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Finance Annex

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Executive summary

As the owner and operator of the national gas transmission system in Great Britain, National Gas Transmission (NGT) is a natural monopoly and therefore subject to a regulatory regime. This regime is in place in part to limit the amount we can earn from charges for use of the network but also to enable and incentivise investment, efficiency, performance and resilience, thus ensuring we deliver outcomes that are in the interests of both current and future energy consumers. Effective price controls balance the risk between networks and customers, allowing NGT to collect fair returns that reflect the risks faced in raising capital to invest in the network and ensuring that investment delivers outcomes that are in the interests of both current and future energy consumers. As such, NGT's revenues and profits are driven by the allowances and returns directed by Ofgem in respect of performing our obligations under our licence. Revenues broadly consist of allowances for operating our business and discharging our obligations, costs related to recovering previous investments to maintain or expand our network, and an allowed return granted by Ofgem at each price control review.

NGT receives its allowances via gas bills paid by end consumers to their retailer. NGT does not operate as an energy retailer or as an importer or shipper and so, does not own the gas in the transmission network nor sell it to end customers.

The regulatory framework is called RIIO (Revenue = Incentives + Innovation + Outputs). The current price control started on 1 April 2021 and runs until 31 March 2026. The regime sets out prospectively the expenditure allowances (budgets and associated revenue restrictions), incentives and output delivery requirements for NGT for the five-year period. NGT's spending plans for the next price control, which will run from 1 April 2026 to 31 March 2031 ("RIIO-GT3"), are scrutinised and benchmarked by Ofgem to ensure allowances are efficient and competitively costed. The regulatory regime also includes incentives relating to costs and service delivery that drive ongoing innovation, cost efficiency and service quality improvements.

We have based our business plan and analysis of the financial framework on the application of core RIIO principles and UK Regulators Network (UKRN) recommendations,¹ principles which have provided network companies incentives for innovation and designing investment proposals that enhance sustainable energy networks at the lowest cost for current and future customers. Where relevant, we have included evidence as to why an alternative approach is necessary for RIIO-GT3. In Chapter 1, we outline the principles we have adopted to maintain these strong foundations while addressing the areas where evidence from the financial markets, within which networks operate to facilitate investment plans, demonstrates a need for further action.

In developing our proposals, we have reviewed evidence from a range of stakeholders including credit rating agencies and non-investor stakeholders including end user consumers, our customers (over 2,500 in total) and Citizens Advice, details of which are included in Chapter 2.6. We have reflected stakeholders' views in the development of our plan and our approach to assessing financeability requirements, as set out in Chapter 3. As well as targeting appropriate credit metric ratings to ensure credit worthiness in an uncertain period we have given equal weight to the equity investor package to ensure adequate levels of investment can be secured, reflecting Ofgem's principle of 'investability' introduced for RIIO-GT3.

During the next price control, as described in our business plan, we are proposing a major programme of infrastructure investment. Our alternative scenario indicates the scale of investment in RIIO-GT3 has annual baseline totex ranges from £867m to £1,196m, totalling £5.3bn (in 23/24 prices), across the five-year price control, as explained in Chapter 5. We expect that funding for new expenditure will come primarily from revenues (the allowances granted to us for new total expenditure (totex) in RIIO-GT3 and recovery of previous investment), new debt and re-invested equity return.

The objective of the financial package is to balance risk between customers and the network. This is achieved by structuring a blend of debt and equity financing that meets investors' expectations while reflecting the realities of the financial markets in which networks operate. By striking this balance, the package ensures that investment and a strong level of financial resilience can be secured efficiently, protecting consumers from unnecessary costs. Chapter 4 combines our principles and stakeholder engagement outcomes with empirical evidence to explain our proposals to achieve this objective. We follow Ofgem's Business Plan Guidance (BPG) in respect of the "base" scenario and provide evidence as to why an alternative scenario is appropriate,

¹ UKRN guidance for regulators on the methodology for setting the cost of capital: [CoC-guidance 22.03.23.pdf](#)

including a cost of equity (CoE) of 6.48% (real relative to CPI) and a cost of debt (CoD) benchmarked against the costs expected to be incurred by the gas sector, as well as the maintenance of the existing regulatory asset life of 45 years.

As presented in Chapter 4, evidence gathered from external bodies such as the National Infrastructure Commission (NIC) strongly demonstrates that the gas transmission network will continue to be utilised to 2050 and beyond.

The use of an appropriate return is important to the financial resilience of the energy sector, particularly at a time when multiple sectors and industries have significant investment and the increase in investment required to maintain the resilience of the gas transmission network through RIIO-GT3. The return granted needs to reflect the increasingly intense international competition for capital and the subsequent realities of the capital markets networks operate within. The financial framework proposed in Ofgem's Sector Specific Methodology Decision (SSMD) partially reflects the evidence NGT and other networks submitted, and we welcome Ofgem's willingness to consider new evidence in these areas. However, **our analysis and evidence presented demonstrates that the range and point estimate for the allowed return Ofgem proposes in SSMD is too low to fairly reflect the risks facing networks**, consistent with Ofgem's statutory duties to consumers, its growth duty and duty to support the transition to net zero. Specifically, **cross-check evidence demonstrates a higher range of cost of equity allowances is appropriate and there are higher borrowing costs for gas networks**, which we believe should be addressed in Draft Determinations (DD). The sector is also subject to additional financing costs driven by the convergence of inflation indices (i.e., the reform of RPI) that need to be properly considered and addressed in additional borrowing cost allowances. Given the inherent uncertainty in deriving such costs from both a legal and financial markets perspective, we propose that a targeted uncertainty mechanism (UM) is appropriate for this purpose. Whilst we recognise that financing strategies are a network's choice, our research demonstrates that such instruments form an important part of an efficient financing strategy and are widely used as such this will be a sector-wide issue beyond the networks' control. Whilst we consider retaining the existing asset life of 45 years is appropriate for NGT, there is also potential for additional costs to be incurred for the early redemption of long-lived debt instruments caused by accelerating the recovery of regulatory assets that should also be considered as part of this UM.

During the RIIO-GT3 process, Ofgem has also chosen to address what it perceives to be additional risks in areas such as inflation and stranding risks. Whilst not directly related to financeability risks, these decisions impact the financial package and as such, we also discuss these matters in Chapter 4. On Ofgem's decision to shorten regulatory asset lives, we note that both the NIC and National Energy System Operator (NESO) forecast a significant role for the gas transmission network for the foreseeable future, showing NGT's role in energy security and the transition to be more important than ever. Our proposals provide for what NGT regards as a fair, equitable return, and where relevant follow members of the Energy Networks Association (ENA) and Future Energy Networks (FEN) to reflect the nature of risks we manage on behalf of customers and the sector, as well as the realities of the markets we raise capital from.

The RIIO-GT2 period has seen significant challenges in the energy sector, notably those caused by the war in Ukraine and the subsequent spike in energy prices. Whilst the transmission and distribution sectors remained resilient to these challenges, many energy suppliers ran into financial difficulty and ultimately left the market. Ofgem has therefore both implemented new reporting requirements from 2023/24 onwards and continues to consult on further financial resilience and regulatory ringfencing requirements. We consider the new requirements in the 2024 reporting cycle and financial resilience requirements, proposed in the Finance Annex of the SSMD, achieve the right balance between appropriate scrutiny and allow networks to set their financial strategies, which remains a principle of the RIIO framework.

We have tested Ofgem's base case assumptions including sensitivity scenarios against the targets set in Ofgem's guidance on financeability and to ensure an appropriate balance is achieved between investors, consumers and customers. Chapter 5, 'Financeability assessment' outlines the results of our preliminary financeability assessment. We also test our alternative financial package against the same financeability criteria.

Equally important to the investor proposition is the impact for those that pay energy bills, as outlined in Chapter 6. Our plan does result in an increased revenue profile and consumer bill, reflecting the investment required in the RIIO-GT3 period to meet stakeholder requirements. Under our alternative package, the average RIIO-GT3 consumer bill in 23/24 prices is £10.29 compared to £8.54 in RIIO-GT2 and £11.16 for Ofgem's base case, which equates to less than 1% of the average consumer bill or around 3p per day. These calculations are based on the FES 2024 Counterfactual demand forecast for our total business plan (i.e., including UMs); the consumer bill impact of our baseline totex plan is £9.89. Consumer bill calculation details (including how these values are impacted by referencing FES 2024 Holistic Transition) are available in Chapter 6.

Our aim throughout this process is to share robust evidence with Ofgem to ensure an appropriately calibrated and fair financial package, and we look forward to working with Ofgem and our stakeholders to achieve this aim.

Purpose of the Finance Annex

This Annex is for stakeholders who require a more detailed understanding of how our business plan will be financed. The purpose of the Annex is to:

- Consider the overall financeability of the plan using Ofgem's base case assumptions;
- Explain how we arrive at our alternative financial package and how it affects the assessment against notional and actual financeability measures; and
- Set out the energy bill impact under Ofgem's base assumptions and our alternative framework.

Within this Annex, our analysis is based on our final business plan submission, submitted in December 2024.

Introduction

We have worked with our stakeholders to build a business plan that reflects their expectations and delivers the services they want. Our expertise in delivering a safe, reliable network will be key in this period where the energy system is undergoing major transformation. The gas transmission network is of paramount importance to power generation, facilitating industry and ensuring gas reaches end consumers via the gas distribution networks and it will continue to be so as the network transitions to net zero. This will remain the case even as the share of renewable power generation increases given the need for a backup supply of intermittent power generation. As such, our plan reflects stakeholders demands for a resilient network that operates at an acceptable level of risk and to the required levels of cyber and physical security.

To manage this, we are proposing a major programme of infrastructure investment which needs to be funded through a combination of debt and equity investment, at the most efficient proportions. The financial package must provide the funding and incentives required to compensate investors at an appropriate level to retain and attract investment to enable NGT to deliver the outcomes required. At the same time, we ensure our allowed revenues and return are appropriately balanced for both the investor and consumer propositions.

In evaluating the RIIO-GT3 financial package:

- We consider the RIIO principles and UKRN recommendations, which we regard as key to delivering a plan that meets investor and consumer requirements over the long-term, presenting alternatives where evidence demonstrates they are necessary;
- We take into account stakeholder views on how we should finance our plans and how they will assess the value of their investment, and the implications for customer and consumer bills;
- We use our principle-based approach, initial stakeholder feedback and seeking external expert consultancy advice to assess Ofgem's proposals and inform our alternative financial package and basis of assessment;
- We assess the financeability of our business plan under Ofgem's base case assumptions and our alternative financial package; and
- We test the impact of our plan on the average household bill against our objective of achieving a sustainably lowest possible bill level in the light of significant capital requirements for RIIO-GT3 and the tariffs which are charged to our customers to ensure transparency and predictability.

Chapter 1: Regulatory context

The price control framework is set on a notional basis for a notional standalone network in the relevant sector. The allowed return is the base return for a notional company with a defined financial capital structure, as opposed to allowances corresponding to company specific financing costs as emphasised in the UKRN Guidance.² This guidance recommends regulators should continue to estimate the allowed return in price controls based on the weighted average cost of capital (WACC) for a notionally financed firm within their sector. Companies' actual capital structure and performance during the price control will determine the actual return, including in areas such as cost efficiency or service delivery, where incentive outcomes may drive revenue adjustments. An appropriately balanced financial framework is key to current and future consumers being fairly charged for the network they use and the services they receive. Careful assessment and calibration of the framework enables a balance to be struck between consumers, benefitting from sustainably low bills and incentivising continued investment in long-term assets which will provide benefits over many years.

RIIO-GT2 provided a strong platform and has worked well in driving a range of network behaviours, which have benefitted both current and future consumers by incentivising companies to innovate and efficiently deliver against stakeholder priorities. RIIO-GT2 has also provided strong incentives for us to manage risks effectively and to deliver improved service levels. These are the primary drivers behind an expected c.1.4%³ totex outperformance over the RIIO-GT2 period.

