ofgem
Making a positive difference
for energy consumers

Consultation

RIIO-2 Draft Determinations - Gas Transmission Annex

Publication date	09 July 2020	**Contact:**	RIIO Team
		Team:	Network Price Controls
Response deadline	4 September 2020	**Tel:**	020 7901 7000
		Email:	RIIO2@ofgem.gov.uk

Our aim for the RIIO-2 price controls is to ensure energy consumers across GB get better value, better quality of service and environmentally sustainable outcomes from their networks.

In May 2019, we set out the framework for the price controls in our Sector Specific Methodology Decisions. In December 2019, Transmission and Gas Distribution network companies and the Electricity System Operator (ESO) submitted their Business Plans to Ofgem setting out proposed expenditure for RIIO-2. We have now assessed these plans. This document and others published alongside it, set out our Draft Determinations for company allowances under the RIIO-2 price controls, for consultation. We are seeking responses to the questions posed in these documents by 4 September 2020. Following consideration of responses, we will make our Final Determinations at the end of the year.

This document outlines the scope, purpose and questions of the consultation. It also tells you how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at Ofgem.gov.uk/consultations. If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

Any enquiries related to the text of this publication should be sent to Ofgem at:

10 South Colonnade, Canary Wharf, London, E14 4PU. Alternatively, please call Ofgem on 0207 901 7000.

This publication is available at www.ofgem.gov.uk. Any enquiries regarding the use and re-use of this information resource should be sent to: psi@nationalarchives.gsi.gov.uk

Contents

1. Introduction

Purpose of this document

1.1 This document sets out our Draft Determinations and consultation positions for the gas transmission (GT) sector price control (RIIO-GT2). It covers the costs, outputs and uncertainty mechanisms (UMs) for the RIIO-GT2 price control period 1 April 2021 to 31 March 2026 that will apply to the Transmission Owner (TO) and System Operator (SO). All figures in this document are in 2018/19 prices, except where otherwise stated.

1.2 The structure of this document, and how it fits in with the wider RIIO-2 Draft Determination publications, is set out in Figure 1 below. It is intended that this document be read alongside several documents, including the RIIO-2 Draft Determinations Core Document.

What do we expect RIIO-GT2 to deliver for consumers?

1.3 Britain's gas transmission network, the National Transmission System (NTS), is owned and operated by NGGT, which is the sole gas TO[1] and SO[2] in Great Britain. NGGT's duties and obligations are set out in its Licence and in legislation.

1.4 Natural gas is essential in the day-to-day heating of households and functioning of industrial and manufacturing processes. However, the role of gas in the pathway to decarbonisation remains uncertain.

1.5 Looking ahead, the energy system will need to change to support the transition to Net Zero 2050.[3] This poses some significant challenges for the GT sector. While it is not known exactly how GB will decarbonise, policy makers are exploring potential pathways, including electrification and hydrogen networks, each of which could result in a very different role for the future use of the gas networks across transmission and distribution.

[1] NGGT, in its role as the TO, owns and maintains the network assets. It is responsible for maintaining the integrity of the networks, developing asset replacement schedules and for providing transmission services to the SO.
[2] NGGT, in its role as the SO is responsible for the day-to-day operation of the national transmission system, including balancing supply and demand, maintaining satisfactory system pressures and ensuring gas quality standards are met.
[3] Net Zero 2050.

1.6 Considerable investment is needed in RIIO-GT2 to ensure the ongoing safety and resilience of the transmission network. However, given uncertainty around the future role of gas and demands on the network in light of this uncertainty, investment in new assets must be carefully balanced against clarity around longer-term needs.

1.7 For RIIO-GT2, we propose to manage this uncertainty in a number of ways:

- we will require NGGT to significantly enhance transparency in the way it plans its network and assesses the need for new investment; particularly in light of expected changes in future demand for gas. This will ensure customers only pay to maintain capacity on the NTS to a level that is needed
- we propose to utilise a range of UMs to make sure NGGT can fund necessary asset health work, but ensure this is only done where the options have been fully considered and the future need is clear
- we also propose to safeguard against the risk of stranded assets by accelerating the depreciation of GT assets and bringing depreciation policy into alignment with the Gas Distribution sector (see Finance Annex for further details).

1.8 By the end of RIIO-GT2 price control, we want to see a GT sector that is:

- **meeting the needs of consumers and network users** by setting outputs and incentives to improve service quality and encourage the efficient system operation of the NTS. We propose to use incentives for: customer satisfaction to drive improvements in customer service; demand forecasting to produce more accurate gas demand forecasts that network users rely on to plan their own activities; and maintenance to minimise disruption to network users. We also propose incentives for capacity constraint management and residual balancing of the system in order to drive further efficiencies in system operation that ultimately result in lower bills for consumers
- **maintaining a safe and resilient network** by funding NGGT to replace ageing assets, while ensuring costs to consumers are kept as low as possible. We propose to allow funding for cyber resilience projects, as well as IT investments where the scope of work is clear. We propose to use UMs to fund further upgrades during RIIO-GT2 once requirements around scope of work are clearer
- **supporting the delivery of an environmentally sustainable network** by funding NGGT to make its compressor sites compliant with environmental

regulation of emissions. We also propose to set outputs and incentives to further reduce the harmful impact on the environment that the gas transmission network and related business activities can have.

1.9 To deliver these objectives as cost efficiently as possible, we have set baseline totex allowances for NGGT only where we are satisfied of the need for and certainty of the proposed work, and where there is sufficient certainty of the efficient cost of work.

1.10 In its Business Plan, NGGT proposed baseline totex for the 5 years of RIIO-GT2 of £2.60bn.

1.11 We propose to allow NGGT a baseline totex of £1.56bn. Our proposals aim to ensure that NGGT provides value for consumers while maintaining its network appropriately. This includes linking approximately 40% of baseline totex to outputs with mechanisms to reduce allowances for non-delivery to ensure that NGGT is only funded for what it actually delivers.

1.12 We also propose to put in place a range of uncertainty measures that will allow us to assess NGGT's proposed expenditure during RIIO-GT2 price control period. We expect NGGT to provide better quality submissions to support our future assessments of expenditure during the RIIO-GT2 price control period. In reaching our view on NGGT's Business Plan (BP) proposals, we have had to rely considerably on seeking additional clarifications and information from NGGT, particularly to support the investment options proposed and the associated costs. We also expect NGGT to improve the quality and scope of asset data during RIIO-GT2 by building a robust set of cost data and reporting through an ongoing regulatory reporting and monitoring process.

1.13 The Totex Incentive Mechanism (TIM) provides NGGT with a powerful incentive to deliver the investments needed efficiently. We consider that it is important to ensure TOs only rewarded for their efficiency effort rather than uncertainty in the ex-ante allowance. We propose to set the TIM sharing at 36.7% for the RIIO-GT2 price control (reduced from 44.7% in RIIO-GT1).

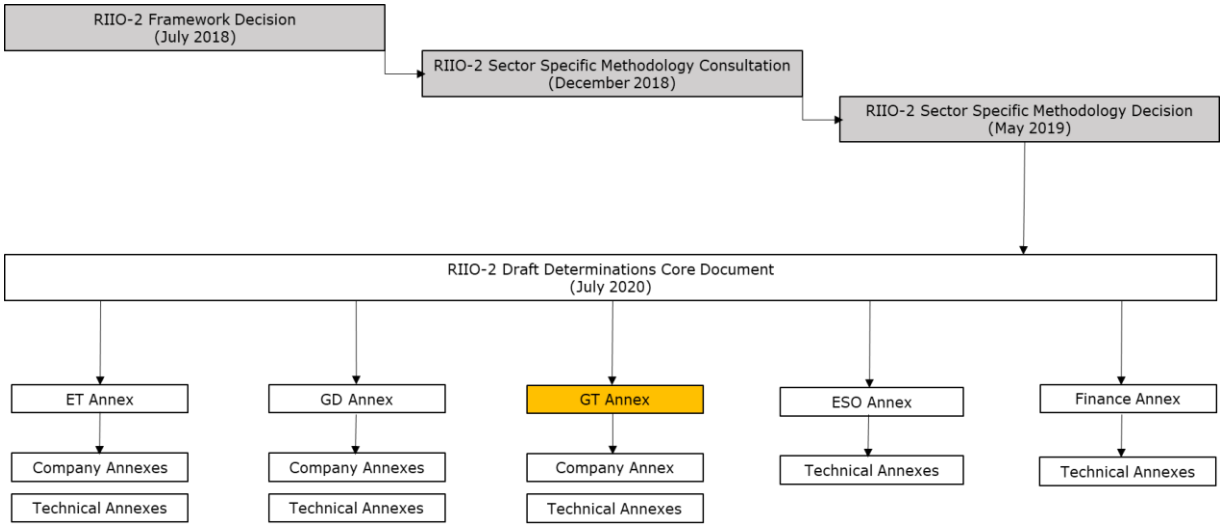
1.14 As a result of our proposed actions for RIIO-GT2, we expect to see reductions of around 0.95% in gas transmission network charges relative to RIIO-GT2.[4] This could reduce the average annual household bill by around 9 pence per year.

Navigating RIIO-2 Draft Determinations

1.15 This document provides our summary view on NGGT's proposed price control settlement for RIIO-GT2. Further detail is provided in the NGGT company-specific annex. This document should be read alongside the:

- Core Document, which contains our approach to areas of RIIO-2 that are common to all sectors;[5]
- NGGT Annex, which contains further detail on our assessment approach, consultation position and rationale for each area of RIIO-GT2 price control;[6] and,
- any technical annexes or consultancy reports relevant to the GT sector (these are cross-referenced in this document, where relevant).

Figure 1: RIIO-2 Draft Determinations documents map



[4] These bill impacts are based on total revenue for charges in Ofgem's financial model (PCFM).
[5] All sectors refers to Electricity Transmission (ET), Gas Distribution (GD), Gas Transmission (GT), and some cases, the Electricity System Operator (ESO).
[6] Although there is only one network company in the GT sector, we have followed the same document structure as GD and ET sectors for ease of comparison. As a result, this document contains further detail on areas that would in the GD and ET sectors be company specific rather than sector annexes.

