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GT3 National Gas Transmission Business Plan for 2026 to 2031

Response to Ofgem Request for Advice
Executive Summary

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Executive summary

Background and context

The National Energy System Operator (NESO) has been requested by the energy regulator, the Office of Gas and Electricity Markets (Ofgem), to provide independent advice on specific elements of National Gas Transmission’s (NGT) Business Plan. This report outlines our advice in response to this request, which was made under [section 171\(1\) of the Energy Act 2023](#).

NGT own, operate and maintain the National Transmission System (NTS) which comprises of nearly 5000 miles of pipeline across Great Britain (GB). In December 2024, NGT [published their business plan](#) covering the period from 2026 to 2031. The plan outlines their strategic vision and commitment to ensuring the gas NTS remains resilient, efficient and aligned with the evolving energy landscape. The business plan is currently going through Ofgem’s draft determination period and NESO has been asked to provide independent advice to assist with Ofgem’s assessment. The draft determination of the business plan is expected to be published later this summer and the final determination towards the end of the summer, by Ofgem.

The business plan is officially known as the **GT3 National Gas Transmission Business Plan for 2026 to 2031**. NGT is regulated by Ofgem, through its framework known as RIIO (Revenue = Incentives + Innovation + Outputs) and this plan covers the third regulatory period (GT3), referred to as a ‘price control period’.

Ofgem requested NESO to review and advise on the alignment of NGT’s GT3 with the long-term energy system needs of GBs energy transition.

Our advice is divided into seven work packages which correspond to the specific questions we were asked. The approach we’ve taken was to analyse NGT’s relevant business plan submissions, comparing this to our own pre-existing analysis and understanding of the gas network by utilising technically specialised hydraulic network analysis software to review investments.

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Summary of key findings

Our key finding is that **we are in general agreement with the analysis** that NGT has undertaken **and are therefore broadly supportive of most of the proposed investment.**

In addition to some minor, non-material challenges to components of the underlying analysis, we have made one material challenge and one recommendation – a challenge that NGT has acknowledged. This challenge regards NGT’s detailed analysis of network capability where we reassessed the proposals for South Wales that has led to NGT requesting an additional £38m to increase entry capability¹ in South Wales.

Additionally, we have recommended that NGT proposes investments to change the operational performance of compressor stations (the projects involve replacing the compression wheel, known as ‘re-wheeling’). We suggest a full compressor ‘site investigation’ to increase understanding of asset performance before a decision is made on investment.

¹ Entry capability is the physical capacity of the NTS to allow gas to enter at specific points, like terminals, storage facilities, or liquefied natural gas (LNG) terminals.

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NESO's duty to provide advice

The [Energy Act 2023](#) sets the legislative framework for an independent system planner and operator to help accelerate GB's energy transition, leading to the establishment of the [National Energy System Operator \(NESO\) in October 2024](#). The Energy Act 2023 outlines that NESO should provide advice, analysis or information in relation to any of its functions, including a series of primary and secondary duties.

Our primary duties are to promote the following three objectives:



Net Zero

Enabling the government to deliver on its legally binding emissions targets



Efficiency & Economy

Promoting efficient, coordinated and economical systems for electricity and gas



Security of Supply

Ensuring security of supply for current and future consumers of electricity and gases

Our secondary duties are to have regard to:



Facilitating Competition

Creating and maintaining competitive energy markets and networks



Consumer Impacts

Understanding what changes mean for consumers



Whole System Impacts

Understanding linkages across systems



Facilitating Innovation

Creating an environment that enables others to help solve energy challenges

Our advice on the NGT Business Plan was commissioned by Ofgem through Section 171 of the Energy Act 2023, which requires NESO to comply with a request for advice from the Minister of the Crown (the holder of an office in His Majesty's Government in the United Kingdom) or the Gas and Electricity Markets Authority (Ofgem), so far as reasonably practicable.

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The request for advice

Specifically, we were asked to provide advice on:

- The alignment of NGT’s network capability assessments that underpins its business plan, with NESO’s assumptions in its [Gas Network Capability Needs Report](#) (GNCNR) and whether this may affect NGT’s RIIO-3 funding request.
- The need for NGT’s proposed investment for asset health in the zones that are vital for ensuring continued resilience – as presented in GNCNR – of the National Transmission System (NTS).
- Whether, at a high-level, NGT’s proposed asset health investments² facilitate security of supply and other wider energy system objectives (e.g. Clean Power 2030).
- NGT’s business plan assumptions and NGT’s analysis of the sensitivities of their GT3 business plan against [NESO’s 2024 Future Energy Scenarios](#).
- NGT’s position on the likelihood, and volumetric magnitude, of constraints on the National Transmission System (NTS) and how they can be resolved.
- NGT’s position on the potential to retain, re-purpose, or decommission sections of the gas transmission network and the impact this could have on the existing methane network.
- Other areas as NESO deems relevant.