The fundamental financial principles of RIIO-GT2, which have contributed to driving the consumer benefits and network behaviours, should be retained within the RIIO-GT3 framework and broadly are in Ofgem's proposals set out in the Finance Annex of the SSMD. However, NGT investment requirements in RIIO-GT3 shows a significant increase when compared to RIIO-GT2 and capital market conditions have significantly changed since RIIO-GT2 was determined. For example, the rise in interest rates and the cost of borrowing along with yields on benchmark government bonds which have increased by circa 3.6%.⁴ It is appropriate for the framework to evolve to address these concerns through improvements in the design of the next price control, whilst maintaining core RIIO principles which focus on incentivisation, innovation and outputs. In developing our financial proposal, we have adopted the following principles which are a combination of those which worked well in the RIIO-GT2 price control and the areas which Ofgem proposes to evolve for RIIO-GT3, or where we believe further improvements can be made:

Balances risk and reward: *risks best managed by networks are not passed to consumers*

Establishing and appropriately allocating significant risks is of direct benefit to consumers. Reducing uncontrollable risks for networks can reduce the cost of capital, and therefore short-term consumer bills. However, limited risk for networks, or inappropriate transfer of risk to consumers where there is scope for those risks to be managed effectively by networks, creates little incentive or financial capacity to control costs because of the limited opportunity to retain benefits from efficiencies and innovation. An inappropriate allocation of risk will ultimately drive higher long-term consumer bills. To avoid this, the framework needs to allow a return which reflects market conditions and the risk landscape. This will provide the financial capacity needed for the networks to be incentivised to take the additional risks required to facilitate the energy transition.

Regulatory commitment and stable regime: *to keep financing costs low for consumers*

It is reasonable for equity investors to expect a framework and returns which are broadly stable over time, so that returns which were considered appropriate at the time of investment would still be considered appropriate now and in the future. Unpredictability increases risk perception, placing upward pressure on the cost of capital. This does not mean that financial parameters should remain unchanged from the previous control.

² UKRN guidance for regulators on the methodology for setting the cost of capital, page 6, paragraph 5: [CoC-guidance_22.03.23.pdf](#)

³ Based on networks share performance divided by total allowance_NGT Regulatory financial performance data file 2023-24 - 'R3-Totex-Reconciliation' Tab

⁴ [UK 10-year Gilt Bond, chart, prices - FT.com](#)

The financial framework should be set using transparent and replicable methodologies which are also considered for their ongoing application in future controls and reflect the realities of the capital markets networks raise capital from.

Whilst the proposed financial package Ofgem is proposing for RIIO-GT3 is largely a roll-forward of RIIO-GT2, Ofgem has chosen to significantly alter certain mechanisms, such as the calibration of cost of debt allowances, indexation of RAV (a long-established regulatory principle) and regulatory asset lives, whilst leaving decommissioning funding mechanisms and how the RIIO-GT3 framework should facilitate the transition to new technologies such as hydrogen and carbon capture and storage (CCS) unaddressed. We assess the impact of such decisions later in this Annex.

Takes a long-term sustainable approach: *to ensure investment is recovered fairly from both current and future consumers*

Financeability is not just a consideration of short-term liquidity ratios, but also considers the long-term sustainability of the company's financial position which is important in safeguarding future investment. We consider trends across several price controls. This helps us to avoid short-term fixes to address immediate cashflow issues that might create financeability problems in the future.

Ofgem introduced the concept of 'investability' for RIIO-GT3 alongside their existing financeability assessment to better understand whether the allowed return on equity meets the needs of the energy network sectors, and to support the overall stability of the RIIO-GT3 price control. As Ofgem described in the Finance Annex of the SSMD, the intention to review investability⁵ is based on expanding the assessment of financeability to equity investors, primarily measured via cross-checks to CAPM-based estimate of cost of equity. NGT agrees with Ofgem's outlined principles to review investability for RIIO-GT3, and we strongly support the proposals made by Frontier Economics (Frontier) in its Equity Investability report⁶ which indicates that investability should be considered for both debt and equity investors. We also consider it appropriate for Ofgem to consider investability over a longer period than just the next price control period, particularly given the impact of decisions on regulatory asset lives and RAV indexation.

Strong incentives: *so, the networks demonstrably strive to deliver benefits for consumers*

RIIO-GT2 maintained an incentive-based framework which provides a framework for both customers and networks to benefit from efficient delivery, but also for networks to go above and beyond core obligations to deliver further value for network users. Networks are encouraged to seek lower costs, through the potential to share benefits, whilst still being held to account for delivering the outcomes they have committed to with clear consequences of non-delivery.

These principles underpin the decisions and judgements we make when developing our financial package.

⁵ Ofgem's RIIO-3 SSMD Finance Annex, page 102-103, Section 3, paragraph 3.245

⁶ Frontier Economics Report prepared for the ENA - Equity investability in RIIO-3, page 13, Section 1, paragraph 33

Chapter 2: Stakeholder evidence and financeability of our business plan

2.1 Introduction

The financial parameters, which make up our financial alternative proposal, are initially derived from principle-based arguments and supported by empirical evidence. We have then taken real world considerations into account when sense checking the package.

There have been material changes in capital market conditions since the RIIO-GT2 price control was determined. The period of ultra-accommodative macroeconomic policy has ended due to a variety of adverse global shocks. As outlined in the Frontier report named 'Equity Investability in RIIO-3',⁷ there has been an abrupt rise in interest rates and the cost of borrowing; gilt yields have increased by 3.6% since the beginning of RIIO-GT2. However, prior to RIIO-GT2, regulators had lowered their estimate of TMR as a response to their review of wider market conditions and the decreasing trend in gilt yields when RIIO-GT2 was set. However, those regulatory models that served the era of cheap money must be adapted to reflect these new conditions in financial markets.

To ensure investability, the cost of equity must be significantly higher than the long-term returns on senior investment-grade debt. This condition stems from the relative earnings profile of debt and equity. Senior debt is paid first, and it is paid a contractually stipulated sum with contractual protections available as a backup. In comparison, holders of equity are paid last, and act as residual claimants on the business with no guarantee they receive anything i.e., in times of financial distress. Therefore, senior debt indicates a lower risk and better recovery prospects. Due to this difference in risk, it would be irrational for investors to invest equity in a sector that does not yield higher returns than a secured bond that offers a lower risk due to their priority on liquidation, regular and predictable income and in some cases, higher liquidity.

Our stakeholder engagement to date has focussed on our key stakeholders; consumers, equity investors who receive a return through dividends and debt investors who receive interest on, and ultimately a repayment, of their investment. We used the evidence gathered through this process to develop proposals that meet both consumer and investor expectations. Our goal is to ensure that our network remains a fair and sufficiently appealing investment proposition that reflects the level of risk investors take on, while also ensuring our proposals are consistent with what consumers require from our network. This allows major capital programmes to be financed by a combination of equity and debt as efficiently as possible.

As well as informing our financial proposals, we also take equity, debt investors and credit agencies feedback into account in developing a methodology to assess the financeability of the network.

2.2 Equity investor and dividend policy

From 26 September 2024, NGT is 100% owned by a consortium of investors led by funds managed by Macquarie Asset Management (MAM) and British Columbia Investment Management Corporation (BCI), after exercising its option to purchase the minority stake held by National Grid Plc.

Our group comprises of GasT MidCo Limited ('MidCo') which holds investments in several subsidiary companies and obtains and provides finance to fellow subsidiaries, including NGT. MidCo was incorporated in June 2022 while NGT was part of the National Grid Plc group and acquired NGT Holdings Limited and its subsidiaries on 31 January 2023. MidCo is 100% owned by GasT PledgeCo Limited and indirectly owned by GasT TopCo Limited (100% owned by the consortium).

⁷ Frontier Report prepared for the ENA – Equity investability in RIIO-3, page 5, Section 1, paragraph 2a

As part of our ongoing investor engagement activities, we regularly meet with our equity investors to discuss the key strategic issues facing the business. We have collated the views expressed by our investor with commentary and market reaction to regulatory announcements.

Investors are typically attracted to regulated businesses by a well-established and stable regulatory model and a relatively predictable dividend stream that can be generated from a well-managed network, which supports the requirements of the long-term funds from which investment is commonly sourced (i.e., pension funds). This stable regime comes with the expectation of a fair return for the investment facilitated. Therefore, our ability to continue to pay dividends, and the potential rate of dividend and RAV growth, are priority considerations in our equity investors' assessment of the attractiveness of investing in NGT, particularly at a time of growth in investment in multiple sectors.

Our dividend policy targets a fair balance between delivery of our obligations to customers to deliver a resilient network, compliance with financial resilience requirements such as regulatory gearing, company performance and the long-term financial resilience of the company. We are not aware of any direct external benchmark that allows comparison of the level of NGT dividends, given the number of factors at play for both NGT and other regulated businesses and the lack of a direct comparator. Considering historic dividend yields from similar businesses are the best available benchmark, we have compared NGT's historic dividend yield to certain businesses to assess its reasonableness as available in Section 2.7.2.

NGT's dividend policy considers several factors, with the key determinants being:

- Resilience measures: This includes gearing levels, maintaining investment grade credit ratings, and the potential impact of the tax clawback mechanism if gearing thresholds are exceeded;
- Investment requirements: The overall needs of NGT, spanning all business units (not just gas transmission);
- Performance: This accounts for rewards or penalties related to the performance of various business units within NGT, including unlicensed activities; and
- Licence obligations: Ensuring sufficient resources are available to meet regulatory requirements, such as balancing and shrinkage purchases.

The dividend policy also ensures adequate headroom to meet financial covenants in NGT's external borrowing arrangements and credit rating metrics (in line with licence requirements) are maintained. Key factors are considered at properly constituted board meetings by directors before declaring a dividend.

Financing and dividend policies depend on multiple factors and are inherently complex. NGT is committed to maintaining strong financial resilience and recognises the need to continuously review financial resilience measures. However, as outlined in our various responses to Ofgem's proposed restrictions reflect a limited set of those factors, which may unnecessarily limit financing transactions and conflict with Ofgem's principle of allowing network companies to implement their own financing structures within regulatory guidelines. Such restrictions may also undermine investors' confidence in investing in the sector and unduly increase costs to the consumer.

Ofgem has proposed several new requirements in respect of financial resilience, both from the regulatory reporting for FY24 onwards and for the RIIO-GT3 period. These include the requirement to hold more than one investment grade credit rating, a dividend lock up at 75% regulatory gearing or a credit rating of BBB- with a negative outlook and an extended period of assessment for networks' annual Availability of Resources assessment (now a minimum of three years or the remainder of the price control period).⁸ FY24 reporting requirements introduced a requirement to provide information on dividend policies, the governance surrounding them, and the cash requirements made of regulated businesses to support any MidCo/HoldCo financing structures (see also paragraph 3 in subchapter 2.3.1).

We consider that these measures reach the appropriate balance of allowing networks to set their own financing strategies, given such measures stop short of imposing restrictions on networks' financing strategies whilst giving Ofgem more information and foresight of potential issues. NGT already holds two investment grade credit ratings, with issuer ratings (outlook) of Baa1 (stable) and BBB+ (stable) for Moody's and Fitch respectively, indicating substantial headroom to the lower threshold of investment grade. Actual debt covenants are well aligned to dividend lock up proposals, and we have complied with the FY24 reporting requirements in NGT's Regulatory Financial Performance Reporting (RFPR) pack submitted in September 2024. We do note that in August 2024, Ofgem also released a separate Call for Input discussing an assessment of regulatory ringfencing

⁸ Ofgem's RIIO-3 SSMD Finance Annex, page 152 and 155, Section 6, paragraph 6.61 & 6.76

obligations. We responded separately to this Call for Input, acknowledging that there are opportunities for these obligations to evolve but reiterating these fundamental principles of not unduly restricting financing strategies.

2.3 Debt investors

Debt investors are primarily interested in credit ratings as they provide a view of the credit risk of the networks and their ability to meet loan principal and interest repayments, as an indication of the probability that a company may default on its loan obligations.

We have considered the view of the two main credit rating agencies (Moody's and Fitch Ratings ("Fitch")) as set out in their responses to the RIIO-GT3 consultation and published notes:

- Moody's Credit Opinion Report for NGT, 27 February 2024;
- A note prepared by Fitch, What Investors Want to Know: RIIO-3 sector specific methodology consultation (SSMC), 19 February 2024; and
- A note prepared by Fitch, What Investors Want to Know: RIIO-3 sector specific methodology decision (SSMD), 14 November 2024.