2. Quality of Service – setting outputs for RIIO-GT2

Introduction

2.1 This Chapter sets out our position on the proposed package of RIIO-GT2 outputs, including Licence Obligations, Price Control Deliverables and Output Delivery Incentives.[7] Our proposals reflect a mixture of outputs that we set out in our SSMD (Sector Specific Methodology Decision), bespoke outputs proposed by NGGT in its RIIO-GT2 Business Plan and additional outputs set by us following assessment of NGGT's Business Plan. Our proposals are set out under the headings of the RIIO-2 outcomes:

- meet the needs of consumers and network users
- maintain a safe and resilient network
- deliver an environmentally sustainable network.

2.2 Table 1 below outlines the entire range of outputs, both common[8] and bespoke[9], that we are consulting on including in RIIO-GT2 and sets out where you can find full details.

Table 1: Proposed RIIO-GT2 outputs

Output name	Output type	Further detail
Common outputs - set by Ofgem		
Meeting the needs of consumers and network users		
Customer satisfaction survey	ODI (Financial)	This document - Chapter 2 NGGT Annex – Chapter 2
Quality of demand forecast	ODI (Financial)	This document - Chapter 2 NGGT Annex – Chapter 2
Maintenance	ODI (Financial)	This document - Chapter 2 NGGT Annex – Chapter 2
Entry and exit capacity constraint management	ODI (Financial)	This document - Chapter 2 NGGT Annex – Chapter 2
Residual balancing	ODI (Financial)	This document - Chapter 2 NGGT Annex – Chapter 2

[7] Licence Obligations set minimum standards that network companies must achieve. Price Control Deliverables specify the deliverable(s) for the funding allocated, and the mechanism(s) to refund customers in the event an output is not delivered. Outcome Delivery Incentives drive service improvement through reputational and financial incentives.
[8] Common outputs were set by Ofgem at SSMD.
[9] Bespoke outputs were proposed by NGGT in its Business Plan or proposed by Ofgem following assessment of NGGT's Business Plan.

Output name	Output type	Further detail
Emergency response and enquiry service	LO	Sector Specific Methodology (SSMD) GT Annex[10] - Chapter 2
Connections	LO	SSMD GT Annex[11] - Chapter 2
Deliver an environmentally sustainable network		
Greenhouse gas emissions (venting)	ODI (Financial)	This document - Chapter 2 NGGT Annex – Chapter 2
NTS shrinkage	ODI (Reputational)	This document - Chapter 2 NGGT Annex – Chapter 2
Annual Environmental Report on Environmental Action Plan commitments	LO	This document - Chapter 2 NGGT Annex – Chapter 2
Maintain a safe and resilient network		
Network asset risk metric	PCD	Core Document – Chapter 5 NARM Annex – Appendix 3
Cyber resilience	Use-it-or-lose-it allowance, PCD	This document - Chapter 3 NGGT Annex – Chapter 3 Core Document – Chapter 7
Physical resilience	PCD	This document - Chapter 3 NGGT Annex – Chapter 3 Core Document – Chapter 7
Annual network capability assessment report	LO	This document - Chapter 2 NGGT Annex – Chapter 2
Exit capacity	LO	GD Sector Annex – Chapter 2
1-in-20 peak day demand capability	LO	SSMD GT Annex[12] - Chapter 4
Bespoke outputs - proposed by NGGT		
Meeting the needs of consumers and network users		
Stakeholder experience incentive	ODI (Reputational)	This document - Chapter 2 NGGT Annex – Chapter 2
Deliver an environmentally sustainable network		
Environmental incentive	ODI (Financial)	This document - Chapter 2 NGGT Annex – Chapter 2
Decommissioning	PCD	This document - Chapter 3 NGGT Annex – Chapter
Asset health – non-lead assets	PCD	This document - Chapter 3 NGGT Annex – Chapter 3
Compressor emissions - Wormington	PCD	This document - Chapter 3 NGGT Annex – Chapter 3
Compressor emissions – King's Lynn	PCD	This document - Chapter 3 NGGT Annex – Chapter 3
Compressor emissions – Peterborough	PCD	This document - Chapter 3 NGGT Annex – Chapter 3
Compressor emissions – St Fergus	PCD	This document - Chapter 3

[10] No change since SSMD, paragraphs 2.118 - 2.126 in SSMD GT Annex.
[11] No change since SSMD, paragraphs 2.77 - 2.84 in SSMD GT Annex.
[12] No change since SSMD, paragraphs 4.53 - 4.60 in SSMD GT Annex.

Output name	Output type	Further detail
		NGGT Annex – Chapter 3
Bacton terminal site redevelopment	PCD	This document - Chapter 3 NGGT Annex – Chapter 3
King's Lynn subsidence	PCD	This document - Chapter 3 NGGT Annex – Chapter 3

Meeting the needs of consumers and network users

2.3 We expect companies to deliver a high quality and reliable service to all network users and consumers, including those in vulnerable situations.

2.4 Our proposals for how RIIO-GT2 can achieve this largely build on outputs used in RIIO-GT1 such as customer satisfaction survey, quality of demand forecast, and capacity constraint management. Performance targets seek to embed and build on the performance seen in RIIO-GT1.

Customer satisfaction survey

Customer satisfaction survey	
Purpose	A financial output delivery incentive to drive improvements in the quality of customer service through customer satisfaction surveys.
Benefits	Increased customer satisfaction and stakeholder engagement; and improved service.

Background

2.5 In our SSMD,[13] we stated that we would retain the customer satisfaction element of RIIO-1's Stakeholder Satisfaction Output (SSO) as a symmetrical financial ODI.

2.6 We said that we expect NGGT to work with its User Group to determine exactly which customers should be the focus of the surveys, and seek input on the design and content of the surveys. We stated that the appropriate strength of the incentive would be considered in the Draft Determinations.

Consultation position

Incentive parameter	Consultation position
Incentive design	Retain customer satisfaction survey incentive as financial incentive.

[13] Paragraphs 2.32 - 2.47 in the RIIO-2 Sector Specific Methodology Decision - Gas Transmission.

Incentive parameter	Consultation position
	Revise baseline target, incentive cap and collar and the incentive strength as set out below
Target	7.8/10 for the stakeholder satisfaction survey score
Incentive rate	Each incremental 0.1 performance deviation from the target is worth +/- 0.071% of annual Base Revenue
Incentive cap/floor	+/- 0.5% of Base Revenue

Rationale for consultation position

2.7 We propose to accept NGGT's proposed baseline performance target of 7.8/10 for its stakeholder satisfaction survey score. We consider this an ambitious target based on outturn RIIO-GT1 data and represents an appropriate challenge for NGGT to outperform in RIIO-GT2.

2.8 Further detail on the rationale for our consultation position is provided in Chapter 2 of the NGGT Annex.

Quality of demand forecast

Quality of demand forecast	
Purpose	To encourage the System Operator to make improvements to the accuracy of its gas demand forecasts.
Benefits	Improved accuracy of NGGT's forecasts of gas demand to support the industry in making efficient decisions about its use of the network.

Background

2.9 NGGT has Uniform Network Code[14] ('UNC') and Licence obligations to provide to the industry NTS demand forecasts over a range of timescales. NGGT is currently incentivised to improve the accuracy of its demand forecasts on a day-ahead basis ('D-1 demand forecasts'), and demand forecasts two-to-five days ahead ('D-2 to D-5 demand forecasts').

2.10 In our SSMD,[15] we stated that NGGT should show in its Business Plan the consumer benefits of the incentive to all gas consumers, and to propose revised tougher targets. We said that if NGGT cannot show consumer benefits we might make this a reputational, instead of a financial, incentive.

[14] The Uniform Network Code (UNC) is the hub around which the competitive gas industry revolves, comprising a legal and contractual framework to supply and transport gas.
[15] SSMD GT Annex - Paragraph 2.60

Consultation position

Incentive parameter	Consultation position
Incentive design	Retain the financial incentive for D-1 demand forecasts, with a lower cap (symmetrical with the collar) and a tighter target. Introduce a new Licence obligation for the SO to annually report on activities/investments conducted to improve D-1 demand forecasting. Make the incentive for D-2 to D-5 demand forecasts reputational only.
Incentive cap/floor	+/- £1.5m symmetrical cap/collar for D-1
Incentive rate	Each incremental 1 mcm/d performance deviation from the target is worth +/- £180k.
Targets	D-1 annual average absolute forecast error target of 8.35mcm/d with the demand forecast storage adjustment up to +1mcm/d

Rationale for consultation position

2.11 Following our assessment and analysis from Subject Matter Experts (SMEs),[16] we propose to retain the financial incentive for D-1 demand forecasts but with a lower symmetrical cap and collar than proposed by NGGT. We propose to make the D-2 to D-5 scheme reputational only, as no clear evidence of consumer benefit from this scheme was shown by NGGT.[17]

2.12 Further detail on the rationale for our consultation position is provided in Chapter 2 of the NGGT Annex.

Maintenance

Maintenance	
Purpose	To incentivise the System Operator in efficient planning of network maintenance at direct exit connections from the NTS
Benefits	Minimised impact of maintenance work on NGGT's customers and minimised disruption to customer operations.

[16] AFRY consultants.
[17] See Chapter 2 of the NGGT Annex for further detail.

Background

2.13 The maintenance incentive was designed in RIIO-GT1 to encourage efficient planning and execution of maintenance work. The maintenance incentive is split into two scheme components incentivising:

- minimisation of the use of Maintenance Days[18] ('MDs') to perform Remote Valve Operations ('RVO') maintenance ('Use of Days Scheme for RVO Work') in no more than 11 RVO MDs
- minimisation of changes initiated by NGGT to the agreed maintenance plan ('Changes Scheme'). In our SSMD,[19] we decided to retain both schemes within the maintenance incentive, and make the financial incentive downside only.

2.14 In our SSMD,[20] we stated that NGGT should propose revised, tougher targets for the RIIO-GT2 period. We said that the new downside-only schemes of this incentive would have floors the same or lower as those in place for the current incentives and any proposed changes to these floors need to be fully justified.