Approach

We have engaged with Ofgem throughout this process and asked clarification questions to NGT, receiving additional justification, information and data in response. We have reviewed proposed asset health interventions at compressor stations that have an impact on network capability and analysed whether the capability needs presented in GNCNR can be provided by the plans in NGT’s business plan.

The analysis that underpins the investments we have been asked to review is technically specialised hydraulic network analysis and requires a good understanding of the characteristics and operations of the gas transmission network.

Our approach has allowed NGT to refine their initial analysis in producing their resubmitted business plan on 31 March.

Consistent with Ofgem’s request we have focussed on NGT’s network capability assessments that underpin their business plan submission, which means we haven’t reviewed cost benefit analysis (CBA) which includes environmental and other benefits, monetary values of constraints etc.

² This refers to activities to maintain, enhance, or restore the condition and performance of equipment and infrastructure.

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Technical summary of findings

Work Package 1 – Network capability assessment

- Our analysis shows that most of the network capability outputs that have been provided by NGT support the required GT3 funding request.
- We recommend NGT undertake further gas demand analysis to improve their understanding of network capability following comparison with our own GNCNR network analysis. Significant differences have been highlighted where analysis hasn't been completed for:
 - Scottish exit capability, and
 - South Wales entry capability.
- As a result of our assessment of Scottish exit capability curves, there has been no impact to the business plan submission as there is no request for investments in this area.
- As a result of our assessment of South Wales entry capability curves, Ofgem SQ, associated sensitivities and additional network analysis NGT has revised their business plan to include an additional £38m of investment to increase the capability.

Work Package 2 – Asset health

- We have focussed on the subset of NGT's proposed asset health investments that are centred on the provision of network capability. We support all those asset health investment intervention requests, noting they are driven by a combination of original equipment manufacturer (OEM) guidance, legal, and safety rules.
- During the review, we have sought – and been provided with – clarity on the strategy for overhauling Lockerley compressor station.
- We also recommend the use of 'site investigations' where appropriate to improve understanding of asset performance to maximise capability of NTS and asset investment.

Work Package 3 – Security of supply

- We have reviewed NGT's proposed asset health investments for security of supply and support those for the business plan.
- We acknowledge that NGT has not specifically considered our CP2030 advice in their business plan due to the timing of our CP2030 advice, however, much of the proposed investment is supportive of the needs of a clean power system by 2030.
- Our [CP2030 analysis](#) demonstrated that the NTS currently has the capability for the gas-fired generation fleet to provide security to the electricity system, although we recognised that there could be gas network operability considerations that may need to be addressed via NGT as their role as system operator.

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- We understand that any additional investment proposals that NGT believe are needed to support CP2030 will be separately submitted to Ofgem.

Work Package 4 – FES assumptions

- We acknowledge that NGT has used the [FES 2023](#) 'Falling Short' scenario for cost benefit analysis (CBA) in its Engineering Justification Papers (EJPs) as part of the 'System Operator Annex', with the re-submission on 31 March to consider FES 2024 Holistic Transition pathway and Counterfactual.
- We understand that the re-submission with the FES 2024 Holistic Transition pathway and Counterfactual hasn't triggered any additional interventions when analysing against the 1 in 20 standard³.

Work Package 5 – Constraints

- We recognise that the constraint volumes⁴ calculations are different between NGT's business plan and the GNCNR report – noting differences in the calculation of resilience curves, the calculation of constraint volumes from the flame charts, and differences in datasets that forecasts a difference in the likelihood of constraints.
- We consider that except for South Wales, the outputs are not materially different; we will continue to work to understand this, but this is not material for advice on the business plan.

Work Package 6 – Repurposing

- There are several assets on NGT's network that could be suitable for repurposing, however, they will require intervention if they are not repurposed and continue to be used for methane gas duties.
- We agree with the need for intervention on the assets presented by NGT in their business plan but have highlighted those assets which could be suitable for repurposing to Ofgem and NGT, to ensure they are appropriately considered.

Work Package 7 – Other areas NESO deem relevant

- We recognise that the business plan highlights the requirement for asset intervention to support South Wales entry requirements. The business plan discusses several options.
- We have undertaken limited analysis of these options which shows the enhanced capability they would provide between NGT's initial submission and re-submission on 31 March. Our

³ The 1-in-20 Security Standard obligation is the requirement to ensure that sufficient capability can be met in both terms of the 1-in-20 peak day level as specified within Unified Network Code UNC General Terms (GT) Section C – Interpretation.

⁴ A constraint is when the NTS has insufficient capability (known as an 'constraint'), gas cannot enter and exit the pipelines to meet the flow requirements in capacity already sold. GNCNR analysis was designed to examine the probability of these constraints for both network entry and exit.

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network analysis assessment has recommended an additional £38m of investment for NGT's revised business plan submission

- NGT proposes investments to change the operational performance characteristics of a series of compressor stations (the projects involve replacing the compression wheel, known as 're-wheeling'). We agree that re-wheeling to improve performance is appropriate but, as also suggested under Work Package 2, have suggested to NGT that they additionally carry out a full compressor site investigation to increase understanding of asset performance. **NGT agrees with the recommendation.**