Common themes which have emerged to date are:

- All agencies recognised the need for the RIIO framework to address some fundamental issues facing networks, notably matters associated with the future of gas demand such as asset stranding and decommissioning. The latter, whilst Ofgem acknowledges may lead to material costs, is not yet addressed by current proposals;
- Despite the uncertainty, there is the expectation that a full recovery of RAV and for costs outside of networks' control (such as decommissioning and/or repurposing costs) is included; and
- Agencies continue to emphasise the need for regulatory stability, notably in respect of changes to long held principles

2.3.1 Credit ratings impact

Moody's recent credit ratings for NGT is updated as Baa1 stable⁹ that is supported by its monopoly position as the owner and operator of the high-pressure gas transmission system in Great Britain. NGT Holdings Limited's credit rating was also updated (15th November 2023)¹⁰ by Fitch as BBB+ with stable outlook. Moody's indicated that NGT has a very low business risk profile due to the well-established and transparent regulatory framework that underpins predictable cash flow until the end of RIIO-GT2 price control. In addition, NGT's solid financial profile, with low cash interest costs and covenant prohibiting dividend distributions, is seen as an important factor that strengthens its creditability. Moody's indicated in their recent credit opinion to NGT that:

"NGT's credit quality also benefits from moderate leverage, with net debt to regulated asset value (RAV) in the low 60s, in percentage terms, and cash interests' costs that are lower than regulatory assumptions. NGT's financing terms include structural protections, in particular a covenant restricting dividend distributions if debt exceeds 72.5% of RAV."

Moody's also emphasised in the same report the need to maintain key metrics reflected in NGT's finance policies, which are underpinned by the RIIO framework granting a fair return. As noted elsewhere in this Annex, financeability assessment thresholds and dividend policies are set in line with these expectations, subject to regulatory gearing at the NGT level of 60%, aligned with the RIIO framework:

"Downward pressure on the ratings would arise if NGT failed to maintain key credit metrics aligned with minimum guidance for the Baa1 rating, which includes net debt to RAV not above 75% and AICR of at least 1.4x.

Downward rating pressure could also arise if actions by the holding company, including an increase in leverage beyond the lock-up level prescribed in its financing documentation, adversely affect the credit quality of the consolidated GasT MidCo group."

MidCo is able to maintain investment grade credit ratings due to sizing debt held at this level in line with investment grade thresholds and to strong credit protective features in place that enhance the company's creditworthiness.

⁹ Moody's Report - Credit Opinion for National Gas Transmission Plc dated 27 February 2024

¹⁰ [Fitch Affirms National Gas Transmission's IDR at 'BBB+/Stable', Senior Unsecured at 'A-' \(fitchratings.com\)](#)

Mitigating factors that reduce the risk of reliance on NGT dividends include: a heavily covenanted structure with lock-up thresholds that restrict dividend payments from MidCo; mandatory liquidity lines covering 18 months of debt service in MidCo; standstill period and equity cure to allow remediation of breach of thresholds; and a whole business security package. Additionally, revenue from the unlicensed metering business and National Gas Services can be used by MidCo to service debt.

Fitch rated NGT at the same level as western European gas transmission operator, Snam S.p.A (BBB+/Stable) in Italy, and a notch higher than Enagas S.A. (BBB/Stable) in Spain. However, NGT has the highest debt capacity amongst European peers in the gas industry. Fitch noted that:

“Both NGT and Snam have higher debt capacity than Enagas, supported by a larger scale and a transparent regulatory framework with a longer record and a lower share of non-regulated earnings. We view NGT as qualifying for sector-specific recovery uplift for its debt, and its senior unsecured debt is thus notched up once from its IDR. We align the rating of NGTH (NGT’s immediate holding company) with NGT’s, reflecting no incremental debt at NGTH and that NGTH has historically agreed to abide by certain regulatory license conditions of NGT.”

2.4 Responses to Ofgem’s Sector Specific Methodology Consultation (SSMC) and Sector Specific Methodology Decision (SSMD)

Emphasising the need to ensure key risk are addressed by the RIIO framework, Fitch lays out an expectation that costs associated with the uncertainties facing gas networks are sufficiently addressed by the RIIO framework:

“We understand that the regulator aims to preserve intergenerational fairness in terms of RAV recovery and could support an introduction of accelerated depreciation as early as RIIO-3 (the upcoming five-year price control starting April 2026), leading to a faster decline in RAV. In any case, we expect a full recovery of RAV and of any additional costs outside of issuers’ control, such as potential decommissioning or repurposing costs, in line with regulatory licence conditions.”

Fitch also shared its high-level overview of the Ofgem’s RIIO-3 consultation to shape future of UK Energy Networks and stated that:

“Fitch expects a more uncertain future for gas networks. Accelerated depreciation could be introduced in RIIO-3 to reflect the expected gradual decline in gas consumption. However, we believe that Ofgem will generally aim for a complete recovery of regulated asset value and any additional costs (such as repurposing or potential decommissioning costs) in the long term under any consumption scenario.”

Moody’s referred to Ofgem’s open letter for Call for Input on the impact of higher inflation (issued in August 2023) by stressing that:

“In general, a sustained period of high inflation is credit positive for UK regulated networks because their RAV increases annually by CPIH while regulatory mechanisms (“real price effects”) are intended to protect the sector from rising operating and capital costs over the medium term. NGT’s metering business also benefits from RPI linkage of rental charges on domestic meters, which account for most of its revenue, until at least December 2024. However, in our view any radical change could undermine investor confidence in the predictability and stability of the regulatory regime.”

Moody’s stated in its most recent credit opinion report prepared for NGT,¹¹ that the SSMC partly recognising that similar risks need to be addressed via the RIIO framework or other government-led alternatives:

“Ofgem will try to manage asset lives to support the transfer of suitable gas assets to future hydrogen network licensees. The SSMC also recognises that the cost of decommissioning redundant assets could become material from the mid-2030s, and that these costs will need to be recovered from customers or taxpayers.”

Fitch also emphasised the importance of Ofgem’s wider assessment of financeability, considering the requirements of equity investors via its ‘investability’ principle:

“Ofgem’s key challenge remains fulfilling its objectives of safeguarding customer interests (including intergenerational fairness) while allowing fair returns for both equity and debt investors and respecting its recently defined net-zero duty. We believe that Ofgem’s concepts of financeability and investability acknowledge the substantial investment needs of the electricity sector to achieve net zero and the importance of visibility over the future of gas to allow adequate funding for gas networks.”

¹¹ Moody’s Report - Credit Opinion for National Gas Transmission Plc dated 27 February 2024, page 8, paragraph 5

Fitch stated in terms of calibration of the cost of debt in its note to Ofgem's SSMD:¹²

"Recent bond issuances indicate high interest costs for gas networks, compared to electricity. If this difference were to persist, the new approach would compensate for the higher financing cost faced by the respective sector."

2.5 Political and regulatory environment

The RIIO-GT2 period has been characterised by significant geopolitical events that have adversely impacted the energy sector, a change in the UK political landscape, and in the perception of the regulated utilities sector. The war in Ukraine put significant pressure on the wider energy sector, notably in the energy retail sector, but also directly on NGT. The urgent need to support mainland Europe's replacement of gas imports from Russia required significantly higher than average gas flows, which were successfully facilitated. This underscores the importance of maintaining sufficient asset health and continuing reinforcement investment. The election of a Labour government in 2024 has led to a significant policy shift, notably the acceleration of net zero targets for energy generation (Clean Power 2030), a scenario that relies upon a suitable gas transmission network to facilitate. In addition, the issues experienced by water customers and networks has increased the public and political focus on the UK regulated sector, leading all regulators to re-assess regulatory frameworks, notably financial resilience and delivery targets.

We have described our views on the financial resilience measures Ofgem intends to introduce elsewhere, which are an appropriate evolution of the existing framework that in our view reflects the risk profile of the energy infrastructure sector. Ofgem has however taken decisions that do change long-established principles and are not matched by other regulators, such as cost of debt allowance mechanisms that adjusts the investor expectation that previous investments in the form of a network's RAV that continues to be fully protected from inflation. Furthermore, risks that are clearly important to stakeholders, such as decommissioning, are yet to be addressed.

These external factors including regulatory changes, unresolved risks and debt investors' concern about potential spillover effects from issues in the UK water sector, are reflected in stakeholder feedback. Debt investors emphasise the need for downside protection, while equity investors prioritise minimum returns on investment, consistent and predictable cash flows and safeguards against macroeconomic factors. This feedback informs the evidence and recommendations we present for the financial package.

2.6 Stakeholders engagement

We have undertaken initial engagement with a wider non-investor stakeholder base including customer groups such as Citizens Advice and directly with end user consumers. These engagements focused primarily on the drivers of investment in RIIO-GT3 and customers' willingness to pay for such investment, but also the importance of the principle of inter-generational fairness and facilitating net zero.

2.6.1 End consumer engagement

We have run a robust consumer engagement programme on many aspects of our RIIO-GT3 business plan, including finance matters. This has included both focus groups and qualitative research amongst UK bill paying consumers that were designed to provide NGT with a deep and evidence-based understanding of their expectations of our services, what costs associated with maintaining assets are justified and how they should be managed, as well as an understanding of their perception of how net zero should be facilitated.

The acceptability and affordability of NGT's proposed business plan was tested via an e-mail survey sent to a representative sample of end consumers and focus groups. The intent of the survey was to inform gas consumers about the proposed plan, its associated bill impact and to measure acceptability of that plan. In total 2,000 surveys were conducted with domestic customers and 500 with business customers. The survey results demonstrated that most end consumers (66% domestic, 53% business) agreed the proposed plan delivered good value for money. Acceptability was tested based on a scenario that assumed retention on the current 45-year asset life, and survey results evidenced the majority of end consumers (74% domestic, 65% business)

¹² Fitch Ratings Report – What Investors Want to Know: RIIO-3 Sector Specific Methodology Decision dated 14 November 2024, page 2

were supportive of the proposed plan based on the detailed investment items proposed, particularly around meeting the needs of future energy customers and the minimal associated bill impact.

The focus groups discussed the following topics:

- Customer perceptions and expectations of our network, notably in respect of reliability and safety and how we should plan investment;
- Asset lives and the principle of intergenerational fairness;
- The impact on consumer bills of planning such investments;
- Decarbonisation and net zero, including the potential shift to hydrogen in the future; and
- The potential impact on consumer bills of facilitating net zero.

Generally, end consumers recognised the reliability of the gas network as a whole and were not willing to compromise its reliability, even if this meant lower consumer bills. The focus groups and surveys also demonstrated a high degree of acceptance for an increase in the consumer bill, to facilitate investment in resilience (we tested up to a £2 per year per customer increase). There was, however, evidence in broader comments provided by focus groups participants and respondents of a growing distrust in utilities, particularly the perception of high profits from oil and gas companies and negative perception of the water sector. We recognise that this emphasises the need for NGT to continue to communicate its role on the network and investment plan well and to ensure they are aligned to stakeholder requirements, as described in our main business plan and related investment papers.

We also recognise the need to continue providing customers with an understanding of NGT services they pay for. We appreciate that energy bills are complex, and we will continue to publish our share of the consumer bill in line with the accepted methodology at least annually as reported in NGT Annual Reports and Accounts.

In reference to regulatory asset lives, most consumers were not concerned about paying for assets that will be used beyond their lifetime, seeing the benefits for future generations and the need to continue spreading the cost of investments. The majority of end consumers were also not concerned about continuing to pay for assets that may have been decommissioned. According to the result of the consumer focus group survey, 53% of respondents understood and supported the spread of asset costs over a 45-year period. Over one in three attendees understood why the cost is spread but believe it should be less than 45-years. Participants were split evenly between having the view that we should be planning investments over both a 15–25-year timeframe but also over 25-50 years. As discussed further in subchapter 4.4.1, this illustrates the uncertainty at all levels in assessing the impact of future gas usage, and the importance of ensuring any decisions around asset lives adhere to core principles and the available evidence.

The consumer focus groups were also asked how important net zero was to them personally by referring to government targets to reach that target by 2050. Most respondents agreed that achieving net zero was important to them, particularly in the context of considering future generations, although some reservations regarding the cost impact of this more broadly were expressed. Respondents raised the need for more transparency from government of a staged plan and how this would be achieved.

Whilst outside of the scope of the business plan, questions on the role of hydrogen in the transition to net zero and the potential related costs were also discussed at forums and included in the survey. Even though there was recognition of the role hydrogen could play and a willingness to pay for an additional increase in the consumer bill to facilitate net zero (again up to £2 per year per customer was tested with a 75% acceptance rate), there is a need to share further information about the role of hydrogen in the energy system and of its environmental, cost and safety impacts. NGT is committed to doing its part to provide such information to all customers but there was also a clear ask from consumers for clarity from the government on how such a transition will be managed and paid for. As such, NGT will continue to engage with DESNZ and Ofgem on our plans for hydrogen and how investments can be facilitated to both attract much needed investment and minimise the impact of consumer bills.