Consultation position

Incentive parameter	Consultation position
Incentive design	The maintenance incentive consists of three schemes: Use of Days for RVO Work, Changes Scheme and Use of Days for Non-RVO Work.
Incentive cap/floor	Downside only financial incentive with a collar of £500k for each scheme (-£1.5m in total).
Incentive rate	A stepped incentive with tiered payments/penalties per change under the Use of Days for RVO Work scheme, and a payment/penalty of £50k per each change day below/above the target under the Changes Scheme and Use of Days for Non-RVO Work.
Targets	11 days for the Use of Days for RVO works Scheme, 7.25% for the Changes Scheme, and 75% alignment for the Use of Days for Non-RVO work

Rationale for consultation position

2.15 We acknowledge NGGT's improved performance in aligning its maintenance activities and the value this incentive has brought to NGGT's customers so far. For this reason we propose to accept aspects of NGGT's proposal for the Maintenance

[18] A Maintenance Day refers to a day of maintenance which impacts upon a customer.
[19] Paragraphs 2.61 - 2.76 in the RIIO-2 Sector Specific Methodology Decision - Gas Transmission.
[20] Paragraph 2.76 in the RIIO-2 Sector Specific Methodology Decision - Gas Transmission.

incentive, including the targets and collars for the Use of Days for RVO Work Scheme; the Changes Scheme; and the Use of Days for non-RVO Work Scheme. However, consistent with the SSMD and recognising that the current level of performance has become business as usual, we propose to make the incentive downside only, with a combined collar of -£1.5m a year in total (ie -£500k per scheme a year each).

2.16 Further detail on the rationale for our consultation position is provided in Chapter 2 of the NGGT Annex.

Entry and exit capacity constraint management

Entry and exit capacity constraint management	
Purpose	To deliver efficient overall cost of System Operator constraint management actions, and encourage balanced risk versus reward decisions in the release of additional capacity.
Benefits	Lower overall costs of constraint management actions due to efficient system operation and optimisation of strategies, as well as due to a more balanced risk versus reward decision-making in the release of additional capacity.

Background

2.17 The entry and exit capacity constraint management incentive (CCM) is designed to minimise the cost of constraints in the NTS against a forecast/target. It is also designed to encourage the release of additional capacity.

2.18 In our SSMD,[21] we decided to defer our decision on the CCM incentive until Draft Determinations. We stated that NGGT should put forward appropriate targets informed by detailed evidence of performance to date, as well as to show that the incentive provides value for money to consumers.

Consultation position

Incentive parameter	Consultation position
Scheme design	Revenue from the overrun charges and the sale of interruptible capacity no longer feed into the CCM incentive
Target	£0.2m per year
Incentive cap/floor	+/- £3.2m per year

[21] Paragraphs 2.85 - 2.105 in SSMD GT Annex.

Incentive parameter	Consultation position
Incentive rate	20%: NGGT would receive 20% of the net underspend or be penalised 20% of the net overspend[22]

Rationale for consultation position

2.19 We are not persuaded about the robustness and validity of NGGT's forecast constraint costs and its' proposed RIIO-GT2 CCM incentive target. There is a significant risk that these costs and the target are overstated and adopting them as proposed would not be in the interests of customers.

2.20 We propose to use the historical RIIO-GT1 performance of £0.2m per year as the annual cost target and a symmetrical cap/collar of +/- £3.2m per year. We also propose applying a lower incentive rate of 20%.

2.21 Further detail on the rationale for our consultation position is provided in Chapter 2 of the NGGT Annex.

Residual balancing

Residual balancing	
Purpose	To incentivise the residual balancing of supply and demand of the System Operator while minimising the impact of any actions on market prices.
Benefits	A more balanced supply and demand with minimised impact on market prices and cost to consumers.

Background

2.22 NGGT is required to perform residual balancing actions on the system and to operate within safe operational limits. NGGT has some choice regarding how it fulfils these requirements. We have set financial incentives to encourage NGGT to do this in the way that causes least disruption to the gas market.

2.23 The residual balancing incentive contains two elements: the Price Performance Measure (PPM) and the Linepack Performance Measure (LPM). In our SSMD,[23] we

[22] This means that NGGT would earn a reward of 20% of the net underspend against the CCM target (taking account of constraint costs and applicable revenue), and similarly would be exposed to 20% of the net overspend against the CCM target.
[23] SSMD GT Annex - Paragraphs 2.106 - 2.117.

were minded to retain both elements of the incentive, with the expectation that NGGT would propose revised targets.

Consultation position

Incentive parameter	Consultation position
Incentive design	Retain both PPM and LPM elements of the scheme, while incorporating a performance range (2.8mcm/d to 5.6mcm/d) within which no incentive would apply for the LPM mechanism during the shoulder months
Incentive cap/floor	£1.6m/-£2.8m across both schemes
Target	PPM: 1.5% of System Average Price (SAP) LPM: 2.8mcm/d (non-shoulder months) and 5.6mcm/d with a 2.8mcm/d to 5.6mcm/d zero performance dead-band (shoulder months)
Incentive rate	A stepped incentive with tiered daily payments up to £1.2k (PPM scheme) and £3.2k (LPM scheme) and penalties down to -£24k for performance against the PPM and LPM targets. See Chapter 2 of the NGGT Annex for further detail.

Rationale for consultation position

2.24 We recognise the value this incentive brings and propose to accept NGGT's proposal and retain both PPM and LPM elements of the scheme. We propose to accept NGGT's proposal and retain both PPM and LPM elements of the scheme, including a performance range (2.8mcm/d to 5.6mcm/d) within which no incentive would apply for the LPM mechanism during the shoulder months.[24] We propose setting the financial cap/collar at £1.6m/-£2.8m across both scheme elements.

2.25 Further detail on the rationale for our consultation position is provided in Chapter 2 of the NGGT Annex.

Maintain a safe and resilient network

2.26 We expect companies to deliver a safe and resilient network that is efficient and responsive to change. To allow for this, there are some areas, such as Network Asset Risk Metric (NARM), where we are looking to build on existing policy developed in RIIO-1. There are other areas, such as Network Capability Assessment (NCA), which we want to introduce in RIIO-2, to reflect our learnings from RIIO-1 and to ensure we are building a strong foundation for RIIO-3.

[24] March, April, September and October.

Annual network capability assessment report

Annual network capability assessment report (ANCAR)	
Purpose	To implement a process that brings greater transparency to the physical capability of the NTS. To facilitate better consideration of the physical capability of the NTS in decision making relating to new network investment, operational constraint management and the management of network access.
Benefits	Decisions relating to network investments, constraint management and access to the NTS are driven by a better understanding of the physical capability of the NTS.

Background

2.27 In our SSMD,[25] we asked NGGT to undertake an assessment of the physical capability of the NTS. Looking ahead to the RIIO-GT2 price control, we also said that we would put in place a Licence obligation on NGGT to produce an ANCAR.

Consultation position

Output parameter	Consultation position
Network capability assessment methodology (NCAM)	NGGT to develop and maintain a robust NCAM. NGGT to review the NCAM at least once in two years and make necessary changes.
ANCAR	NGGT to submit ANCAR, including: • flow forecasts across all Network Entry and Exit Zones • the level of physical Network Capability for each of these Entry and Exit Zones • the level of Network Capability that can be delivered using commercial tools for each of these Entry and Exit zones • changes to the level of physical network capability at all Entry and Exit Zones compared to the previous year, including an explanation of the drivers of these changes • a forecast of the target level of physical Network Capability in 10 years' time, taking account of the needs of NTS users.
Network capability targets	We do not propose to set network capability targets for the RIIO-2 period
Capacity baselines	We propose to amend NGGT's Licence to reduce baseline capacities at two Entry Points (St Fergus and Theddlethorpe). NGGT to initiate a comprehensive review of baseline capacities ahead of the next price control review.

[25] Table on page 42 of the RIIO-2 Sector Specific ANCAR Methodology Decision - Gas Transmission.

Rationale for consultation position

2.28 We propose to introduce a new Licence obligation on NGGT to develop and maintain a robust NCAM, and to submit an ANCAR. This can deliver value to consumers by providing a sound basis for NGGT to make future network investment decisions and efficient trade-offs between investment in physical assets and the cost of commercial tools[26] at NGGT's disposal. We do not propose to set network capability targets for the RIIO-2 period because capability of the NTS can be delivered by physical capability, as well as commercial tools, and is flexible rather than at a static level.

2.29 Further detail on the rationale for our consultation position is provided in Chapter 2 of the NGGT Annex.

Exit capacity obligations

2.30 Within the GD Annex, we have set out our decision to remove the existing financial incentive for exit capacity bookings, and to replace it with an enhanced obligation framework designed to ensure continued booking efficiency.

2.31 The processes set out in these obligations would require input from NGGT at certain points, and therefore may require a matching Licence condition to be created.

2.32 We expect that these obligations will largely reflect a formalisation of existing practices and should not create any significant additional work.

2.33 A full description of our proposed approach is set out in Chapter 2 of the GD Annex, but the specific list of obligations that we propose to apply to NGGT are set out in Table 2 below.

Table 2: Exit capacity obligations

Obligation	Applies to
Publish 1-in-20 peak day demand forecasts per individual 'network structure'.	NGGT / GDNs
Publish the methodology used to assess GDNs capacity bookings.	NGGT
Work in good faith with other networks to establish the booking pattern that maximises efficiency	NGGT / GDNs

[26] Commercial tools include Capacity Buybacks, Locational Energy Trades, Turn Up/Turn Down Contracts, etc.

Obligation	Applies to
Enter into formal dialogue with other relevant (connected) networks to establish efficient level booking for Assured Offtake Pressure, Flat, Flex (or other products facilitated by UNC).	NGGT / GDNs

Deliver an environmentally sustainable network

2.34 The transmission network and related business activities can be harmful to the environment and stakeholders expect the companies to take appropriate steps to mitigate their environmental impacts such as pollution to the local environment, resource waste, biodiversity loss and visual amenity issues relating to infrastructure.

2.35 In this section, we set out our consultation position on the environmental elements of NGGT's Business Plan.

2.36 Table 3 sets out the proposed environmental outputs for the RIIO-GT2 price control and where they are discussed. Our consultation position on the minimum requirements of the EAP for RIIO-2, which apply to both the transmission and gas distribution sectors, is in Chapter 4 of the Core Document. Our consideration of NGGT's bespoke environmental RIIO-GT2 proposals is in the NGGT Annex.

