbonisation pathway, GB fails the N-1 test in both assessment winters.

The N-1 test requires the remaining gas supply infrastructure to meet a 1-in-20-year peak-day gas demand after the loss of the largest piece of supply infrastructure. To assess the N-1 test, we have derived the 1-in-20-year peak-day gas demand for each pathway and year by identifying the 70th highest (95th percentile) maximum winter demand across the 1,400 corresponding winter simulations.

As shown in Table 6, under the base case, GB narrowly passes the N-1 test in winter 2031/32 and narrowly fails in winter 2036/37. As discussed in 'How we assess system stress', this shows the limits of a binary supply security test, as we expect NGT could manage small shortfalls over short periods. However, we would expect the N-1 margin under Falling Behind to pose a greater challenge to system security. Preventing this outcome could require an enduring solution, which DESNZ is considering through its consultation response. Decarbonisation is an effective way to safeguard gas supply security, as N-1 margins remain positive under the faster net zero pathway (Holistic Transition).

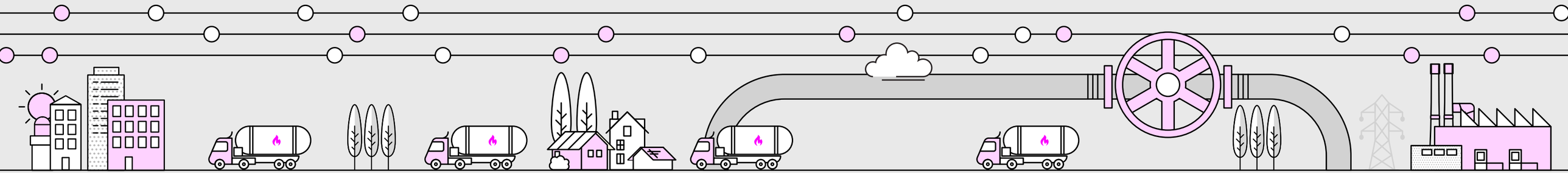
This emerging risk is lower than in the 2025 GSSA because we now use climate-adjusted demand data, which reduces peak demand expectations in our assessment years. As discussed, the use of UNSEEN weather data in future GSSA publications may further adjust our demand expectations. The lower risk level also reflects revised supply assumptions after further analysis of the Vesterled pipeline from the NCS, and our now-higher UKCS delivery expectations.

Nevertheless, risk is still emerging as GB's gas system continues to change. The tight margins in our base case show how inflexible the system could be in an N-1 scenario. In this event, all remaining supply sources would need to operate at high levels to prevent the identified margins from worsening. Further outages elsewhere in the system in real time, or further reductions in gas supply capacity over the next five years, would increase the likelihood or magnitude of N-1 shortfalls.

Table 6: Comparison of N-1 calculations in the 2025 and 2026 GSSAs, showing that the revised methodology and updated supply assumptions reduce, but do not remove, the risk

1-in-20 Margin (mcm)	GSSA 2025		GSSA 2026 (this report)	
	2030/31	2035/36	2031/32	2036/37
Base Case	-76	-57	3	-3
Falling Behind	-127	-114	-34	-34
Holistic Transition	-16	48	64	109

4. Mitigations and Next Steps



As set out in this report, gas supply security remains at risk in some scenarios in future winters. This position has not materially changed since the 2025 GSSA. In the 2025 GSSA, we set out options to mitigate the gas supply security risks we identified.

These were grouped into four categories:

1. Reducing gas demand on a peak day
2. Maximising existing gas supply infrastructure
3. Developing new gas supply infrastructure
4. Developing National Transmission System (NTS) infrastructure to support gas supply security

Alongside the 2025 GSSA, DESNZ published its *Gas System in Transition: Security of Supply Consultation*,[60] which reflected our assessment of gas supply security risk and set out a range of options for improving system security in future winters. In August 2026, DESNZ published an interim response to that consultation,[61] further outlining the government's intention to explore options for intervening in, and supporting, the gas market before any risks to gas security materialise. It also said that DESNZ will set out its preferred position on the mitigations in a fuller response in due course.

We will continue to work with DESNZ, Ofgem, National Gas Transmission (NGT) and the wider industry to deliver the most effective solutions to future gas supply risks. In the 2025 GSSA, we did not advocate any single mitigation, and suggested that a combination of options might be needed to reduce future supply security risks. Many of the options we identified – particularly in categories 2 and 3 – also featured in the government's consultation and interim response.