2.6.2 Specific stakeholder engagement on the financial package

We engaged with stakeholders on elements of the RIIO-GT3 financial package and investability, but given the complex nature of this topic, our engagement was very targeted. Because of its technical nature, we only considered it appropriate to engage members of the public on selected inputs to the finance package (asset lives for example) and the overall affordability of the

output. However, we have assessed the submissions Citizens Advice (CA) made to Ofgem's request for input to its proposals and considered how these should be considered in our own assessment.

The key topics CA raised were:

- CA raised several observations regarding the UKRN Guidance on which Ofgem bases its approach to RIIO-GT3, including the use of CAPM. We are aligned with Ofgem's perspective that whilst not perfect, CAPM is the most suitable model available if applied in a transparent manner and with reference to appropriate data. UKRN Guidance is considered broadly appropriate and has been referenced throughout our analysis, with exceptions raised where we consider them necessary.
- Beta data: perhaps for different reasons, we have also advocated the use of longer-term datasets and a wider set of comparators for beta, although our concerns are related to how well the gas sector is represented in the sample and ensuring that the comparators are representative of the risk Ofgem and we are trying to measure. Whilst we do not agree with CA's proposal that worldwide data should be used, we have proposed that to derive a meaningful sample of beta comparators that relevant European listed entities should be included.
- Investability: while we recognise that the concept can be interpreted in many ways, we support Ofgem's view that the familiar concept of financeability should be expanded to consider equity investors. A fair return, that reflects the reality of the financial markets that networks operate in, is crucial to retaining and attracting sufficient capital to deliver investment plans. However, such stakeholder concerns make a proper consideration of a wide suite of cross-checks essential to ensure that the allowed package reflects the appropriate market evidence, and to demonstrate that the framework has been applied in a transparent manner.
- Asset lives and repurposing: we continue to engage with DESNZ and Ofgem on this matter and recognise a number of the principles CA raise. In respect of being fair to both users of existing and future networks, as described in subchapter 4.4.1 of this Annex, all analysed methodologies for establishing asset transfer values are centred on this principle. Furthermore, whilst NGT's impact on the consumer bill is significantly lower than gas distribution networks, we recognise the consequence of depreciating the RAV more quickly, notably the risk of overcharging existing users without fully understanding the benefits of repurposing assets in the form of avoiding decommissioning and accelerated depreciation costs.
- Return Adjustment Mechanisms (RAMs): CA advocates including financing performance in RAMs (in RIIO-GT2 both financing and tax performance are not included). Ofgem has a well-established principle that financing strategies are a network's choice and as such, it is networks and not consumers who take the risk of such strategies. It would therefore appear inappropriate to include financing performance in RAMs unless this balance of risk and reward was also adjusted. We also note that Ofgem has already taken significant action to limit the impact of inflation on financing performance.

2.7 Financeability of our Business Plan

We have taken the views and commentary of both equity and debt investors into account when developing our approach for assessing RIIO-GT3 financeability.

Our initial assessment for equity investors focusses on yield and sustainability of the dividend. We reflect Ofgem's assumptions in the SSMD for a notional capital structure, notably a dividend yield of 3% in line with SSMD and RIIO-GT2.

As described in further detail in Chapter 5 and in line with application in practice, we assess financeability using Moody's Regulated Electric and Gas Networks Rating Grid Methodology, and Moody's and S&P's core metrics. These form our primary tools to assess the credit rating of the notional and actual network when utilising Ofgem's Business Plan Finance Model (BPFM) and so, the debt investor proposition. We expand this assessment to applying the requirements of debt and equity investors in reality, modelling our plans against the requirements of our banking and shareholder agreements and financing policies, including those that govern NGT dividends.

We have taken the views and commentary of both equity and debt investors into account when developing our approach for assessing financeability which we set out in this chapter. Ofgem's and networks' financeability duty and our initial analysis are covered in Chapter 5, 'Financeability assessment'.

2.7.1 Equity financeability and dividend payout

Our investors have highlighted our ability to continue to pay a dividend and the importance of a sustainable RAV as priorities. Ultimately, if return levels are not sufficient, it becomes irrational for an investor to be willing to invest in equity or sink capital into energy networks when that investor has access to competing equity investments elsewhere in the wider market. This would make raising new equity and debt more costly for the company and thereby increase costs for consumers.

The absence of a dividend increases the risk that investors will not receive a return commensurate with the risk of their investment. To continue to attract equity investors and reflect the delay in realisation of returns, we need to be able to pay a dividend yield which is comparable to equivalent investment opportunities and demonstrates stability in line with investor expectations.

On this basis, we regard dividend yield as an input assumption which has a direct impact on the equity investors' required return. We reference the dividend yield assumption used in RIIO-GT2, and Ofgem's base case assumptions in the SSMD, which considers a nominal dividend yield of 3% appropriate but have also compared NGT's dividend yield under the previously summarised dividend policy to the industry average, as described in subchapter 2.7.2. We have also tested our plans and the financial package against our actual financing and dividend policies, as summarised in Chapter 5.

Based on the arguments and evidence considered it is appropriate for the dividend to be set at a pragmatic rate; a rate that balances the need to provide a current reward to shareholders with a need to retain capital in the business. As noted, when we summarised NGT's dividend policy earlier, we see the dividend as an input that recognises interdependencies within the financial package, rather than solely as an output.

National Gas's parent company, GasT MidCo Limited, has a further level of debt within the overall capital structure. A proportion of the dividends paid by National Gas Transmission Ltd are used to service this debt before dividends are paid to the ultimate equity holders.

We continuously monitor the liquidity needs and covenant forecasts at MidCo. Where there are gaps, we ensure an appropriate financing strategy or remedial action is in place. Although MidCo utilises periodic dividends from NGT to service its debt, MidCo can operate for an extended period without NGT dividends. MidCo maintains a liquidity facility with enough capacity to cover 18 months of debt service and has access to efficient debt capital markets. As recourse, MidCo has equity cure provisions within its financing arrangement which will support the company where there are signs of difficulty. Furthermore, NGT also generates distributable reserves from non-regulated business such as National Gas Metering and National Gas Services.

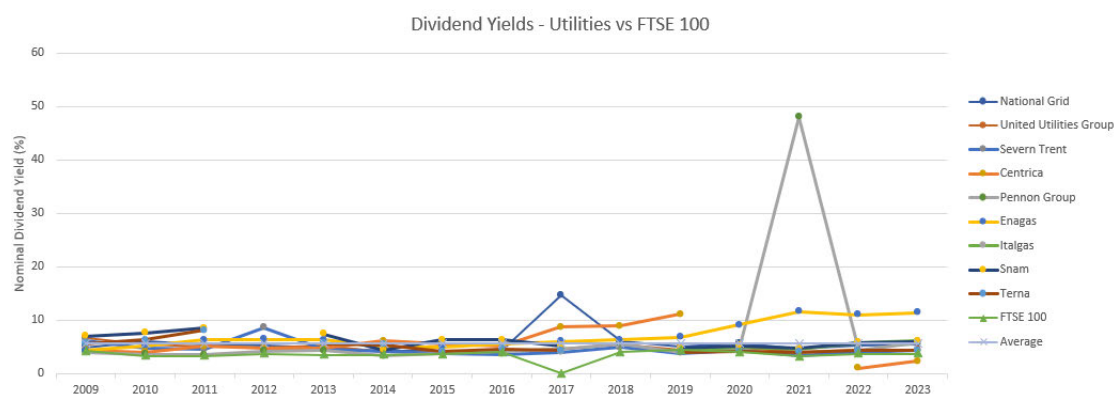
NGT reports its dividends paid in the Regulatory Financial Performance Report (RFPR) by committing to transparency on reporting and has complied with the extended reporting requirements implemented by Ofgem for the FY24 cycle.

2.7.2 Historic dividend yields

Within our peer group, over the last 15 years, yields have varied due to changes in market values, as well as changes in dividend policies and the differing different models/structures of the groups analysed. Overall, the average yield in the utility sector has been higher than for that of the FTSE100, 5.63% and 3.52% respectively.

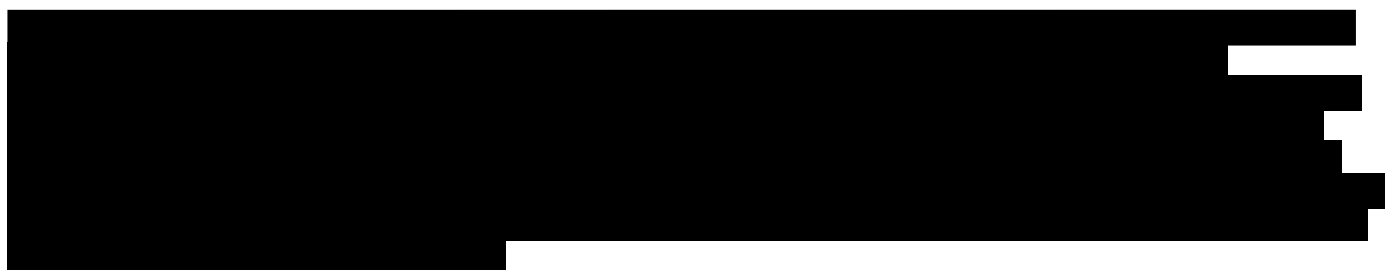
There are characteristics of a regulated utility that make the dividend a more important feature of investors proposition even compared to yield stocks within the FTSE100. These relate to the long asset lives relative to other UK listed businesses and the regulatory price controls that set their revenues. A consistent dividend policy, both in terms of yield and cover, therefore, provides confidence to investors of the regulatory commitment to allow equity investors to recover their initial investment and earn a stable return over the long term. This is further supported by utility peers in other jurisdictions, for example European utilities average dividend yield was 5.72% over the last decade.

Chart 1: Dividend Yields – Utility Group Analysis



Source: Bloomberg & Dividend data, NGT Analysis - Dividend Yields across major UK and EU listed Utility companies and the FTSE 100 Index from 2009 through to 2023

Yields across the UK utility sector have averaged c.5.56% in the period analysed, demonstrating that National Gas' dividend policy is broadly consistent with market expectations of the peer group. The spike seen in the above chart for Pennon Group in 2021 is most likely associated with the acquisition of Bristol Water Holdings UK Ltd, along with proposing a special dividend and share consolidation, and in connection with this the repurchase of shares to execute a share buy-back.



2.7.3 Debt financeability

Our assessment is informed by the methodologies adopted by the credit ratings agencies. This aligns the regulatory assessment with the agency treatment and measurement of the various risk factors that debt investors consider when evaluating an investment. Our approach:

- **Focusses first on the notional company**

The onus for ensuring financeability of the actual companies lies with networks. However, the regulator has a duty to have regard to the need to secure that the price control is set at a level which would allow an efficient notional company to finance its licensed activities. The methodology which is adopted therefore needs to be robust, replicable and relevant for both views.

Whilst the parameters and particulars of actual companies may be of some interest to the extent that they inform estimates for a 'notional efficient company', the financial parameters (such as cost of debt, gearing, cost of equity, and financial metrics) should be estimated for the notional efficient company. The financeability of the actual company can only be assured on a sustainable basis if supported by a package which delivers a financeable notional company.

- **Targets a strong credit rating consistently across the financial package**

Standard Special Condition A38 of the NTS Gas Transporter licence (NTS GT licence) in force as at March 2024 states that: *"The licensee must use reasonable endeavours to maintain an Investment Grade Issuer Credit Rating at all times."*

¹³ NGT Annual Report and Accounts 2023/24, page 80: [FY24 NGT Doc](#)

Ofgem has decided to introduce other financial resilience measures that were discussed and laid out in the SSMC, as referred to those in this document in Chapter 2.2 paragraph 9, one of which is to require networks to maintain more than one investment grade issuer credit rating. National Gas already carries two credit ratings as referred in subchapter 2.3.1.