Table 3: Proposed RIIO-GT2 environmental outputs

Output name	Output type	Further detail
Common outputs		
Annual Environmental Report including Environmental Action Plan commitments	LO	This document – Chapter 2 Core Document – Chapter 5 NGGT Annex – Chapter 2
NTS Shrinkage	ODI-F	This document – Chapter 2 NGGT Annex - Chapter 2
GHG Emissions (venting)	ODI-F	This document – Chapter 2 NGGT Annex – Chapter 2
Bespoke outputs		
Environmental Incentive	ODI-F	This document – Chapter 2 NGGT Annex – Chapter 2
Compressor Emission Compliance	PCD, UM	This document – Chapter 3 NGGT Annex – Chapter 3
Decommissioning	PCD	This document – Chapter 3 NGGT Annex – Chapter 3

Environmental Action Plan and Annual Environmental Report

Environmental Action Plan and Annual Environmental Report	
Purpose	To ensure that the TOs take responsibility for the environmental impacts arising from their networks and are more transparent on what they are doing to mitigate these.
Benefits	These mechanisms will support cross-sector consistency and greater environmental ambition from the companies.

Background

2.37 In our SSMD,[27] we adopted a cross-sectoral environmental framework requiring the TOs to develop an EAP as part of their RIIO-2 Business Plans. We said that we expect the TOs to assess the environmental impacts of their RIIO-2 Business Plans, and to identify in their EAPs value for money initiatives and actions to mitigate those impacts.[28]

2.38 We set out the EAP framework in the Core Document, including the inclusion of the EAP Commitments in RIIO-2. This section provides more detail on our consultation position on elements of NGGT's EAP proposals relating to:

- reducing Business Carbon Footprint (BCF)
- enhancing biodiversity and natural capital
- reducing pollution to the local environment
- sustainable resource use, recycling and reducing waste.

2.39 NGGT requested £247.3m[29] to implement the thirty specific initiatives in its EAP, as well as a financial ODI, which encompasses a range of activities designed to reduce NGGT's environmental impact.

2.40 If all measures in the EAP were implemented successfully, NGGT forecasts that this would result in a reduction of approximately 1,782t/CO2e[30] to its BCF by the end of RIIO-2 relative to a counterfactual of implementing no additional measures.

[27] SSMD Core Document - Chapter 7.
[28] SSMD Core Document - Paragraphs 3.35 - 3.36.
[29] £239.3m of this is for compressor emission compliance and redundant asset decommissioning.
[30] Based on the mid-point of NGGT's lower and upper bound forecast.

2.41 In addition to its EAP, NGGT also proposed a financial environmental incentive that incorporates a range of environmental metrics into a single incentive. See Chapter 2 of the NGGT Annex for further details.

Consultation position

Output parameter	Consultation position
EAP commitments	Accept all of the EAP Commitments proposed by NGGT for BCF reduction, resource use, and biodiversity and natural capital (examples in table 4) and provide baseline funding
ODI-F Environmental incentive	Accept the ODI-F with some modifications to NGGT's proposal - see Chapter 2 in the NGGT Annex for further details.

2.42 We are proposing that NGGT will report in its Annual Environmental Report (AER) over the course of RIIO-GT2 on its progress against its EAP commitments. See Chapter 4 in the Core Document for details.

Rationale for consultation position

2.43 We welcome the initiatives proposed by NGGT in its EAP to reduce its BCF and mitigate the wider environmental impact of its operations. We consider that NGGT has demonstrated a good level of ambition in its EAP and we acknowledge the commitment to factor environmental impact into all major investment decisions. We propose to accept NGGT's proposals in the EAP because we consider they appropriately and efficiently tackle the environmental impacts in a way that is in the interests of existing and future consumers.

2.44 We propose to provide £163.83m baseline funding for compressor work and decommissioning redundant assets.[31] We will attach a PCD to this funding. We propose to provide £5.76m of funding for the EAP commitments related to BCF reduction, resource use and biodiversity and natural capital in NGGT's baseline allowance. We consider the funding amounts for these individual EAP commitments are not sufficiently material to warrant a PCD. Instead, we consider the reputational incentive of the AER is a sufficient safeguard to mitigate the risk that NGGT does not deliver on the commitment.

[31] NGGT Annex – Chapter 3.

2.45 NGGT's main EAP proposals that we propose to accept for the RIIO-GT2 price control are summarised in Table 4 below.[32]

Table 4: EAP proposals

Area	EAP proposals
Government legislation	PCD: Replacing two compressor units. Starting work at three more compressor sites.
BCF	EAP Commitment: Develop Science-Based Target (SBT) by 2023.
BCF	EAP Commitment: Invest in methane monitoring equipment to reduce leaks.
BCF	ODI-F: Replace 30% of operational fleet with EVs.
BCF	ODI-F: Reduce carbon emissions on business travel by 10% by end of RIIO-2.
BCF	EAP Commitment: Purchase 100% office electricity from renewable sources.
BCF	EAP Commitment: Continue to participate in EU-ETS.
BCF	EAP Commitment: Achieve carbon neutral construction for major projects starting in RIIO-2.
BCF	EAP Commitment: Install renewable generation at operational sites.
Resource use	EAP Commitment: Implement the ISO20400 sustainable sourcing process.
Resource use	ODI-F: Reduce waste intensity annually on construction projects.
Resource use	EAP Commitment: Pilot and implement circular economy principles.
Resource use	PCD: Address 80 redundant assets.
Resource use	ODI-F: Reduce office waste by 20% by 2026.
Resource use	ODI-F: Recycle 60% of office waste by 2026.
Resource use	ODI-F: Reduce water use in offices by 20% by 2026.
Biodiversity / natural capital	ODI-F: Increase environmental value of non-operational land by 10% by 2026.
Biodiversity / natural capital	EAP Commitment: Reinstate redundant sites to BNG[33]

Government legislation

2.46 NGGT has proposed replacing a number of compressors in order to comply with environmental regulations on emissions. Assessment of these proposals is in Chapter 3 of the NGGT Annex.

[32] The full list of proposals is in Annex 16.01: Environmental Action Plan of NGGT's Business Plan.
[33] Biodiversity Net-gain Updating Planning Requirements Consultation.

Business Carbon Footprint (BCF)

2.47 We recognise that there are difficulties establishing a Science Based Target (SBT) in the gas industry due to uncertainty around the future of gas and the pathways to Net Zero, and welcome NGGT's commitment to establish an SBT by 2023.

2.48 We welcome NGGT's proposal to replace 30% of its fleet with electric vehicles (EVs) during RIIO-GT2, and will provide an allowance for this and for the associated charging infrastructure. See Chapter 3 in the NGGT Annex for details of our assessment.

2.49 We propose to accept NGGT's justification for installing solar generation at its compressor sites and investing in methane monitoring equipment. We propose to provide baseline funding for these investments. See Chapter 3 in the NGGT Annex for details of our non-operational Capex assessment.

2.50 Other commitments in NGGT's EAP to reduce its BCF include reducing road mileage by promoting rail and virtual meetings, promoting EV company cars, remaining in the EU ETS scheme,[34] ensuring its supply chain has carbon reduction targets, focusing on efficient office energy use, and purchasing 100% renewable energy for its own operations. We welcome NGGT's initiatives in all of these areas as NGGT has demonstrated the environmental benefits in its Business Plan in terms of reduced emissions, and will monitor NGGT's progress against these commitments through its Annual Environmental Report.

Resource use

2.51 NGGT has made a range of commitments in this area, notably to recycle 60% of office waste; reduce water use by 20%; and reduce the amount of waste created in its offices by 20%. We recognise NGGT's ambition and hope these commitments will help embed an environmentally-focussed culture into NGGT as BAU.

2.52 NGGT has also looked wider than its own organisation and we welcome its proposal to pilot and implement circular economy principles and implement the ISO20400 sustainable sourcing process[35] as we consider this will help embed a culture of environmental responsibility across the industry.

[34] EU Emissions Trading System.
[35] ISO 20400 - Sustainable Procurement.

Biodiversity/natural capital

2.53 We believe NGGT has shown ambition in this area and recognise the consumer benefit of NGGT's commitment to deliver biodiversity Net Gain on non-operational land and construction projects, which is a cleaner and more diverse natural environment for communities impacted by the NTS.

2.54 NGGT has requested £81.1m to decommission a number of redundant assets and £16.5m to decommission compressors that no longer meet emissions compliance legislation in RIIO-GT2. If left unaddressed, these assets have potential to cause environmental damage and incur maintenance costs. Further detail of the assessment of this proposal is in Chapter 2 of the NGGT Annex.

Environmental incentive

Environmental incentive	
Purpose	To incentivise NGGT to outperform the baseline improvement targets in its Environmental Action Plan.
Benefits	NGGT will further reduce its carbon emissions, improve the natural environment and reduce its resource use for the benefit of current and future consumers.

Background

2.55 In its Business Plan, NGGT proposed a bespoke ODI-F to reward/penalise its performance in the following seven environmental areas compared to an annual target:

a) adoption rate of alternative fuel vehicles

b) reduction in business travel CO2 emissions

c) operational and office waste recycling rate

d) percentage reduction in office waste

e) percentage reduction in office water use

f) percentage increase in environmental value of non-operational land

g) percentage biodiversity net gain in every new construction project.

2.56 The ODI-F would compare the actual annual performance metric in an area to specified annual targets and performance thresholds that NGGT has proposed in each area. Performance would be scored depending on the level of under or out-performance in each area. NGGT proposed that the metrics are weighted equally such that the scores in each area would be added together to obtain an overall score which would be used to calculate the level of penalty or reward. NGGT proposed to cap the maximum reward and penalty at +/- £4m per annum.[36]

Consultation position

Output parameter	Consultation position
Mechanism design	Accept the basic design of NGGT's proposed environmental ODI-F, subject to resolving the issues discussed in this table.
Scope and weighting	Reduce the weight on the three metrics relating to waste, recycling and resource use by two thirds
Metric for alternative fuel vehicles	We are consulting on re-specifying the metric to target a reduction in the CO2 emissions from operational transport.
Incentive value	Our proposed options are: • equating the incentive to the economic value of the disbenefit / benefit arising from the performance level in each area • equating the incentive to the efficient delivery costs plus a margin.