While the government decides on the appropriate action or intervention, we have not repeated the options it is currently considering in this GSSA. We will continue to provide advice and expertise where needed, but in this assessment we have focused on mitigations that fall outside the government's current decision-making process.

As a result, the mitigations in this year's GSSA fall mainly into categories 1 and 4, which we have updated to reflect the latest demand figures in the 2026 Ten Year Outlook. We have also proposed a future action for NESO to expand the time horizons of GSSA analysis from next year.

4.1 Reducing gas demand on a peak day

In 2025, NESO's Future Energy Scenarios (FES) set out three pathways for decarbonising the energy sector, which included a decline in overall and peak-day gas demand to 2050. Reducing this gas demand remains an important mitigation measure to manage future gas supply security and improve winter margins.

The 2026 Ten Year Outlook,[62] published in September 2026, shows higher peak gas demand than our FES 2025 net zero pathways, based on our best view of how Great Britain's energy system will develop over the next 10 years.

As set out in this GSSA, our analysis projects no negative gas supply margins from 2030 onwards under our fastest decarbonisation pathway (Holistic Transition). However, action is still needed to drive demand-side decarbonisation, particularly in clean heat and the power sector, to reduce overall and peak gas demand and remove the remaining gas supply risk.

Clean heat technology

Greater uptake of clean heat technology, particularly air-source (air-to-water and air-to-air) and ground-source heat pumps, will continue to displace a major source of peak

60 DESNZ, *Gas System in Transition: Security of Supply Consultation*, November 2025.

61 DESNZ, *Gas System in Transition: Security of Supply Interim Response*, August 2026.

62 NESO, FES documents.

gas demand. The government's *Warm Homes Plan*,[63] updated in March 2026, sets out an ambition for more than 450,000 heat pump installations a year by 2030. Continued uptake of low-carbon heating will reduce peak-day residential heating demand from gas boilers. Improvements to building fabric efficiency and insulation would also help reduce gas demand by using by using energy more efficiently.

Power system decarbonisation

Decarbonising the power sector remains a priority for the government in achieving its Clean Power 2030 mission. We still expect dispatchable gas-fired generation on the system in the winters we have assessed during the 2030s. However, replacing some of it with low-carbon sources, including more wind and solar generation, will reduce the gas that the power system needs on a peak demand day or during a system stress event. Reducing the power sector's reliance on gas could also reduce the risk of power system disruption if gas-fired generation is curtailed during a Network Gas Supply Emergency (NGSE).

4.2 Developing National Transmission System (NTS) infrastructure to support gas supply security

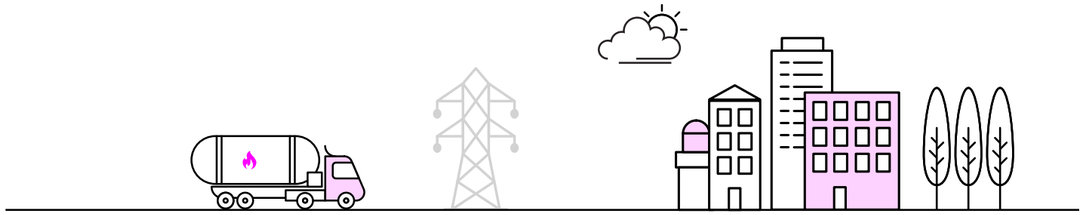
NESO continues to support future planning of the gas National Transmission System (NTS). Our role in gas strategic planning included publishing the Gas Options Advice (GOA) in 2025, in which we assessed the options proposed by NGT to address issues of physical network capability on the NTS. We also work closely with NGT to ensure gas system integrity, and to explore potential options to support gas infrastructure, operational standards and processes, and overall supply in future winters.

New supplementary standard for securing gas supply

This year's analysis shows a risk of negative gas supply margins in both winters 2031/32 and 2036/37 under an N-1 scenario. We have also identified risks in scenarios that the N-1 standard does not cover, including shortfalls caused by reduced storage and interconnector flows. The N-1 standard is also based on the 1-in-20-year peak demand day, while our analysis shows possible shortfalls on days that do not have the highest demand or the most extreme winter weather.

We understand that the N-1 standard is applied largely to allow asset owners to prepare their systems and operations for an unprecedented loss of the largest piece of supply infrastructure. However, the standard does not require or guarantee that gas will be delivered during an emergency. NGT has previously proposed a new 'deliverable commodity' standard (covering supplies of gas),[64] based on our GSSA methodology.