An investment grade is achieved under Moody's definition with a credit rating of Baa3, Fitch with a BBB- rating and Standard and Poor's (S&P) with a BBB- rating. However, just achieving investment grade for the base allowed return does not provide any financial capacity to absorb macroeconomic shocks or outturn of company specific risks. From a debt funding perspective, we aim to retain a BBB+ credit rating for NGT (for the actual company, which therefore includes the Metering and unlicensed businesses) as this ensures access to a wide range of debt instruments and capital markets at efficient interest rates.

The purpose of targeting a Baa1/BBB+ credit rating for the notional company is both to enable access to an efficient cost of debt and ensure that we are appropriately resilient to future financial shocks, which is important given our role as owners and operators of critical national infrastructure.

A Baa1/BBB+ credit rating is also consistent with recognised regulatory practice, consistent with the cost of debt allowance (which is benchmarked based on an average of A and BBB corporate bonds) and consistent with our peers (currently there are two entities (National Grid Plc and Centrica Plc) in the UK, that we analysed in subchapter 2.6.2, rated BBB or lower. All the regulated peer utilities in the UK are rated Baa1/BBB+ or above.

A notional efficient network will need to achieve the same credit rating in the financeability assessment to access this debt rating. That is, the benchmark rating for the financeability assessment and the cost of debt rating must be consistent. We estimate that setting debt funding at Baa2/BBB level would add 10-20bps to debt funding costs.

The financial capacity of Baa1 enables us to deal with downside risks associated with the pursuit of innovation and incentivisation strategies. As summarised in Chapter 5 and Appendix A1 of this Annex, we have performed numerous stress tests against our Totex plan, with Ofgem's suggested RORE under-performance scenario resulting in outputs closest to our financeability targets (assuming current credit rating thresholds and ratios). A strong credit rating is required to ensure an investment grade credit rating can be maintained should such a downside scenario occur. Such targets may also need to be revisited should credit rating agencies decide to adjust their approach in response to changes to the RIIO-GT3 framework.

We have therefore assessed our credit rating against a target rating of Baa1/BBB+.

- **Considers investability along with financeability over future price control periods to ensure the long-term sustainability of the company's financial position**

Ofgem laid out in the SSMD that the new concept of investability will be considered in several ways to assess equity financeability. The primary measure will be cross-checks to Ofgem's CAPM based estimate of the cost of equity.

Other supportive assessments are laid out as the need for additional checks that have been suggested by other network companies, the assessment of additional risk factors in RIIO-GT3, the estimation of a point from the cost of equity range and the assessment of equity issuance costs associated with new equity requirements over RIIO-GT3.

- **Considers a range of financial ratios for debt investors, covering Moody's methodology and scorecard approach**

It is appropriate to apply a similar approach to those used by the ratings agencies to assess our financeability under the RIIO-GT3 deal. This ensures that the financeability of the notional company is not decoupled with that of the actual network.

Moody's, Standard and Poor's (S&P) and Fitch all take account of qualitative and quantitative risk factors in their assessment of credit ratings. The qualitative risk factors include both industry risks, such as the stability of the regulatory regime and company specific risks, such as the nature of the investment programme and management approach to financing activities. The quantitative elements are based on the outcome of financial ratios which demonstrate a company's ability to service debt and investment requirements from its cashflow.

We use the methodology adopted by Moody's network scorecard as a basis for our primary tools to measure financeability from a debt investor's perspective.

Chapter 3: Financing requirements

Based on our business plan submission, around 30% of our annual totex will be funded by customers via in-year revenues and 70% is funded by the company, to be recovered from future customers. This transfers risk from customers to the company, spreading the cost of the long-term investments we make over multiple generations, fairly matching the cost with those that use the network over time.

To optimise the efficiency of raising debt finance and to remain compliant with the regulatory framework, the company funds around 40% of its share of totex from equity or retained cashflow and 60% from debt investors.

Funding sources include:

- Reinvestment of profits attributable to equity investors; and
- Raising financing efficiently from debt investors.

Both debt and equity investors provide funding in anticipation of earning a return that is commensurate with the risk they are taking.

Risk arises due to the uncertainty as to whether the future cashflows generated by the company will fully refund the investment and return expected by investors. Whilst there are certain aspects of our regulatory agreements that reduce this risk, its five-year timeframe is much shorter than the regulatory asset life of 45-years and the current holding period of many of our investors. Therefore, investors' assessment of the attractiveness of investing in UK regulated energy networks will include a judgement about the long-term quality and stability of the UK regulatory regime, the certainty of recovery of the RAV which represents money due to investors and future levels of return.

If investors perceive the risk is too high compared to the return they will move their money elsewhere, making raising new equity and debt more costly so increasing costs to consumers.

3.1 We add value to consumers by accessing efficient sources of debt financing to fund large scale investment over the long-term

[REDACTED]

Our scale enables access to the debt capital markets which tend to provide the most efficient source of debt financing. Most of our debt is raised in this way, but we also maintain some bank borrowings. We also have access to £735 million of undrawn existing committed bank Revolving Credit Facility to manage our liquidity position should debt capital market funding be unavailable at any point, but also to ensure our licence obligations (such as balancing supply and demand on the network and acting as Supplier of Last Resort) can be facilitated in a range of scenarios.

[REDACTED]

[REDACTED]

Additionally, RPI reform (occurring in 2030) adds the expectation to compensate RPI investors. Fallback clauses in our RPI debt intend to leave issuer and investor at no better or worse position following a fundamental change in the benchmark. Therefore, the reform could increase accretion by c.100bps (subchapter 4.2, paragraph 6), being the consensus ‘wedge’ between RPI and CPIH on almost any historic measure. We may be able to limit this, from early analysis of possible fallback and structuring of agreements. However, this is not within the control of NGT, as an individual company, rather it will be based on acceptable market practise. As noted in our summary of NGT’s alternative financial package in subchapter 4.1, the allowances granted for additional borrowing costs need to take such factors into account. Given the uncertainty associated with valuing such costs it may be appropriate to introduce a UM targeted at this specific input.

We are a well-known issuer with a clear and distinctive debt investor proposition, reflecting our world-class safety and reliability performance. We actively maintain a good financial reputation with rating agencies, investors, lenders and other creditors, and maintain strong key financial ratios used by the credit rating agencies to determine the respective credit ratings. As a result, we can access multiple markets at any time and benefit from flexibility that allow us to optimise our funding strategy and achieve the best relative value. For example, we can issue debt in any one of multiple currencies, using derivatives to manage the ultimate liability into sterling ensuring we have access to the best value funding available. In 2023, we issued in the EUR market, at NGT, and swapped the instrument to GBP by entering cross currency swaps.

Efficient debt funding is incentivised by the regulatory framework because the resulting lower interest rates feed into future revenue allowances.

We seek to minimise the total interest rate charges to NGT, whilst managing liquidity risk and maintaining a balanced maturity profile of debt issued that appropriately manages refinancing risk.

3.2 The notional gearing is efficient by comparison to the utility peer group

Given rating agency views and regulatory precedent, we believe that gearing levels between 60% and 65% are efficient for raising equity and debt albeit it is lower than rating agencies’ gearing requirements for investment grade of 65%-72%. This has proven to be the case over several years and it is of note that the notionally efficient gearing level used by Ofgem, and other utility regulators is currently within the range of 50%-60%.¹⁴

The definition of regulatory gearing in RIIO-GT2 currently includes drawings on arrangements such as revolving credit facilities. For normal operations we agree this is logical, however there are certain obligations placed upon NGT that can cause it to be disadvantaged when compared to other networks (or at least create a misleading impression of leverage), such as the requirement to fund shrinkage costs. During RIIO-GT2, there have been periods when shrinkage costs incurred were significantly higher than allowances granted, the delayed recovery of which was funded via NGT’s facilities. The opposite position can occur should significant over-recoveries of allowed revenue to arise due to volume changes outside of NGT’s control. We therefore consider there to be value in re-assessing the definition of regulatory gearing when drafting the licence and associated reporting models (PCFM, RFPR etc) for the RIIO-3 period to exclude such timing items, which would align with NGT’s debt agreements.

NGT’s actual gearing is currently lower than its notional company gearing. In total, NGT reported approximately £3.7bn of debt in 23/24 (£4.0bn in FY22/23).¹⁵ This equates to a gearing level of around 51%, lower than the notional assumption of 60%. When gearing is compared across the sector, NGT’s gearing level is lower than gas distribution companies. In total, 2 of the 14 peers across the gas distribution and transmission sectors that have a gearing of 65% or higher are currently on negative outlook (Figure 1). In line with NGT’s documented financing and dividend policies and guiding by the RIIO-GT2 framework, coupled with significant investment plans in the remaining years to RIIO-GT2, NGT expects to align with the 60% notional structure by the end of RIIO-GT2.

¹⁴ Ofgem’s RIIO-3 SSMD Finance Annex, page 130 and 96, Section 4, paragraph 4.16 & Section 3, paragraph 3.219 - Table 8

¹⁵ NGT Annual Report and Accounts 2023/24, page 49: [FY24 NGT Doc](#)

Figure 1: Actual and notional gearing levels by GDNs versus NGT

Figure 1: Actual and notional gearing levels by company



Source: Economic Insight analysis of RFPR data. Red lines denote notional gearing for each sector

3.3 Market evidence indicates that Ofgem’s base case financial package may not fully address investor expectations

As detailed in Chapter 4, our research and analysis, along with that of the sector, demonstrate that key indicators of investability, such as various cross-checks of the overall cost of equity or its components, suggest higher ranges of allowed return than those proposed by Ofgem are required.

Proposals Ofgem included in the SSMD, while retaining a 45-year asset life, do result in a financeable business plan when applying existing tests (i.e., credit rating and AICR at set targets). Ofgem made a separate decision to shorten asset lives for the GDNs and possibly NGT that naturally accelerates the recovery of allowances into RIIO-GT3, which increases performance against these metrics. Such an acceleration is not a lever for improving financeability but has a separate driver being to address potential stranding risks. This decision also increases consumer bills, as described in Chapter 6.

Another separate decision was made to address the so-called leverage effect in period of higher than forecast inflation, granting a nominal allowance for fixed rate debt that also increases cash allowances in RIIO-GT3 at the expense of RAV indexation. Again, this was not a decision taken to improve financeability but focused on addressing Ofgem’s concerns regarding inflation.

However, we are aware that Moody’s is re-assessing its methodology and thresholds to take both changes into account. The financeability assessment result will therefore not necessarily remain the same after that recalibration. In addition, neither decision was influenced by factors or evidence that drive the calibration of allowed returns as generally defined under RIIO.

As such, there are still further points to consider in respect of the return included in the SSMD that are driven by the available market evidence or the principle of regulatory consistency, or indeed in the case of cost of debt allowances, a full and fair reflection of networks’ totex plans rather than the working assumptions included in the SSMD.

Chapter 4: Our alternative financial package

We derive the parameters which underpin our alternative financial framework using a principle-based approach and empirical evidence.

The key aspects of our alternative financial package can be summarised as:

- A real post tax cost of equity of 6.48% CPI-stripped;
- Notional gearing of 60%;
- Cost of debt allowances set using full indexation approach and based on an adjusted trailing average that adequately reflects average borrowing costs in the gas sector;
- A single totex capitalisation rate set at the 'natural' rate; and
- Asset lives maintained at 45 years and depreciated on a sum of digits basis, as in RIIO-GT2.

We have justified this package based on a wide range of evidence and a financeability assessment that provides financial capacity to absorb downside risks.

There has been extensive consideration of the methodology for setting allowed return and the wider financial package in Ofgem's RIIO-GT3 framework and sector specific consultations and we have set out our views in response to those consultations. Our approach in this plan, and as described in this chapter, is in most respects consistent with Ofgem's RIIO-GT3 policies. However, in some cases, notably asset lives and the methodology to estimate RfR and TMR, we take a different view in the light of available evidence. This Chapter explains where we have differing assumptions.

4.1 Allowed Equity Return

Setting the right allowed return is critical to achieving a balance between current and future customer charges and attracting and retaining investment, particularly at a time when multiple sectors and industries have significant investment, and therefore capital requirements. This balance ensures networks can fund their operations and future investments and have adequate financial capacity to manage uncertainty around the energy transition, whilst at the same time ensuring consumers pay no more than is necessary for the services and activities they receive and from which they benefit. The return granted therefore needs to reflect the competition for capital and the subsequent realities of the capital markets networks operate within. The required financial capacity is dependent on networks receiving a fair return for the risks they manage, and on investors having confidence in the stability of the regulatory regime.