Rationale for consultation position

2.57 We propose to accept NGGT's proposal for an environmental ODI-F as we consider that an ODI-F would ensure that NGGT has a financial interest, proportionate with its involvement and effort, in achieving or exceeding the baseline targets set out in its EAP. However, we propose to revise the NGGT's proposed performance metrics, methodology and incentive strength.

2.58 Further detail on the rationale for our consultation position is in Chapter 2 of the NGGT Annex.

Greenhouse gas emissions (compressor venting)

Greenhouse gas emissions (compressor venting)	
Purpose	To encourage the System Operator to consider environmental impacts when making decisions about venting from NTS compressors.
Benefits	Reduced environmental impact from compressor venting.

[36] See NGGT's Output Delivery Incentive Annex of its RIIO-GRIIO-GT2 Business Plan for full details of the bespoke ODK-F proposal annual targets, scoring system and the calculation of the penalty or reward.

Background

2.59 The greenhouse gas (GHG) emissions scheme incentivises NGGT to take the cost of GHG emissions into account when deciding whether to depressurise compressor units or to keep units on standby.

2.60 In our SSMD,[37] we made the decision to retain the downside-only incentive based on the current design following its review in 2018.

Consultation position

Incentive parameter	Consultation position
Incentive design	Symmetrical financial incentive
Incentive cap/floor	+/- £1.5m
Target	2,897 tonnes of CO_2 per year
Incentive rate	A reward/penalty of approx. £1.7k for every tonne vented below/above target up to the incentive cap/floor.

Rationale for consultation position

2.61 We consider the inclusion of a financial upside is justified to motivate NGGT to reduce GHG emissions from compressor venting and deliver further improvements on managing its venting of emissions, in line with achieving the government's Net Zero targets.

2.62 Further detail on the rationale for our consultation position is in Chapter 2 of the NGGT Annex.

NTS shrinkage

NTS shrinkage	
Purpose	To incentivise the System Operator in efficient procurement and management of own use gas and electricity for the operation of compressors and energy that cannot be billed.
Benefits	Reduced cost and amount of shrinkage on the NTS

[37] SSMD GT Annex - Paragraphs 3.60 - 3.72.

Background

2.63 The NTS shrinkage[38] incentive aims to reduce both the cost and amount of shrinkage on the NTS. The incentive is comprised of three components:

- Compressor Fuel Use ('CFU'): The energy (electricity and gas) used to run compressors to transport gas through the NTS
- Calorific Value Shrinkage ('CVS'): The energy which cannot be billed due to the provisions of the Gas (Calculation of Thermal Energy) Regulations 1996
- Unaccounted for Gas ('UAG'): The quantity of gas, which is lost from the NTS and is attributable to metering errors.

2.64 In our SSMD,[39] we decided to remove the CFU element from the Shrinkage incentive. We also expressed our view that NGGT should not continue to be incentivised for the two smaller components of this incentive - UAG and CV shrinkage - unless it is able to demonstrate that the two elements are within its control and have provided value for money to consumers during RIIO-GT1.

Consultation position

Output parameter	Consultation position
Incentive Design	Retain as a reputational only incentive with a simplified design.

Rationale for consultation position

2.65 We do not consider it appropriate to financially incentivise volume reductions of shrinkage, as it is extremely difficult to predict what a reasonable baseline is and it is not clear how much of the variation against a baseline/target is attributable to concrete actions by NGGT.

2.66 We conclude that there is little value for consumers from a financial incentive for NGGT to make efforts to minimise expected costs and associated risk when procuring shrinkage energy on a day-to-day basis. Therefore, our view is that a reputational incentive requiring NGGT to report on actual CFU procurement costs against specified baselines and investigate causes of UAG and CVS is more appropriate for NTS Shrinkage.

[38] Shrinkage is a term used to describe the energy that 'shrinks' in the operation of the gas network.

[39] SSMD GT Annex - Paragraphs 3.73 - 3.86.

2.67 Further detail on the rationale for our consultation position is in Chapter 2 of the NGGT Annex.

3. Cost of Service - setting baseline allowances

Introduction

3.1 This chapter provides an overview of our approach to assessing the baseline funding requests from NGGT and sets out our proposal of its baseline totex allowances and relevant PCDs.

3.2 We have set baseline totex allowances for NGGT only where we are satisfied of the need for and certainty of the proposed work, and where there is sufficient certainty of the efficient cost of the work. Our proposed baseline totex for NGGT is summarised in Table 5 below.

Table 5: NGGT baseline funding request and Ofgem's proposals

Cost category	NGGT proposed baseline (£m)	Ofgem proposed baseline (£m)
Load related	11.59	2.44
Non-load related	898.74	517.51
Other costs	545.80	230.31
Non-op Capex	296.50	68.40
Network operating costs	389.51	379.65
Indirect costs	518.24	411.10
Ongoing efficiency	-57.92	-50.50
Total	**2,602.45**	**1,558.91**

3.3 Our proposed reductions result from us not being satisfied of the robustness of justification of certain work or activity levels and taking a view of efficient costs for justified work or activities lower than NGGT's proposals.

The make-up of Totex

3.4 NGGT's Business Plan costs are broadly categorised as two types: capital expenditure (Capex) and operational expenditure (Opex). In general, Capex is associated with the installation of new long-life assets or maintaining/upgrading existing assets, while Opex relates to the costs of running and maintaining the network.

3.5 There are three main Capex elements:

- Load-related expenditure (LRE), which relates to investment to expand current network capacity or to connect with new entry or exit users
- Non-load related expenditure (NLRE), which relates to investment to maintain the health of the existing asset base
- Non-operational Capex relates to assets not directly connected to the network but which support the general functioning of the business; for example, vehicles and transport, and office buildings.

3.6 There are two main groups of Opex:

- network operating costs, which are those costs incurred in the day-to-day running of the network; for example, rectifying faults, repairs and maintenance activities
- indirect Opex, which encompasses business support costs (BSC), ie cost relating to functions such as corporate governance, and closely associated indirects (CAI), ie back office functions directly involved in the construction and operation of network assets such as Project Management and Network Design.

3.7 There are also other one-off or bespoke costs, such as those related to resilience work for cyber and physical security. These costs are a mix of Capex and Opex.

3.8 In addition to assess the current view of efficient level of individual cost components above, we also expect the companies to strive for improvements in the way they operate through the price control period. We do this through the imposition of an efficiency challenge on the totex amount derived through our assessment. The level of this challenge is informed by forecasts of growth in the general economy and specific inputs to the companies' activities, for example, labour and input material prices.

Key findings of our assessment

3.9 NGGT's costs cover both the Transmission Owner (TO) and System Operator (SO); we have assessed each element of totex using our assessment toolkit[40] and describe some of the key outcomes below.

[40] SSMD GT Annex - Chapter 5.

Load related

3.10 Less than 0.5% (£11.59m) of NGGT's proposed costs relate to load-related expenditure - the main project is the Blackrod reinforcement project (£8.85m) which we propose to reject. NGGT has indicated potential uncertain spend of £262m linked to the potential customer-driven expansion at the Milford Haven terminal. We propose to allow £2.44m in baseline allowances for Network Capability projects and a UM to consider load-related expenditure related to customer requests for increased network capacity during RIIO-GT2.

Non-load related

3.11 The majority of NGGT's proposed Capex spend plan relates to its existing asset base, specifically for compressor replacement due to emissions legislation and asset health work to maintain the condition of the NTS.

3.12 Our NLRE proposals reflect £112.24m of volume (ie the amount of work) and £268.99 of cost assessment (ie the cost of work) reductions. We are proposing to accept £517.51m of the £898.74m (approximately 56%) NLRE in NGGT's baseline proposal and provide UMs to enable us to consider further costs during RIIO-GT2 where project costs become clearer. This includes implementing a new staged approach to the assessment of compressor costs, which reflects the project financial and decision-making stage-gates NGGT uses, to try to overcome previous challenges we have faced when assessing compressor projects.

Other costs

3.13 In GT, other costs are predominately comprised of physical and cyber security costs. NGGT is responsible for maintaining the physical and cyber security of the NTS. Details of NGGT cyber security plans and our assessment are omitted from our Draft Determination, as they are a matter of national security.

3.14 NGGT has proposed to invest a total of £131.87 in physical security measures. We have reviewed NGGT's submission and propose to allow £64.93m.[41]

[41] Includes Capex and Opex costs.

Non-operational Capex

3.15 NGGT proposes spending £296.50m on costs relating to IT & Telecoms (TO and SO), Vehicles, property and strategic spares.

3.16 Our view is that the majority of the £251.63m NGGT proposed for IT & Telecoms projects either do not pass a needs case test or are immature and require the options and costs to be developed further. We propose to allow £33.54m as baseline and include a UM at the start and mid-point of RIIO-GT2 so Ofgem can re-assess these costs.

3.17 For the remaining investments, vehicles, property and strategic spares, we propose to allow £34.86m of NGGT's £44.87m request.

Opex

3.18 NGGT has proposed network operating costs (£355.41m), associated with the day-to-day maintenance of the NTS, and indirect Opex (£482.74m), supporting both general business activities (business support) and operational activities (CAIs).[42]

3.19 Our assessment of these areas utilised historical run rates and econometric regression techniques.[43] We propose to accept £790.75m of these costs against a submission of £897.26m.

Ongoing efficiency

3.20 NGGT proposed £57.92m of ongoing efficiencies (OE) associated with its requested baseline allowance. This was comprised of a flat 4% Capex efficiency from year 1 of RIIO-GT2 and a compound 1.1% efficiency for Opex. We propose not to accept NGGT's proposals and instead apply £50.50m of OE on our proposed baseline allowance, comprised of a compound 1.0% efficiency for Capex and compound 1.2% efficiency for Opex. We also propose a 0.2% innovation efficiency for totex that we apply in addition to our Capex and Opex OE.[44] Further detail of our approach is in Chapter 5 of the Core Document.

[42] Excludes Quarry and Loss and Pension costs.
[43] See chapter 5 in the Core Document for details of our modelling choices and assessment.
[44] See Chapter 5 in the Core Document for details of our OE approach.