We agree that a supplementary, cross-organisation standard should be developed in addition to the existing N-1 requirements, to take account of the wider gas supply adequacy risks we have raised in this assessment. Any new standard would also need to consider whole system impacts and the level of risk that is tolerable across other sectors of the energy system in a gas supply deficit. We want to work with Ofgem, DESNZ, NGT and the wider industry on how a supplementary standard could be developed, tested and implemented.



63 DESNZ, Warm Homes Plan, updated March 2026.

64 National Gas, National Gas publishes response to the Government's Gas System in Transition: Security of Supply consultation, February 2026.

4.3 Expanding the GSSA to include the one- to four-year horizon

As set out in this report, overall gas supply security remains sensitive to supply reductions and to infrastructure and market-driven changes, which can occur at any time. Some of these structural changes may also affect the gas market before the GSSA assessment period and may require closer attention to fully understand the risk and any actions needed.

The GSSA currently covers winters five and ten years ahead of publication, as required by Licence Condition C4 of NESO's Gas System Planner Licence. NGT publishes its *Gas Winter Outlook*[65] for each coming winter, but there is currently no clear route or role for DESNZ, Ofgem, NESO or NGT to assess winter supply security in the period between the coming winter and five years ahead.

Following engagement with stakeholders and strategic partners, we recommend expanding the period covered by future GSSAs, and will work towards implementing this from next year. We see value in a GSSA that includes analysis of winters one to four years ahead (inclusive), starting with the 2027 publication. This change may require amendments to NESO's Gas System Planner Licence. We welcome further engagement with Ofgem and the wider industry on the most effective way to make this change, including any new obligations. Assessing winters one to four years ahead would give the government earlier sight of emerging risks to gas supply security and give wider industry a more complete picture of the gas supply landscape.

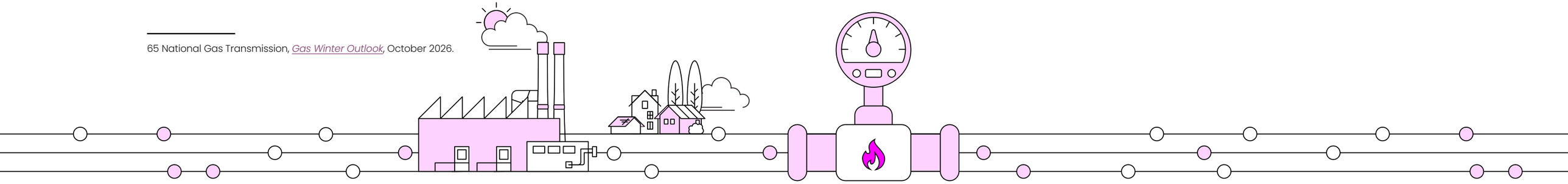
65 National Gas Transmission, *Gas Winter Outlook*, October 2026.

4.4 Next steps

This assessment sets out our updated outlook for gas supply security in winters five and ten years ahead. Our conclusions are largely unchanged from last year: there is an ongoing risk to future gas supply, with potential shortfall days in the assessment years if the largest piece of supply infrastructure is lost. Based on our updated demand modelling, we no longer present this as a risk confined to an isolated 11-day period, but as one that could emerge at any point across a winter. Further supply-side disruption could increase the likelihood, frequency and magnitude of margin shortfalls in future winters. Our wider analysis of storage and interconnectors shows the importance of maximum supply deliverability on peak demand days.

The government has signalled that it will take further action or intervene as part of its ongoing *Gas System in Transition: Security of Supply Consultation* process. We will continue to work with our strategic partners, including the government, Ofgem, NGT and the wider industry, to support secure and reliable energy supplies for consumers, and provide any further advice needed. This includes expanding our assessment to cover winters one to four years ahead, which we have recommended from next year.

Alongside this, we will continue to improve our modelling assumptions and analytical methods, particularly our demand data. We are working with the Met Office to incorporate the UNSEEN dataset into our future publications, allowing us to focus more on extreme events and current climate patterns and get a more complete representation of future weather. We welcome further feedback on how to improve any other areas our gas supply modelling and invite any stakeholders to . Please contact us at box.gassupplysecurity@neso.energy.



Glossary

Availability
Part of the de-rating calculation that considers whether the physical quantities of gas that GB will need are available from supply sources.

Baseload supply
Gas supply that is consistently available and not subject to short-term fluctuations.

bcm
Billion standard cubic metres under GB reference conditions (temperature: 15^{0}C, pressure: 1 atmosphere, or 1.01325 bar).