The cost of equity cannot be directly observed and will always be an estimation, which makes it important that all available evidence is considered to ensure the estimation and subsequent setting of the cost of equity within the price control review is suitably robust. As part of the process, we test both the symmetry and range of the implied Return on Regulated Equity and have set out the results in Chapter 5, 'Financeability assessment'.

The most used framework to estimate cost of equity is the Capital Asset Pricing Model (CAPM). The equity beta within CAPM captures all the risks that cannot be eliminated through diversification of an investment portfolio, for which investors require compensation. However, very few of the risks that we face as a business can be clearly classified as either diversifiable or non-diversifiable. Furthermore, CAPM is largely dependent on historic data and as such, there is a likelihood of forward-looking risks that networks face not being captured in CAPM inputs. As such, we and other networks have consistently emphasised the importance of cross-checks of the cost of equity range resulting from CAPM.

We do not draw attention to the shortcomings of the CAPM with a view to challenging its use, rather we raise it to underline the importance of sense-checking the results using alternative approaches and information, particularly in such a crucial period for the sector.

In the following chapters, we set out our estimates for the cost of equity and the parameters and cross-checks on which these are based to ensure the estimates represent a fair outcome for both investors and consumers. In doing so, we continue to follow the principles originally established by Ofgem for RIIO price controls and the UKRN Guidance.

In estimating cost of equity, and in selecting a reasonable point value from within the possible ranges, we will not only consider cross-checks, but also consider financeability considerations; feedback from both investors and consumers; the levels of network risk and how network risk has changed since the RIIO-GT2 price control was set; and the need to attract and retain finance.

In summary, the proposed cost of equity in this business plan is based on the following values, which are shown alongside Ofgem's base case assumption.

Table 1: Ofgem's base case assumptions and our alternative financial framework

CPI stripped	Ofgem			National Gas Transmission		
	Low	High	BP assumption	Low	High	BP assumption
Risk Free Rate (RfR)	1.18%	1.18%		1.54%	1.65%	1.65%
Total Market Return (TMR)	6.50%	7.00%		7.0%	7.5%	7.5%
Equity Beta	0.64	0.89		0.76	0.89	0.83
Cost of equity	4.57%	6.34%	5.43%	5.70%	6.83%	6.48%

The following chapters explain our alternative approach and estimates at this stage.

4.1.1 Risk free Rate (RfR)

The RfR is the theoretical rate of return of an investment with zero risk; it is the return that investors expect from a perfectly safe investment over a certain period. Ofgem utilised the one-month (October, daily) average of a 20-year index-linked gilt (ILG) for RIIO-GT2 and is proposing to utilise the same input for RIIO-GT3. Again, as in RIIO-GT2, it is proposed that the RfR is updated annually during the RIIO-GT3 period. NGT's SSMC response concluded the use of 20-year ILGs and an update to the rate on an annual basis is appropriate as a starting point. However, based on the work performed for the ENA by Oxera,¹⁶ NGT presented evidence in its response to the SSMC that reference should be made to AAA-rated non-government bonds when estimating the RfR (to account for the convenience premium between government and non-government instruments as fundamentally companies cannot borrow at the same rate as governments, among other factors) and estimates of the wedge between RPI and CPIH should reference RPI-CPI wedge based on swap rates and the wedge between CPI and CPIH.

Ofgem decided in its SSMD that its intention is not to account for the convenience premium or a CPI-CPIH wedge in the RfR allowance.

Based on our analysis and the updated work performed by Oxera on behalf of the ENA ("RIIO-3 cost of equity-CAPM Parameters"¹⁷):

- We acknowledge and accept Ofgem's proposed approach to adopt a 20-year term for ILG measured over a one-month average, with the RfR allowance updated annually. Whilst evidence was presented at the SSMC for a CPI-CPIH wedge, we also acknowledge and accept Ofgem's proposed approach to accounting for the RPI-CPIH wedge.
- Evidence, academic research and regulatory precedent continue to demonstrate that the RfR should not solely reference ILG, as detailed in Oxera's report.¹⁸
- In respect of the specific points Ofgem raised in its SSMD:
 - RIIO-GT2 appeals: Ofgem referred to the Competition Market Authority's (CMA) decision in the RIIO-GT2 appeals that indicated ruling out convenience premium in RfR estimation was "not wrong". However, the CMA did not explicitly consider the use of ILG as the sole proxy of the RfR to be the superior approach to a combination of ILG and AAA-rated non-government bonds. Indeed, the CMA concluded in the PR19

¹⁶ Oxera Report prepared for the ENA - RIIO-3 cost of equity dated 23 February 2024

¹⁷ Oxera Report prepared for the ENA - RIIO-3 cost of equity-CAPM parameters dated 8 November 2024

¹⁸ Oxera Report prepared for the ENA - RIIO-3 cost of equity-CAPM parameters dated 8 November 2024, page 13, Section 2.1, 2nd paragraph

redeterminations that the convenience existed and therefore that relying solely on ILGs could be improved upon.¹⁹

- Evidence in Oxera's report²⁰ demonstrates a positive convenience premium can be observed during both calm and agitated financial market conditions.
- Oxera also analysed Ofgem's assessment of utilising adjusted AAA-rated reference data and identified that such an approach has been superseded by the CMA's findings and has certain methodological flaws.
- As at the SSMC, Oxera references precedent from previous CMA judgements and Civil Aviation Authority (CAA) price control processes to demonstrate other regulatory bodies have assessed the convenience premium and found it to be more than zero, in contrast to Ofgem's analysis.²¹ We also note the conclusion reached by the Northern Ireland Utility Regulator (a signatory of the UKRN Guidance) in its Final Determination (FD) of the Northern Ireland Electricity Networks' RP7 transmission and distribution price controls that it is necessary to consider other proxies when setting the RfR.²²
- Subsequently, Oxera's approach to valuing the convenience premium at 27bps combined with the latest data on gilt yields (data cut off as of 1 July) results in an RfR of 1.54% versus Ofgem's initial estimate of 1.18%.

Therefore, in NGT's financial assessment the base scenario assumption uses the risk-free rate as determined by Ofgem in the SSMD, that is 1.18%. NGT's estimate of risk-free rate, using the approach as recommended by Oxera and the underlying gilt rate forecast included in Ofgem's final BPFM, is 1.65% (including add-ons of RPI-CPIH wedge of 11 bps and weighting of AAA-rated bonds generating an uplift of 27bps²³) as included in our alternative financing scenario.

4.1.2 Total Market Return (TMR)

TMR is used to estimate the Equity Risk Premium (ERP), the additional return over the risk-free rate that investors expect for taking the market average level of risk. In RIIO-GT2 ERP is calculated as the difference between TMR and the risk-free rate and that is the approach Ofgem proposes retaining in RIIO-GT3. NGT made the point in its SSMC response that no strong evidence is seen for amending the broad methodology applied to estimate the ERP and as such we agree with Ofgem's proposal to retain the methodology applied in the current price control in RIIO-GT3, although we and other networks continue to emphasise that while TMR may be largely stable over time, the relationship between TMR and market data (notably interest rates) needs to be very carefully considered.

Ofgem decided in its SSMD to adopt the following approach in setting TMR:

- Ofgem derived a range for TMR by placing equal weight on ex-post and ex-ante approaches, relying on the one-year arithmetic average for the ex-post (historical) TMR, and Ofgem relies on the Dimson, Marsh, Staunton (DMS) decomposition approach for the ex-ante (adjusted historical) TMR. Given the inherently judgemental nature of ex-ante data, as submitted at SSMC we continue to be of the view that it is not correct to place 50% weight on historical ex-ante approaches.
- Ofgem uses a combination of the Consumption Expenditure Deflator (CED) series for the period 1900-49; the new backcast series for the CPIH for the period 1950-88; the CPIH estimates published by the Office of National Statistics (ONS) from 1988-2022 onwards. This is consistent with the approach proposed by Oxera at SSMC.

Based on our analysis and the updated work performed by Oxera on behalf of the ENA:²⁴

- We acknowledge the positive changes considered by Ofgem such as relying on arithmetic mean calculation for the ex-post TMR and considering new information series for inflation;
- For the ex-ante TMR, Ofgem applies a downward adjustment for serial correlation that does not appear appropriate. NGT's concerns remain over subjective nature of ex-ante data and therefore NGT does not support setting 50% weight on historical ex-ante approach;

¹⁹ Oxera Report prepared for the ENA - RNGT_C20 Oxera RIIO-3 Cost of Equity – CAPM Parameters dated 8 November 2024, page 13, Section 2.1, 2nd paragraph

²⁰ Oxera Report prepared for the ENA - NGT_C20 Oxera RIIO-3 Cost of Equity – CAPM Parameters dated 8 November 2024, page 16, Section 2.1, 2nd paragraph

²¹ Oxera Report prepared for the ENA - NGT_C20 Oxera RIIO-3 Cost of Equity – CAPM Parameters dated 8 November 2024, page 17, Section 2.1, Figure 2.1

²² NI Utility Regulator RP7 Final Determination Economic Regulation Forum Briefing Paper, page 2-3, Section 3.1, 1st paragraph

²³ Oxera Report prepared for the ENA - NGT_C20 Oxera RIIO-3 Cost of Equity – CAPM Parameters dated 8 November 2024, page 24, Table 2.3

²⁴ Oxera Report prepared for the ENA - NGT_C20 Oxera RIIO-3 Cost of Equity – CAPM Parameters dated 8 November 2024, page 25-44, Section 3

- Ofgem’s TMR range increased slightly from SSMC, but such a movement is not sufficient to fully reflect the higher interest rate environment. As evidenced and explained in Oxera and Frontier reports,²⁵ not reflecting the market environment appears inconsistent with previous regulatory decisions. In RIIO-GT2, 70.3% of the reduction in gilt yields since RIIO-GT1 was passed onto networks and therefore into lower consumer bills, whereas the SSMD position implied networks should now bear the cost of a higher interest/gilt rate environment. This may be interpreted by investors as expectation of different behaviour in times of increasing or decreasing interest/gilt rate environments, undermining confidence and regulatory consistency; and
- Ofgem’s approach in SSMD considers setting the bottom of the TMR range in line with their ex-ante estimate and the top of the range with ex-post estimate which presents in rounded terms the TMR range of 6.5%-7.0% whereas NGT’s alternative financing scenario presents the TMR range of 7.00-7.50%.

TMR Cross-Checks:

1. TMR Glider, DGM and the long-term historical average

At the SSMC, Frontier formulated a “TMR Glider” calibrated using both historical market implied TMR (based on a dividend growth model (DGM)) and historical prevailing interest rates (gilt yield). While Ofgem did not acknowledge the role of prevailing interest rates in the RIIO-GT2 TMR decision, analysis demonstrates that market-based forward TMR and underlying interest rates move broadly in the same direction, and Frontier’s TMR Glider provides a method of quantifying this relationship. At the SSMD, on behalf of the ENA, Frontier has updated evidence and proposed further refinements detailed in its revised report,²⁶ utilising the TMR Glider, the long-term historical average TMR and DGM outputs as a balanced set of evidence to form a cross-check of TMR. Frontier strongly advocates the view that the TMR Glider is not designed to be a predictive TMR model but is instead a helpful tool for regulators to reflect prevailing market conditions when setting the TMR for upcoming price controls. Taken together with the long-run historical average and DGM outputs, this approach provides a balanced set of evidence to be considered alongside Ofgem’s survey data to ensure the CAPM-TMR is set at an appropriate level. The centre point of this range is defined by the long-run historical average, which is roughly 7% CPIH-real. Frontier’s analysis of the TMR Glider results on the manner in which TMR moves with gilt yields demonstrates that a range of 1% around the long-run average may be appropriate for regulatory purposes when assessing a reasonable range of variation for a stable TMR.²⁷ Frontier concluded that this would imply a range of 6.5%-7.5%, anchored around the long-run average, could provide an approach to setting TMR which looks ‘through the cycle’ (as is Ofgem’s objective) but with sufficient flexibility to ensure TMR adequately reflects the macroeconomic environment in a stable and predictable way. For RIIO-GT3, based on both Frontier’s and Oxera’s analysis, prevailing market conditions strongly suggest a TMR range of 7.0%-7.5% with a point estimate at the top of this range.