Approach to GT cost assessment

3.21 NGGT's (GTO and GSO) Business Plan sets out its proposed activities and associated funding request covering the period 1 April 2021 - 31 March 2026. Alongside the core plan, there are numerous subsidiary documents, which set out the detail underpinning the plan. The key documents relating to the cost assessment process are:

- Engineering Justification Papers (EJPs) - these set out the needs case, the options considered and the assessment process ("optioneering") applied to those options in order to identify the proposed solution, including the associated cost benefit analysis for each of the main schemes of work
- Business Plan Data Tables (BPDTs) - these detail the costs and volumes of asset interventions proposed during the period, along with the operational costs for running the network
- Network Asset Risk Metric (NARM) tables - these set out the in-year and lifetime network risk reduction for each intervention detailed in the BPDTs
- supporting papers - many of the significant interventions and activity types have additional papers and tables giving further detail on why the Licensee considers their proposal to be in the consumer's interest.

3.22 We required NGGT to submit its costs post-capitalisation as this is the basis on which we set our allowances. This differs from electricity transmission where allowances are set pre-capitalisation. The impact is approximately a 10% uplift to Capex costs in GT, offset by a decrease in network operating costs. This is mostly due to project management costs being included as part of Capex. We have ensured that this has been considered during the econometric benchmarking of indirect Opex costs, to ensure all transmission companies are compared on a consistent basis.

3.23 In the gas transmission sector, there are no comparators which limits the toolkit available in certain areas such as Capex. However, for certain Opex costs this can be overcome by comparing across the whole transmission sector (electricity and gas).

3.24 Accordingly, our approach to assessing Network company costs relies on a combination of bespoke review and comparison across all transmission companies, as appropriate to the nature of the cost. Capex programs have been subject to bespoke assessment of the needs case and optioneering, followed by a review of

the efficiency of proposed costs. Opex has been reviewed by comparing the Network company submission with both historical incurred costs and cost levels across the gas and electricity transmission sectors for similar activities, where possible.

3.25 In considering the Business Plans, we have raised a large number of supplementary questions directly with NGGT. These have helped clarify points of detail or provided extra data to inform our view. Where necessary, we have also held meetings with NGGT to further explore issues.

3.26 The following sections detail the GT cost assessment processes followed in each of the main BPDT cost groupings: Load and Non-Load related capex; non-operational Capex and oppex.

Load and non-load related Capex

3.27 Load and non-load related Capex relate to investment to expand the network capacity and investment to maintain the health of its existing asset base, respectively. Our cost assessment in these areas follows a two-stage approach; firstly, a review of the needs case and the options considered fulfilling this requirement; and then, an assessment of whether the proposed costs are considered efficient, and if appropriate, what adjustments should be applied.

Needs case review

3.28 As part of their RIIO-GT2 Business Plan submissions, network companies were required to provide EJPs, which set out the scope, costs and benefits for major projects or aggregated investment programmes aimed at improving asset health of existing equipment or providing increased capacity on the network. These EJPs underpin the high-level outputs contained in the Business Plans by detailing the investments required to meet the proposed outputs and summarising the needs case and supporting evidence.

3.29 The EJPs should act as a robust decision support tool, open to scrutiny and challenge in conjunction with other appropriate means of justification for investment decisions. They should be transparent about need, options, scope, and which risks, costs and benefits were considered by the TO as part of the analysis. In support of these aims, Ofgem published EJP Templates and Guidance, as part

of the overall RIIO-GT2 Business Plan Guidance. The EJP Guidance sets out the expected content and format of the EJPs.

3.30 In support of the assessment of the RIIO-T2 Business Plans, Ofgem developed an EJP assessment framework to ensure that the EJPs meet the published guidance and provide sufficient evidence for the proposed investments. The assessment process considered the following:

- **the needs case for the investment:** As per the EJP Guidance, we considered whether this has been demonstrated by the provision of an explanatory narrative and evidence to support the needs for investment. Supporting evidence should include asset condition data; degradation projections, network capability assessments and references to the outputs of other industry standard assessment methodologies
- **the options development and assessment process:** We considered whether all credible options to meet the needs case have been identified, including do nothing or minimum intervention, the reasons given for the rejection of options should be presented and whether the rationale for rejection is clear
- **efficiency of engineering solutions:** We considered whether the preferred option is a proportionate solution to the identified needs case and that the scope of the solution has not expanded beyond meeting the identified need without further justification
- **investment delivery timings and volumes:** We considered whether the volumes proposed as part of a proposed solution could be delivered in the RIIO T2 period and for asset replacement projects whether they deliver a net risk reduction as measured by NARM
- **maturity of submitted costs:** We reached a view on how well developed the project costings are - for instance, whether they are supported by market tested tenders, or whether they are still just at desktop study stage.

3.31 NGGT has not reported a material amount of Capex spend starting in RIIO-GT2 with deliverables completing in RIIO-GT3.

3.32 To support the assessment of NGGT's plan we commissioned Atkins Consultancy[45] to provide a view on the EJPs, including the needs case and options selection. From this and our own review of NGGT's plan, we were able to form our view on

[45] The report provided by Atkins Consultancy will not be published on our website due to the commercially sensitive nature of the subject matter.

the justified volume of work and whether additional protections, such as UMs or PCDs, were required to manage the risk to the consumer of under-delivery or increased requirements of investment.

Cost efficiency review

3.33 After establishing our view of the justified investment work from each Network company's schemes plus a view on their cost maturity, we then assessed the efficient cost for this work. We derived an efficient cost or unit cost where possible by assessing a combination of historical RIIO-T1 costs, forecast tendered costs or NGGT Subject Matter Expert's (SME) view of costs.

3.34 The final outputs of the load and non-load Capex cost assessment process were:

- a list of approved investments and their associated justified volumes
- our view of the efficient costs for each of those investments
- any volumes from the baseline proposals that have been assigned as PCDs
- any volumes from the baseline proposals that have been allocated to UMs.

Other costs

3.35 Other costs comprise resilience work for cyber resilience (cyber OT), business IT security (cyber IT) and physical security. For details on cyber OT and IT see Chapter 8 of the Core Document.

3.36 Our approach to physical security follows the same approach as NLRE described above except the needs case for a new site is approved by Government. For details on physical security see Chapter 8 of the Core Document.

Non-operational Capex

3.37 Non-operational Capex costs comprise the following four categories: Property; Small tools, equipment, plant and machinery (STEPM); Vehicles and transport; and, Information Technology & Telecoms (IT&T).

3.38 For both Property and STEPM costs, we examined the detailed breakdown of forecast costs and historical run-rates for spend over the RIIO-1 period.

3.39 For vehicles and transport costs, we used a historical trend model based on RIIO-T1 actual incurred costs for non-electric vehicles. We then multiplied the model's

output by the proportion of the fleet that is not being replaced with electric vehicles (EVs). For the EV element, we multiplied our view of the proposed volume by an appropriate EV unit cost based on our review of the companies' submissions. We added both of these figures together to determine an overall proposed allowance for Vehicles and Transport.

3.40 For assessing IT&T costs, we were assisted by external consultants with expertise in this subject area. This assessment reviewed the strength and traceability of the IT proposals against four criteria: robustness of project justification; credibility of planning; understanding and deliverability of resource definition; and efficiency and certainty in costing.[46]

3.41 Projects that met all four assessment criteria were included for proposed baseline funding. Projects that met the first criterion but failed to meet all criteria are proposed to be subject to the Non-operational IT&T UM, details of which can be found in the Chapter 7 of the Core Document.

Opex

3.42 Opex analysis centres around two areas: network operating costs (direct Opex) and indirect Opex. The former relates to expenditure, which is primarily for the day-to-day maintenance of the NTS to a safe and good standard; the latter concerns costs incurred supporting both general business activities and operational activities.

3.43 In contrast to Capex, Opex costs are expected to be more regular and less prone to significant shifts in activity levels. It lends itself to analysis through historical run rates and econometric techniques, as there is a more direct comparability of activities across companies. The following sections explain how these have been applied in our assessment of NGGT's Business Plan.

Network operating costs (Direct Opex)

3.44 TO direct Opex costs are those incurred on an ongoing basis relating to NGGT's field-based workforce delivering its asset steward responsibilities. SO direct Opex costs are ongoing costs incurred operating the network on a day-to-day basis.

[46] See the Technical Annex for further details of the assessment approach.

3.45 Our assessment used a historical trend model for both the TO and SO to forecast RIIO-T2 costs. Due to changes in the way some of these costs have been categorised across RIIO-T1 and RIIO-T2, we did not consider it appropriate to disaggregate NGGT's proposed direct Opex costs when using our model. We have instead used historical actual total direct Opex data to set RIIO-GT2 costs.

Indirect Opex

3.46 Indirect Opex consists of both Business Support Costs (BSC) and CAI. BSC are incurred supporting companies' general business activities, while CAI costs are those that support operational activities.

3.47 We performed a joint assessment of both BSC and CAI across ET and GT due to the commonality of their sub-categories, but excluded NGGT (SO) given its different business nature[47]. We also excluded Electricity Distribution Network Operator data, despite the advantage of increasing sample size, as this would require significant data normalisations to ensure costs were being compared on a like-for-like basis.

3.48 The individual cost sub-categories are set out in the Table 6 and Table 7 below.

Table 6: Business support cost sub-categories by sector

Business Support category	GT	ETO
IT&T	Yes	Yes
Property management	Yes	Yes
Audit, finance, and regulation	Yes	Yes
HR and non-operational training	Yes	Yes
Insurance	Yes	Yes
Procurement	Yes	Yes
CEO and group management	Yes	Yes

Table 7: CAIs sub-categories by sector[48]

CAI category	ET	GT (TO)	GT (SO)
Operational IT & Telecoms	Yes	Yes	Yes
Project management	Yes	Yes	No
Network design and engineering	Yes	Yes	No

[47] Note that the Electricity System Operator was also excluded from this analysis due its activities and cost structures being very different from those of the TOs.
[48] We have included some cost elements (eg project management) here to analyse them together with the more directly associated activities so as to avoid distortions introduced by company capitalisation policies.

CAI category	ET	GT (TO)	GT (SO)
System mapping	Yes	Yes	No
Engineering management and clerical support	Yes	Yes	No
Network policy (including R&D)	Yes	Yes	No
Health, safety, and environment (HSE)	Yes	Yes	Yes
Operational training	Yes	Yes	No
Store and logistics	Yes	Yes	No
Vehicles and transport	Yes	Yes	No
Market facilitation	Yes	Yes	No
Network planning	Yes	Yes	No

3.49 We assessed the IT&T costs as part of a separate expert review (see the Non-operational Capex section above, which discusses our approach to assessing those costs). For all of the other sub-categories, we were assisted in our analysis by external econometric specialists.