Boil-off
The continuous evaporation of LNG during storage, which maintains the -162^{0}C temperature by preventing pressure from increasing. These volumes are either delivered into the NTS, sent directly to LDZs, or reliquefied and returned to the storage tanks as LNG.

Calorific Value (CV)
The measure of energy released when a given volume of gas is burned. The CV used for converting energy (kWh) to volume (mcm) is 39.6 MJ/m^3.

Cavern pressure
The internal pressure within underground gas storage caverns, which must be managed to ensure structural integrity and deliverability.

Cold snap
A sustained period of very low temperatures and minimal wind that drives up gas demand. Cold snaps are used in scenario testing to assess system resilience.

Compressor stations
Facilities equipped with gas turbine or electric drive units that increase the pressure and flow rate of natural gas to transport it through the NTS. They are strategically located along NTS pipelines to maintain pressures and ensure gas can be delivered over long distances.

Cushion gas
The volume of gas permanently retained in a storage facility to maintain adequate pressure, cavern integrity and ensure the deliverability of working gas.

De-rated supply
An adjusted estimate of supply capability that accounts for real-world constraints. Used to assess realistic physical supply during stress events.

Decommissioning
The process of safely retiring gas infrastructure that is no longer in use.

Deliverability
Part of the de-rating calculation that considers the capacity of infrastructure (for example, pipelines or terminals) to transport gas onto the NTS.

Flexible supply
Supply sources that can quickly adjust output in response to changes in demand. LNG and gas storage are key examples of flexible sources.

Frequency
How often negative gas supply margins may occur, measured in shortfall days: simulated days on which demand exceeds supply.

Future Energy Scenarios (FES)
NESO's view of a range of potential future pathways for the whole energy system, exploring routes to net zero by 2050 for both energy demand and supply. For the latest release, visit *Future Energy Scenarios* (FES) on our website.

Gas Network Capability Needs Report (GNCNR)
NESO's view of the NTS's capability to meet current and future network requirements. For the latest release, visit *Gas Network Capability Needs Report* (GNCNR) on our website.

Gas Options Advice (GOA)
NESO's evaluation of investment proposals from NGT that aim to meet the gas network's capability requirements in GB. For the latest release, visit *Gas Options Advice* (GOA) on our website.

Gas shippers
Market participants who contract for gas transportation and delivery. They play a key role in commercial supply arrangements.

Gas system operator
The entity responsible for coordinating gas flows within the NTS, balancing daily supply and demand, and ensuring system integrity. NGT holds this role.

Gas Ten Year Statement (GTYS)
NGT's view of how it intends to operate and plan for the gas NTS over the next 10 years. For the latest release, visit *Gas Ten Year Statement* (GTYS) on NGT's website.

Intact network
A scenario where all gas supply infrastructure – including onshore assets (NTS, terminals and sub-terminals) and upstream infrastructure – is operational, with no supply outages or failures limiting gas flows.

Interconnector
Transmission infrastructure linking GB to European gas markets to enable cross-border gas trade. Key import interconnectors include those to Belgium (INT) and the Netherlands (BBL).

Likelihood
The probability of observing at least one day of negative gas supply margins in a winter.

Linepack
The total volume of gas stored within a pipeline system, which is directly proportional to the operating pressures of that system.

Liquefied natural gas (LNG)
Natural gas cooled to -162°C for transport and storage in liquid form. LNG is transported on purpose-built vessels and delivered to GB at one of three terminals. LNG provides flexible and globally sourced supply options.

Local Distribution Zones (LDZs)
Regional zones across GB where gas is distributed locally by gas distribution network operators. LDZs serve residential, commercial and smaller industrial consumers.

Magnitude
The size of negative gas supply margins that may occur, measured in million cubic metres (mcm).

Margin
The difference between realistically available supply and expected demand. A positive margin indicates surplus supply; a negative margin signals a potential shortfall.

Market competition
The extent to which multiple shippers may wish to purchase the same gas molecule.

Mature basin
A gas-producing region where output is declining due to natural resource depletion. The UKCS is considered a mature basin.

mcm
Million standard cubic metres under GB reference conditions (temperature: 15°C, pressure: 1 atmosphere, or 1.01325 bar).

Mitigations
Actions or strategies to reduce risks to gas supply security.

Molecules
A colloquial term referring to the physical units of natural gas.