Survey evidence cross-checks:

• Investment managers’ forecast of TMR

Ofgem agreed in SSMD that investment manager forecasts of TMR provide a cross-check more directly of its TMR assumption than the overall cost of equity finding, as suggested by Frontier in its report.²⁸ Survey evidence represents a ‘reality check’ of investor expectations and given the potential biases contained within such expectations, are most reliable when used over time. According to Frontier’s updated analysis, the average across TMR forecasts for the discount rates for 5 of the 10 institutions that Ofgem considered at RIIO-GT2, has increased by 2.3% (6.9% in July 2020 to 9.3% in September 2024, both nominal).²⁹

• Fernandez survey

Frontier’s report also contains details of the annual survey of risk-free rates and market risk premium conducted by Fernandez et al³⁰ to supplement TMR cross-checks. Evidence from this survey above implies an approximate 3% increase in nominal terms (6.9% in 2020 to 9.7% in 2024), broadly supporting the evidence derived from investment manager forecasts.³¹

²⁵ Oxera Report prepared for the ENA - NGT_C20 Oxera RIIO-3 Cost of Equity – CAPM Parameters dated 8 November 2024, page 6-7, Section ‘Executive summary’ & Frontier Report prepared for the ENA - Updated cost of equity cross-check evidence dated 22 November 2024, page 3-4, Section ‘Key findings’

²⁶ Frontier Report prepared for the ENA - NGT_C20 Oxera RIIO-3 Cost of Equity – CAPM Parameters dated 22 November 2024, page 38-51, Section 7 & 8

²⁷ Frontier Report prepared for the ENA - Updated cost of equity cross-check evidence dated 22 November 2024, page 44, Section 7.4, paragraph 7.4.1

²⁸ Frontier Report prepared for the ENA - Equity investability in RIIO-3 dated 5 March 2024, page 68, Section 6.4.3, paragraph 226-229

²⁹ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 47-48, Section 8.1, paragraph 8.2.3

³⁰ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 48, Section 8.3, paragraph 8.3.1

³¹ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 48-49, Section 8.2, paragraph 8.3.2

Summary of TMR cross-checks



Source: Ofgem, Frontier analysis

Note: All figures in CPIH real

The figure above compares the results of Frontier's analysis of TMR cross-checks to the range Ofgem included in SSMD. Notably the midpoint of Ofgem's range sits below the historical long-run average when the evidence provided by the cross-checks illustrates that market evidence implies TMR should be above the long-run average for RIIO-GT3. This is again supported by the conclusion reached by Oxera in its report.

4.1.3 Beta

Beta is used as an estimate of the risk specific to an investment that cannot be diversified away ("systematic risk"). Asset beta, the systematic risk of investing in an asset, is made up of equity beta (the exposure of shareholders to systematic risk) and debt beta (the same for debt investors), weighted by an appropriate level of gearing.

NGT and the ENA recommended, in its response to Ofgem's SSMD, the inclusion of certain European comparators to generate a suitable sample and placing most weight on longer-term estimation windows when estimating the beta.

According to the SSMD, Ofgem's methodology on the equity beta is based on the following set of assumptions:

- It places weight on National Grid, GB water companies (Severn Trent and United Utilities), and European utilities (Enagas, Red Electrica, Terna, Snam and Italgas), but excludes Pennon and SSE from the sample due to their historical exposure to non-regulated businesses;
- It references daily returns over 2, 5 and 10-year estimation windows. Ofgem is expecting to place most weight on longer-term estimation windows for the Draft and Final Determinations (DD and FD);
- It used the most diversified local index in the relevant currency rather than using world betas in line with UKRN Guidance; and
- It references the enterprise value of gearing for de-levering raw betas, using Harris-Pringle formula. Ofgem decided to retain 0.075 as of debt beta used in the RIIO-GT2.

Based on our analysis and the updated work performed by Oxera on behalf of the ENA³²:

- NGT agrees with Ofgem's proposal to build a range for beta considering 2, 5 and 10-year estimation windows and to derive beta by relying most heavily on longer-term timeframe when picking a point estimate for asset beta, as placing more weight on 10-year betas has the advantage of counterbalancing the unequal weight placed on the short-term data and taking better account of the gas sector.³³ Ofgem included an "early view" of an asset beta range of 0.30-0.40 in the SSMD,³⁴ also recognising that its preferred approach for setting beta supports a point estimate towards the

³² Oxera Report prepared for the ENA - RIIO-3 cost of equity-CAPM parameters dated 8 November 2024, page 45-52, Section 4

³³ Ofgem's RIIO-3 SSMD Finance Annex, page 85, paragraph 3.172

³⁴ Ofgem's RIIO-3 SSMD Finance Annex, page 95, paragraph 3.216

upper bound of this range.³⁵ Given the challenges facing the sector (expected investment levels in electricity, uncertainties in gas) there is no reason to expect the risk of energy networks have decreased since RIIO-GT2, which supports this approach. As such, Oxera's analysis recommends a narrower beta range of 0.35-0.40. This translates to an equity beta range of 0.76-0.89 assuming a debt beta of 0.075 and 60% gearing.

- NGT supports Ofgem's inclusion of certain European comparators to generate a suitable sample in the comparator list, particularly in respect of the gas sector. However, Pennon's exclusion from the sample list does not appear consistent with UKRN Guidance, particularly given by the time of RIIO-GT3 FD there will be more years of water-only activities within the assessment period, increasingly its relevance versus RIIO-GT2 when Pennon was included as a comparator. Furthermore, as Oxera demonstrates in its analysis of beta for water sector in response to Ofwat's PR24 final methodology,³⁶ the inclusion of Pennon had the same impact on re-levered equity betas across 2, 5 and 10-year estimation windows. Extending the beta comparator sample still results in a limited pool of comparators for the gas sector because National Grid has increasing proportion of its business invested in electricity distribution due to its acquisition of Western Power Distribution (now known as National Grid Electricity Distribution, in June 2021) and its fully disposed in its gas transmission business, but this approach significantly improves the comparator pool.

To confirm the validity of the inclusion of European comparators, Oxera was commissioned by the ENA to analyse the regulatory regimes that each of the five European comparators are regulated under and compared these with the RIIO framework across several risk factors derived from either the regulatory process or the design of the regulatory regime. According to its findings, Oxera asserts that the five European networks considered by Ofgem have systematic risks comparable to those of the GB energy networks due to the sufficiently comparable regulatory frameworks.³⁷ Oxera also assessed the reliability of this analysis by considering the percentage of revenues from regulated activities for all the comparators in the sample and observed all had high proportions of regulated revenues, above 90% according to data from 2019, the year representing the mid-point of a 10-year period for the beta estimation.³⁸

In addition to the proportions of revenues sourced from regulated activities, Oxera assessed how much revenue is sourced from the activities regulated specifically under the main domestic energy network regulatory frameworks. Oxera's assessment demonstrated that the main regulatory framework the European comparators operate within accounts for at least 86% of revenues for all comparators, except Snam which operates gas storage and regasification activities along with GT networks (still a majority at 69%). Therefore, Oxera's report provides good evidence to conclude that the European comparators can be considered appropriate for inclusion in the assessment of the main driver of the regulatory risk component of the asset beta.

We have also observed that estimates of beta made after Oxera's cut-off date are trending higher and as such, there is a need to keep data under review ahead of both DD and FD.

4.1.4 Use of cross-checks

UKRN Recommendation 7 suggests the use of cross-checks to sense check the overall cost of equity derived from the CAPM derived midpoint but that the midpoint should only be deviated from if there are strong reasons to do so. At the SSMC, Ofgem agreed with that recommendation and proposed to adopt it in RIIO-GT3 and NGT and other networks submitted evidence in response. However, the SSMD disregarded most of the evidence and methodologies presented as cross-checks, notably those methodologies that utilise observable evidence regarding cost of debt to estimate a suitable cost of equity. Therefore, the ENA appointed Frontier to update reporting submitting at the SSMC to demonstrate the robustness and reliability of each cross-check. Frontier employed a criteria list to assess the credibility of each of the method as outlined below:

- Assumptions driven: all cross-checks rely on assumptions, but Frontier tested whether the overall result is driven by assumptions (e.g., outperformance);

³⁵ Ofgem's RIIO-3 SSMD Finance Annex, page 98 and 117, paragraph 3.224 & 3.305

³⁶ Oxera Report prepared for the ENA - RIIO-3 cost of equity-CAPM parameters dated 8 November 2024, pages 49 & 57, Section 4.2 & A1

³⁷ Oxera Report prepared for the ENA - Review of the regulatory regimes and business mixes for relevant European comparators to strengthen the use of European beta data, page 31, Section 3.6

³⁸ Oxera Report prepared for the ENA - Review of the regulatory regimes and business mixes for relevant European comparators to strengthen the use of European beta data, page 6, Section 2.1, paragraph 2

- Potential bias: whether the assumptions or the nature of cross-check introduce the risk of bias, for instance in the case of survey evidence;
- Risk comparability: understand whether the cross-checks rely on companies/markets that are comparable in terms of risks;
- Completeness: confirm if there are sufficient market data points for a robust cross-check;
- Replicability/transparency: assess if the information is in the public domain and the evidence can be observed; and
- Regulatory burden: understand whether the cross-check involves complexity and/or the need for update from DD and FD.

NGT continues to support the use of cross-checks to sense check the overall cost of equity and as such, this chapter of our business plan updates the material presented in response to the SSMC.

The detailed reports from Oxera and Frontier, NGT and other networks submitted at the SSMC included an assessment of a series of cross-checks, including those utilised by Ofgem in RIIO-GT2 or proposed in the SSMC. The methodologies employed in this assessment fall into four categories as laid out below, with TMR cross-checks summarised separately in Chapter 4.1.1:

1. **Debt-market cross-checks:**
2. **Survey-evidence cross-checks;**
3. **Equity valuation based cross-checks; and**
4. **Accounting profitability cross-checks.**

The objective of such cross-checks is to enhance the robustness of the estimate derived from the CAPM, which is particularly important at a time when networks face unprecedented risks in future and risks that may not be reflected in historical data used to estimate CAPM. The outcome of these cross-checks should be considered by Ofgem to ensure a balanced estimate of the risks facing networks in the future is arrived at.

At the SSMC, the consultants appointed by the ENA recommended Ofgem consider additional innovative cross-checks such as hybrid bonds and the ARP-DRP cross-check. Ofgem listed in the SSMD potential issues it found with these methodologies, albeit confirmed that the rationale for utilising such cross-checks was understood and it will consider how such evidence can be incorporated as a cross-check for RIIO-GT3 purposes. As such, we (along with other ENA members) present further evidence on those cross-checks. Ofgem stated that it does not plan to utilise long-term profitability benchmarks or multi-factor models at DD.

Whilst we acknowledge the limitation of profitability cross-checks, methods adopted by Ofgem such as OFTO bid-derived cost of equity, infrastructure fund derived-IRR and investment manager surveys suffer from the same limitations. As such, further evidence on accounting profitability cross-checks is included in Frontier's report as a directional, real-world check of the level of cost of equity set by the CAPM approach.

1. *Debt market cross-checks*

- **Hybrid bonds**

Frontier's rationale in focussing on hybrid bonds was that such instruments blend characteristics of both debt and equity.³⁹ Assuming the allocation of these securities between debt and equity stands at 50% (as assumed by credit rating agencies), the spread between the expected return on hybrid bonds and conventional senior debt would fall at the midpoint between equity and senior debt costs. At the SSMC, among the GB hybrid bond options analysed by Frontier, evidence from NGG Finance plc (part of the National Grid plc group) June 2073 hybrid was selected, given its longest time-to-next call and to avoid currency exchange complications. According to the result of Frontier's updated analysis,⁴⁰ the spread between the expected return on this hybrid bond and the corresponding IBoxx at the time of issue was estimated to be 136bps, which in turn infers a point estimate for the implied cost of equity of 6.6% CPIH-real. The range of sensitivity analysis carried out by Frontier formed a range of 5.8% to 8.4% CPIH-real according to the same report.⁴¹

At the SSMD, Ofgem stated that it understood the logic of this cross-check but expressed concerns regarding the limited sample utilised in the analysis. As such, Frontier has expanded the sample utilised, selecting 55 bonds from 16 utilities which reflect

³⁹ Frontier Report prepared for the ENA - Equity investability in RIIO-3 dated 5 March 2024, page 42, Section 5, paragraph 140

⁴⁰ Frontier Report prepared for the ENA - Updated cross-checks evidence dated 22 November 2024, page 19-20, Section 2.4

⁴¹ Frontier Report prepared for the ENA - Updated cross-checks evidence dated 22 November 2024, page 20, Section 2.4 - Table 2

comparable characteristics to GB hybrid previously assessed. This updated analysis demonstrates that the specific National Grid bond spread previously used to estimate the cross-check (151bps) is very close to the average of the new sample of 55 bonds (148bps). As such, the original analysis is considered sufficiently robust to be a valid cross-check of cost of equity. As the SSMD midpoint of the cost of equity range from SSMD (5.48%) falls below the range implied by this cross-check, it can be considered that investability risks would be heightened by adopting such a cost of equity range and CAPM parameters should be reassessed.