3.50 Our benchmarking approach is to apply an econometric approach with Pooled Ordinary Least Squares (POLS) estimators on the aggregation of relevant cost categories. We used POLS given their relative simplicity, transparency, and favourable small sample properties. Our assessments were conducted on a top-down basis rather than at an activity level to reduce potential distortion from differences in cost allocations and to reduce the risk of inadvertently 'cherry picking' results.

3.51 Our selection of econometric model first assessed the model's general statistical fit, the robustness of the chosen cost drivers, and whether the modelled results appeared plausible. We then ran a range of diagnostic tests to further test the model's robustness.

3.52 Our models used only historical data to avoid undue dependency on company view. However, we conducted model sensitivity checks, which included forecast data to confirm consistency and applicability of the model.

3.53 To ensure comparability of costs, we assessed costs at a gross rather than net level. Otherwise, a model's assessment may be influenced by differing cost allocation policies between networks rather than actual efficiency.

Modelling of Business Support Costs

3.54 BSCs have shown similar trends for both ET and GT across both the RIIO-1 and RIIO-2 periods. This provides confidence in pooling ET and GT for BSC benchmarking given that similar aggregate trends allow for our model to have a stronger predictive capability than if trends were diverging.

3.55 We considered a number of potential cost drivers for BSCs, recognising they are a combination of fixed and semi-variable factors that will increase by step changes in response to both size / volume and as a result of the complexity of an organisation.

3.56 The broad options include Modern Equivalent Asset Value (MEAV), which simultaneously reflects the scale, complexity, characteristics and composition of the network asset base; and Composite Scale Variables (CSV), which incorporate other cost drivers, namely Full Time Employees for Human Resources costs and Total Spend / Totex for Procurement costs.

3.57 Our proposed solution is to use CSV combined with a relevant statistical adjustment for GT and ET sector compatibility as this was found to give a stronger model fit than a MEAV-only regression.

Modelling of CAIs

3.58 After considering a number of potential cost drivers, we concluded that a multivariate regression that includes both MEAV and Total Capex, was the most appropriate. The Total Capex plus MEAV regression has robust cost driver coefficients and an adjusted R-squared of 0.79 for the preliminary model specifications. There is also the intuitive reasoning that Total Capex and MEAV should together reflect both the workload and scale effects that drive CAIs.

3.59 In view of the spread in Network company efficiency scores arising from our chosen model, we also considered the results from different estimators and simple ratio benchmarks to cross-validate our model outputs. These gave us confidence that the results were robust and reliable for setting an efficiency challenge. Details of these alternative approaches can be found in the SME's report published as Indirect Opex Annex alongside Draft Determinations.

Ongoing efficiency

3.60 In addition to the processes of assessing efficient costs of individual cost categories based on current available information as set out above, we have included an ongoing efficiency (OE) challenge as part of the allowances determined in each cost area. This is to incorporate the expected growth in productivity across the general economy, coupled with sector-specific considerations. The level has been informed by work carried out by our consultants.[49]

3.61 Prior to applying our OE challenge, we have removed NGGT's proposed OE from its Business Plan. We have then adopted our proposed 1.2 Capex and 1.4% Opex challenge. For full details of our approach see Chapter 5 of the Core Document.

[49]CEPA, RIIO-GD2 and T2: Cost Assessment - Frontier shift methodology paper (May 2020).

4. Adjusting baseline allowances for uncertainty

Introduction

4.1 This Chapter sets out the UMs that we are proposing for NGGT in RIIO-GT2. Some of these reflect the position that we set out in our SSMD,[50] and some have been developed through further engagement with NGGT following the submission of its Business Plan.

4.2 As set out in Chapter 7 of the Core Document, the three types of UM that we are proposing to utilise in the GT sector in RIIO-2 are re-openers, pass-through and indexation mechanisms.

4.3 We are proposing a common set of design parameters for re-openers. Our proposal and rationale can be found in the Core Document.[51] Unless explicitly stated otherwise for specific circumstances, re-openers will follow the common set of design parameters including:

- one week-long re-opener window in January of the relevant year for network company applications
- application requirements will be set in licence conditions and guidance where possible
- the ability for both the Authority and the network companies to trigger the re-opener
- a materiality threshold of 1% of annual average Base Revenue, multiplied by the TIM incentive rate, with aggregation available subject to certain criteria.

4.4 Table 8 summarises RIIO-GT2 proposed UMs. See Chapter 4 in the NGGT Annex for our detailed assessment of NGGT's RIIO-GT2 UMs.

[50] SSMD GT Annex – Chapter 6.
[51] Core Document - Chapter 7.

Table 8: Summary of RIIO-GT2 proposed UMs

UM name	UM type	Further detail
Common UMs – across all sectors		
Ofgem Licence fee	Pass-through	Core Document - Chapter 7
Business rates	Pass-through	Core Document - Chapter 7
Bad debt	Pass-through	Regulatory Finance Annex – Chapter 11
Inflation indexation of RAV and allowed return	Indexation	Regulatory Finance Annex - Chapter 9
Cost of debt indexation	Indexation	Regulatory Finance Annex - Chapter 5
Cost of equity indexation	Indexation	Regulatory Finance Annex - Chapter 5
Real Price Effects	Indexation	Core Document – Chapter 5
Tax review	Re-opener	Regulatory Finance Annex – Chapter 7
Pensions (pension scheme established deficits)	Re-opener	SSMD Finance Annex - Chapter 7
Physical security	Re-opener	Core Document - Chapter 7
Cyber resilience IT	Re-opener	Core Document - Chapter 7
Cyber resilience OT	Re-opener	Core Document - Chapter 7
Coordinated Adjustment Mechanism	Re-opener	Core Document - Chapter 7
Net Zero	Re-Opener	
Non-operational IT & Telecoms	Re-opener	Core Document - Chapter 7
UMs for NGGT only		
Central Data Services Provider costs (was called The Gas Transporters share of Xoserve costs)	Pass-through	SSMD GT Annex - Chapter 6
Independent Systems	Pass-through	SSMD GT Annex - Chapter 6
Policing cost associated with Counter-Terrorism Act 2008	Pass-through	SSMD GT Annex - Chapter 6
Incremental capacity	Re-opener	This document - Chapter 4
Quarry and Loss	Re-opener	This document - Chapter 4
Pipeline diversions	Re-opener	This document - Chapter 4
Bacton terminal site redevelopment	Re-opener	This document - Chapter 4
King's Lynn subsidence	Re-opener	This document - Chapter 4
Asset health – non-lead assets	Re-opener	This document - Chapter 4
Compressors	Re-opener	This document - Chapter 4
GT Opex escalator	Indexation	This document - Chapter 4

Incremental capacity

Incremental capacity re-opener	
Purpose	To allow an adjustment to NGGT's allowed expenditure in the event of a request for the release of Firm Entry/ Exit Capacity which constitutes Incremental Obligated Entry/ Exit Capacity and which cannot be satisfied through the use of Entry/ Exit Capacity Substitution.
Benefits	This re-opener will allow a case-by-case assessment of project need and cost, and support delivery of key infrastructure at best value to the consumer.

Background

4.5 In our SSMD,[52] we set out that we would introduce a re-opener mechanism to manage potential costs associated with the release of incremental capacity.

Consultation position

Funded Incremental Obligated Capacity Re-opener[53]	Consultation position
Materiality threshold	No materiality threshold for triggering the re-opener.
Re-opener window	No specific window for submissions.
Notice to release Incremental Obligated Capacity	Retain the current notice given by the Licensee of a request.
Pre-application notification	To be submitted to Ofgem at least 12 months prior to the project submission.
Project submission	Project submission process to include a needs case and cost assessment.
Exceptional events mechanism	To include a mechanism for adjusting allowances for exceptional events.

Rationale for consultation position

4.6 We propose that the incremental capacity re-opener has a number of submission stages, including those that require NGGT to make a comprehensive project submission, including a needs case and cost assessment. This would be intended to be in line with the industry process (PARCA).[54] This will allow us to assess NGGT's project submissions on a case-by-case basis.

[52] SSMD GT Annex - Paragraph 6.16.
[53] We will consider as part of Licence drafting whether there should be two separate re-openers, for Entry and Exit respectively, but our proposed policy is as set out here.
[54] National Grid - reserving capacity.

4.7 See Chapter 4 in the NGGT Annex for full details of this UM.

Pipeline diversions

Pipeline diversions re-opener	
Purpose	A mechanism that ensures NGGT is able to recover costs that are outside of its control.
Benefits	Consumer money is not spent on projects with uncertain costs and/or scope of work.

Background

4.8 In our SSMD,[55] we stated our intention to retain a re-opener provision for pipeline diversion costs and review the cost items that NGGT may recover in relation to diverting existing pipelines.

Consultation position

Output parameter	Consultation position
Materiality threshold	In line with our common approach to re-openers as set out in the Core Document[56]
Re-opener window	Year 2 of RIIO-GT2

Rationale for consultation position

4.9 For the reasons set out in our SSMD, we have decided to retain the re-opener for pipeline diversion costs arising from obligations / liabilities NGGT have inherited from British Gas the Gas Council. Given the level of uncertainty around the need to divert pipelines, it would not be in consumers' best interests to provide ex ante funding for such work.

4.10 We propose to adopt the standard re-opener approach[57] for pipeline diversion costs, and we consider that a re-opener in Year 2 of RIIO-GT2 is appropriate, as any projects that require funding during the price control are likely to have been identified at this point.

4.11 See Chapter 4 in the NGGT Annex for full details of this UM

[55] SSMD GT Annex – Chapter 6.
[56] Core Document – Chapter 7.
[57] Core Document – Chapter 8.

Quarry and loss

Quarry and loss re-opener	
Purpose	To adjust revenues should NGGT incur material costs related to loss of development or mineral sterilisation Quarry and Loss claims.
Benefits	Consumer money is not spent on projects with uncertain costs and/or scope of work.

Background

4.12 In our SSMD,[58] we stated that we were minded to retain a Quarry and Loss re-opener for costs related to loss of development or mineral sterilisation only and to provide baseline funding for all other Quarry and Loss costs.