N-1 standard
A key gas system resilience standard that assesses whether the gas supply system can meet 1-in-20-year peak-day demand if the largest single piece of supply infrastructure is lost.

National Transmission System (NTS)
The high-pressure pipeline network that transports gas across GB. It is maintained and operated by NGT.

Net exporter
A country or region that exports more gas than it imports.

Net importer
A country or region that imports more gas than it exports.

Norwegian Continental Shelf (NCS)
Norway's offshore gas production area. The NCS is one of GB's main sources of imported gas, delivered through pipelines including Vesterled, Langeled and the Shell Esso Gas and Associated Liquids (SEGAL) system.

Reliability
Part of the de-rating calculation that considers whether the gas volumes identified through availability analysis can be purchased by, and delivered to, GB market participants.

Seasonal normal conditions
Expected weather and demand patterns based on long-term historical averages.

Security of supply
The ability of the gas system to meet demand reliably under all conditions.

System stress
Periods when the gas system is under pressure due to high demand, supply disruption or infrastructure constraints.

Technical maximum capability
The theoretical maximum volume of gas that infrastructure can deliver under ideal conditions.

Terminals
Facilities where gas is received, processed and delivered onto the transmission system. Includes both LNG and pipeline entry points.

UK Continental Shelf (UKCS)
The offshore area surrounding the UK where natural gas is extracted. It represents a domestic source of supply and is considered part of indigenous production.

Uniform Network Code (UNC)
The regulatory framework that governs gas transportation and balancing in GB. It ensures fair access and consistent operational standards.

UNprecedented Simulated Extremes using ENsembles (UNSEEN)
UNprecedented Simulated Extremes using ENsembles (UNSEEN), developed by Met Office, simulates historic weather observations which could have feasibly occurred, identifying extreme weather events that were possible but did not ultimately materialise. The simulated weather observations are adjusted to reflect our current climate.

Winter Outlook (NESO)
NESO's Winter Outlook report presents our view of security of supply for the electricity system for the winter ahead. For the latest release, visit *Winter Outlook* on our website.

Winter Outlook (NGT)
NGT's Gas Winter Outlook report examines the forecast supply and demand for the gas system in GB. For the latest release, visit *Gas Winter Outlook* on NGT's website.

Wobbe Index
A measure of gas quality and interchangeability of fuel gases. It is calculated as the calorific value divided by the square root of the specific gravity. The Wobbe Index is used to ensure consistent combustion characteristics across different gas sources and is important for appliance safety and performance, as set out in the *Gas Safety (Management) Regulations* (GS(M)R).

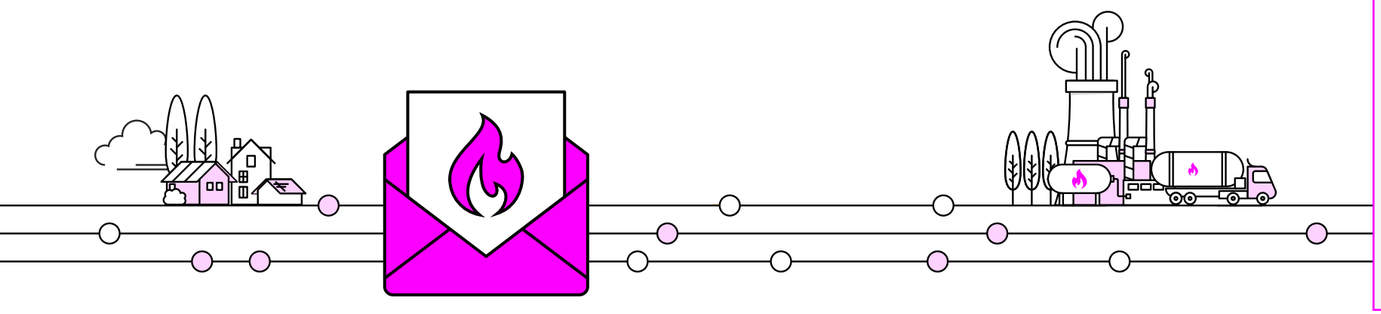
1-in-20-year peak demand
A statistical benchmark representing the level of demand expected to occur on one day in every 20 years. Used in gas system planning and security of supply assessments.

Get in Touch

Email us with your views on the *Gas Supply Security Assessment* at box.gassupplysecurity@neso.energy, and we will get back to you.

You can also write to us at: **Energy Security Modelling**
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The *Gas Supply Security Assessment* is part of a suite of documents prepared by NESO. Visit neso.energy for more information.



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