4.13 As part of its Business Plan, NGGT provided information regarding the types of costs associated with loss of development and mineral sterilisation along with strategies to manage such claims.

Consultation position

Output parameter	Consultation position
Materiality threshold	In line with our common approach to re-openers as set out in the Core Document[59]
Re-opener window	Year 2 of RIIO-GT2

Rationale for consultation position

4.14 For the reasons set out in our SSMD, we propose to use a UM to treat unforecastable Quarry and Loss costs. NGGT proposed a re-opener in Year 2 of RIIO-GT2, and we accept this.

4.15 NGGT provided additional information regarding the types of costs it incurs challenging loss of development and mineral sterilisation claims and we are satisfied with the actions NGGT takes.

4.16 Although NGGT provided some additional details of forecast costs in these areas, there still remains considerable uncertainty around the materiality and timing of these costs, and therefore we maintain our SSMD position of treating loss of development and mineral sterilisation claims through a re-opener.

[58] Paragraph 6.35 in the RIIO-2 Sector Specific Methodology Decision - Gas Transmission.
[59] Core Document – Chapter 7.

4.17 See Chapter 4 in the NGGT Annex for full details of this UM.

Bacton terminal site redevelopment

Bacton redevelopment	
Purpose	To address uncertainty around the costs of addressing long-term asset health issues at the Bacton terminal.
Benefits	Consumer money is not spent on projects with uncertain costs and/or scope of work.

Background

4.18 The Bacton North Sea gas terminal was constructed in the late 1960s, and as such, many of the assets at the site have reached a state of significant degradation. NGGT has proposed developing a replacement terminal on a brownfield site may prove to be cost beneficial over replacing existing assets like-for-like.

4.19 This project is still in an early development stage. There is significant uncertainty around the costs involved in redeveloping a gas terminal and NGGT has therefore requested a re-opener for the costs for this project.

Consultation position

Output parameter	Consultation position
Materiality threshold	N/A
Re-opener window	Feb 2022 (Options Selection), Aug 2022 (Cost assessment)
Re-opener requirements	Outlined in associated PCD

Rationale for consultation position

4.20 NGGT proposed attaching a re-opener to this investment, and we accept the justification for this due to the uncertainty around the investment option and efficient costs of delivery.

4.21 In order to allow for further development of the optioneering at Bacton, we are providing a baseline allowance for project development costs, which will then be trued-up as part of this re-opener.

4.22 The full rationale for our consultation position is detailed in the Bacton cost assessment section in Chapter 4 in the NGGT Annex.

King's Lynn subsidence

King's Lynn subsidence	
Purpose	To address uncertainty around the costs of addressing subsidence issues at King's Lynn compressor station.
Benefits	Protecting NGGT and consumers against risks associated with setting a fixed allowance when the scope of the project is not fully defined and costs are immature.

Background

4.23 NGGT has identified issues with bi-directional flow pipelines at King's Lynn compressor station whereby ground movements caused by subsidence are causing stress on the pipework at the site, causing a safety, security of supply and environmental risks.

4.24 To address this issue, NGGT is considering options to replace the bi-directional pipework on the site by building new pipework, underpinning the existing pipework and building new pipework configurations on the site.

Consultation position

Output parameter	Consultation position
Materiality threshold	N/A
Re-opener window	April 2022 (options selection and cost assessment)
Re-opener requirements	Outlined in associated PCD[60]

Rationale for consultation position

4.25 As this project is at an early stage of development, the final preferred option has not been selected and as such, there is significant uncertainty around the final outturn cost. As such, we agree with NGGT's proposal to apply a UM.

4.26 In order to allow for further development of the optioneering at King's Lynn, we are providing a baseline allowance for project development costs, which will then be trued-up as part of this re-opener.

4.27 The full rationale for our consultation position is detailed in the King's Lynn subsidence cost assessment section in Chapter 4 in the NGGT Annex.

[60] See Chapter 3 in the NGGT Annex.

Asset health

Asset Health	
Purpose	To adjust NGGT revenues due to uncertainty in the costs associated with above ground Plant & Equipment and Cab Infrastructure assets during T2.
Benefits	To protect consumers and NGGT from the uncertainty in: - the costs necessary to tackle above ground Plant & Equipment defects and deliver proactive maintenance - the scope and bundling of work necessary to deliver the Cab infrastructure re-life programme.

Background

4.28 To support its proposed unit costs for the overall asset health plan, comprising seven unique project themes, NGGT provided a series of cost justification papers as evidence to demonstrate the efficiency of its costs. Ofgem used this evidence as the basis of its cost assessment to reach a view of efficient costs and set allowances.

4.29 For two of these project themes, namely Plant & Equipment and cab infrastructure, we have been unable to reach a view of efficient costs based on the information provided.

Consultation position

Output parameter	Consultation position
Materiality threshold	In line with our common approach to re-openers as set out in the Core Document[61]
Re-opener window	Year 3 of RIIO-GT2
Re-opener requirements	NGGT should develop cost reporting through the annual regulatory reporting process to support the review of incurred costs and assessment of forecast costs for the remainder of RIIO-GT2. This data should be sufficiently granular and comprise units of measure that do not obscure the underlying costs of delivery.
Limits of Applicability	The scope of this proposed Asset Health UM is limited to those asset classes within the Plant & Equipment and Cab Infrastructure project themes.

Rationale for consultation position

4.30 We have been unable to estimate an efficient unit cost for these two project themes in RIIO-GT2 in support of ex-ante funding. Furthermore, due to

[61] Core Document – Chapter 7.

methodological and data issues, we have been unable to accept the costs as submitted. It is for these reasons we propose the use of a UM.

4.31 We propose the re-opener window to be year 3 of RIIO-GT2 to allow NGGT to build up a robust set of cost and volume data for us to assess and set efficient allowances for the remainder of RIIO-GT2.

4.32 While recognising uncertainty around the cost, we accept the need to fund proactive work to prevent further deterioration of the asset population, which will ultimately lead to increased costs to consumers in the future. We therefore also propose to partially fund this work on an ex-ante basis and this is covered in the cost assessment chapter.

4.33 The full rationale for our consultation position is detailed in the asset health UM section in Chapter 4 in the NGGT Annex.

Compressor UMs

Compressor UM	
Purpose	To adjust NGGT revenues once compressor emission projects have sufficiently developed options and cost maturity to set a baseline allowance.
Benefits	Consumer money is not spent on projects with uncertain costs and/or scope of work.

Background

4.34 NGGT's compressor fleet is affected by the Medium Combustion Plant Directive (MCPD)[62] coming into effect in 2030. In order to comply with this legislation and ensure gas flows can be met, NGGT has proposed a number of investments across the NTS.

4.35 NGGT proposed a UM for the following compressor projects:

- King's Lynn
- Peterborough and Huntingdon
- St Fergus.

[62] Medium Combustion Plant Directive.

Consultation position

Output parameter	Consultation position
Materiality threshold	No materiality threshold proposed - re-opener needed to decide on final option and funding for each site
Re-opener window	Site specific due to varying project timelines - see table 9 below
Re-opener requirements	See site specific assessments – see Chapter 4 of the NGGT Annex
Limits of Applicability	To costs incurred at each specific compressor site.
Sites covered by this UM	Wormington, Kings Lynn, Peterborough and Huntingdon, St Fergus

Table 9: Proposed re-opener windows for compressor UMs

Site	Stage 2 Submission Window	Stage 3 Submission Window
Wormington	Feb 2022	Jan 2024
Kings Lynn	Sep 2022	Aug 2024
Peterborough & Huntingdon	Oct 2024	Sep 2026
St Fergus	Jun 2023	Nov 2025

Rationale for consultation position

4.36 We propose this UM to include King's Lynn, Peterborough and Huntingdon, St. Fergus, and Wormington. We propose to include Wormington in this UM, despite it not being proposed by NGGT, because it is at the same stage of development as the sites proposed by NGGT.

4.37 The projects submitted in NGGT's RIIO-GT2 Business Plan are generally at an early stage in project development, with final options yet to be selected. As such, we propose baseline funding for development work and will use a re-opener UM to adjust NGGT's allowance to true-up these costs. We propose to fund the full project cost, once the scope of work required and efficient costs of delivery have been sufficiently developed.

4.38 For details of our assessment approach see the compressor UM section in Chapter 4 of the NGGT Annex.

GT Opex escalator

GT Opex escalator	
Purpose	To adjust NGGT's CAI Opex allowance following changes to its Capex allowance through uncertainty mechanisms.
Benefits	Ensures NGGT has efficient CAI allowance to deliver its Capex programme during RIIO-2.

Background

4.39 As set out in Chapter 3, our proposed view of baseline CAIs is derived by regression analysis or historical benchmarking using cost drivers including the total baseline Capex or regulated asset value (RAV). The actual Capex allowance and RAV may be different during RIIO-GT2 from the baseline view due to the effect of various UMs or mechanisms linking funding with outputs. Therefore, an Opex escalator UM would recognise the additional impact on CAI from the delivery of Capex through UMs.

Consultation position

UM parameter	Consultation position
CAI adjustment	0.754% uplift to CAI for each 1% uplift in Capex

Rationale for consultation position

4.40 Our proposed uplift for CAIs is consistent with our proposed approach to determining the efficient CAI baseline allowances. Our current view is to use the coefficient for Capex from the same POLS regression analysis, which is a 0.754% uplift to CAI for each 1% uplift in Capex. We consider this an effective method to fund an efficient level of indirect Opex caused by any additional Capex delivered through an UM.

4.41 The full rationale for our consultation position is detailed in Chapter 4 in the NGGT Annex.

Appendices

Appendix 1 – Consultation questions

The bulk of our consultation questions on our RIIO-GT2 price control Draft Determinations are included in the NGGT Annex. This is because the detail of our assessment and rational for consultation position are set out in the NGGT Annex.

This document provides an overview of RIIO-GT2 price control package. We welcome stakeholders to provide their views on the overall package by answering consultation questions below, as well as consultation questions in the NGGT Annex.

GTQ1. Do you agree with the outputs package that we are proposing for the GT sector?

GTQ2. Do you agree with our overall approach to cost assessment in the GT sector?

GTQ3. Do you agree with the UM package that we are proposing for the GT sector?