- **ARP-DRP cross-check**

In the SSMD, Ofgem stated that it understood the general logic of the ARP-DRP cross-check submitted within Oxera's SSMC report for the ENA⁴² but did not agree that the relationship between cost of debt indicators and an appropriate cost of equity is as direct and linear as Oxera's modelling suggested. The overall logic that it is reasonable for equity investors to expect a higher return than debt holders remain valid however and as such, whilst an updated analysis was not available to Frontier, it did take Oxera's findings into account in its revised cross check report, noting that the ARP-DRP supported a significant increase in CoE compared to RIIO-GT2.⁴³

2. Survey evidence cross-checks

- **Infrastructure fund implied equity IRR**

At RIIO-GT2 Ofgem utilised data from a sample of infrastructure funds that invest in private finance initiatives and utility assets to derive a cross-check of cost of equity. In a report for the ENA, Frontier collated updated data for the same funds (where still in existence) and such evidence was presented to Ofgem at the SSMC. At the SSMD, Frontier has updated this data further,⁴⁴ which demonstrates that the average equity implied IRR has increased from c.6% in July 2020 to c.10.1% in September 2024. Frontier adopted the increase of 4.1% as the headline figure in its cross-check analysis, which is approximately 8% CPIH-real.⁴⁵

Frontier has previously raised a number of critiques of this cross-check but as Ofgem utilised it at RIIO-GT2 and will assess how to do so again for RIIO-GT3, concludes that the equity IRR evidence cross-check is most suited to assessing whether CAPM values from one price control period to another are consistent with trends in market conditions over time, facilitated by considering multiple funds over a consistent time series of data. Frontier indicated that an upward movement of over 4% points since 2020 is substantial enough to demonstrate the CAPM values, between RIIO-GT2 and RIIO-GT3, should reflect a similar upward direction, emphasising that while the CAPM values do not need adjusting on a one-for-one basis with the cross-check, a robust explanation is required should the absolute value from the CAPM range be substantially different than the cross-check output, as is currently the case.

3. Equity valuation-based cross-checks

- **Market-to-Asset Ratios (MARs)**

Ofgem utilised this cross-check at RIIO-GT2 to infer that the allowed cost of equity was sufficient based on 'traded MARs', being the ratio of the regulated Enterprise Value (EV) and the Regulated Asset Value (RAV) of each company; its logic being that any premium must reflect future expected outperformance or an allowed return that is higher than the 'true' cost of equity. Ofgem stated in the SSMD its intention to take this cross-check into account again for RIIO-GT3. At the SSMC, Frontier updated the analysis of traded MARs,⁴⁶ albeit an updated analysis of transaction MARs was not possible given the lack of transactions. At the time, this analysis did however demonstrate a significant reduction in MARs since Ofgem's assessments in RIIO-GT2. According to the findings, the market data suggested a range of 10%-15% whereas Ofgem's RIIO-GT2 analysis inferred a range of 20%-60%.

Ofgem explained in the SSMD, while it acknowledges that MARs are unlikely to support a precise decision on an allowed CoE, it maintained its view on the issue of investor assumptions driving premia to RAV. Furthermore, Ofgem expressed scepticism around transaction MARs being driven by additional factors such as synergy assumptions.

⁴² Oxera Report prepared for the ENA - RIIO-3 cost of equity dated 23.02.2024, page 75-84, Section 3

⁴³ Frontier Report prepared for the ENA - Updated cross-checks evidence dated 22 November 2024, page 35, Section 6, paragraph 6.1.9

⁴⁴ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 22-23, Section 3.3

⁴⁵ Frontier Report prepared for the ENA - Updated cost of equity cross-check evidence dated 22 November 2024, page 23, Section 3.3, paragraph 3.3.3

⁴⁶ Frontier Report prepared for the ENA - Equity investability in RIIO-3 dated 5 March 2024, page 63-66, Section 6.4.1, paragraph 207-213

At this stage of the price control process, Frontier has updated MAR values in its report⁴⁷ which overall implied on average a MAR at 1.11x using market value of debt. According to Frontier's updated MAR analysis, recent transactions have generated materially different transacted MARs, for example its estimation of the transacted MARs for Electricity North West is at 1.64x and Phoenix Gas at 0.95x. Frontier concluded that this exercise yields a broad implied cost of equity range of 4.90%-12.33% CPIH-real with a range of plausible assumptions e.g., RAV growth etc. that are detailed in their report.⁴⁸ Therefore, Frontier concluded there is inherent difficulty in utilising transaction MARs as a reference to infer the cost of equity. Hence, Frontier recommended Ofgem avoid putting undue weight on this cross-check.

Frontier indicated that there are multiple uncertainties that drive utilities' market valuation i.e., true cost of equity, investors' expectations of expected outperformance, RAV growth etc. Hence, it is very difficult to explain precisely why MAR premia are at their observed levels, as to understand that well would require knowledge of investors' combined assumptions on both outperformance and RAV growth in perpetuity, but as investor's valuations remain private Frontier asserted that these cannot be known. The uncertainty applies to both traded and transaction MARs, but traded MARs, compared to transaction MARs, contain a lower degree of uncertainty as frequent trading supports more transparency. Frontier also asserts that transaction prices of private utilities are likely to be biased upwards due to the presence of a single seller and multiple buyers under which circumstance, the expected outcome is to transact with the bidder that offers the highest price. Bid prices will therefore reflect investors' view of future cash flows and an uplift to ensure their bid wins over other offers. This results in this upward bias of transaction prices and MARs.

Frontier's findings indicate that there are many structural and practical sources of uncertainty associated with the MAR cross-check, including deriving accurate enterprise values of the regulated business from reporting transaction or group enterprise values. For this reason, NGT supports Frontier's conclusion to score MAR inference relatively low on the cross-checks application framework. Given Ofgem's objective of monitoring MARs over time, we agree with Frontier's recommendation that Ofgem should wait until regulators have released definitive information on the likely regulatory settlement when there will be relatively accurate and up to date accounting data on MARs before deciding whether to put weight on this cross-check.

4. Accounting profitability cross-checks

- **Long-term profitability cross-check**

Frontier considered profitability metrics of utilities can be a useful real-world check to compare the allowed equity return and the outturn level of profitability for businesses with a similar aggregate risk profile as regulated businesses. Therefore, Frontier referenced the range for long-term profitability cross-check in its report⁴⁹ to provide a helpful reference point that ensures the CAPM-CoE point estimate falls within a reasonable location. If the contrary proves to be the fact, Frontier's conclusion is that this may be a signal for regulators to review CAPM parameter ranges.

Conclusion on cross-checks

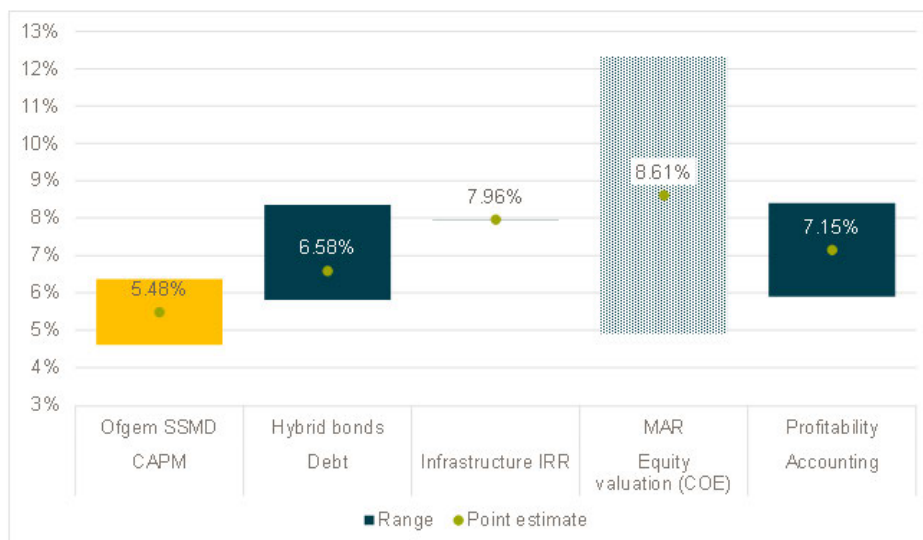
The work performed by Oxera and Frontier on cross-checks all infer that the cost of equity midpoint generated by the CAPM methodology is not sufficient to fully reflect the risks facing networks and changes in capital market conditions, nor would it meet Ofgem's stated objective of making the RIIO-GT3 price control package investable for an equity investor. In particular, the point estimate of 5.48% in CPIH deflated terms sits below the lower bound of the hybrid bond cross-check range of 5.80% CPIH-real. This is supported by additional cross-checks that provide a directional sense check such as the infrastructure fund IRR showing a point estimate of 7.96%.⁵⁰ Ofgem should therefore consider the evidence from such cross-checks when assessing how UKRN Guidance are applied in the RIIO-GT3 price control and address the inference that the range of estimates applied to each input to CAPM are not truly reflective of current and forward-looking risks, notably those for TMR. Adopting the TMR input inferred by relevant TMR cross-checks and Oxera's work on the CAPM output of 7.0%-7.5% is however in line with the cross-checks and is therefore adopted in our alternative financial package.

⁴⁷ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 29-31, Section 4.4

⁴⁸ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 29, Section 4, paragraph 4.4.4

⁴⁹ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 33, Section 5, paragraph 5.1.7

⁵⁰ Frontier Report prepared for the ENA - Updated cost of equity cross-checks evidence dated 22 November 2024, page 35, Section 6, paragraph 6.1.7



Source: Ofgem, Frontier Economics, Oxera

Following from the evidence gathered above for the overall positioning of CoE, NGT has decided to choose the top of the presented TMR range with the point estimate of 7.5%. This is based upon the conclusions of Oxera and Frontier analysis which both reference prevailing market conditions strongly indicate a TMR range of 7.0%-7.5% for RIIO-GT3 and recommend that the point estimate should be towards the top of this range. NGT's point estimate of 7.5% brings the CoE to 6.48% for RIIO-GT3 which is consistent with the hybrid bond cross check evidenced in Frontier's analysis to be the most robust that presents a range of 5.8% to 8.4% CPIH-real and infers a point estimate for the implied CoE of 6.6% CPIH-real. It is also supported by the evidence from the infrastructure IRR and other cross checks, which while perhaps more viable as directional indicators rather than for a specific calibration of CoE, do illustrate how underlying market conditions should be reflected in CoE.

4.2 Cost of Debt (CoD)

The cost of debt allowance in a price control is set to remunerate companies for the cost of debt that would be expected to be incurred by a notional efficient network company. UKRN Recommendation 8 states that regulators should estimate an allowance for an efficient company under the notional company structure for the relevant sector, with actual debt costs suitably benchmarked against other market evidence.

The best estimate of this efficient cost of debt is likely to be based on a trailing average of market rates. By updating this trailing average each year, the resulting cost of debt estimate is an average that applies both to existing debt and new debt that is raised during the price control. This 'full indexation' approach was used during RIIO-GT1 and RIIO-GT2.

In RIIO-GT2, the allowed cost of debt was constructed utilising data from an index of borrowing costs deemed to best align to the sector (Iboxx Utilities 10yr+), and an allowance for additional costs that are not fully reflected in that index output adjusted to a real allowance using the long-term CPIH assumptions set in RIIO-GT2. At the SSMC, NGT and other gas networks presented strong evidence for an increase in risk for gas networks relative to electricity and to RIIO-GT2, which manifests as a higher cost of borrowing and lower tenures for the gas sector. As such, we submitted that it is appropriate to assess NGT efficient costs against a comparator group of GT and GD, which provides an appropriate balance of reflecting the divergent risk between electricity and gas and maintaining a comparator that extends beyond NGT alone. At the SSMD, Ofgem shared a high-level working assumption for the cost of debt for each sector to utilise in business plans but not the supporting calculations or data.

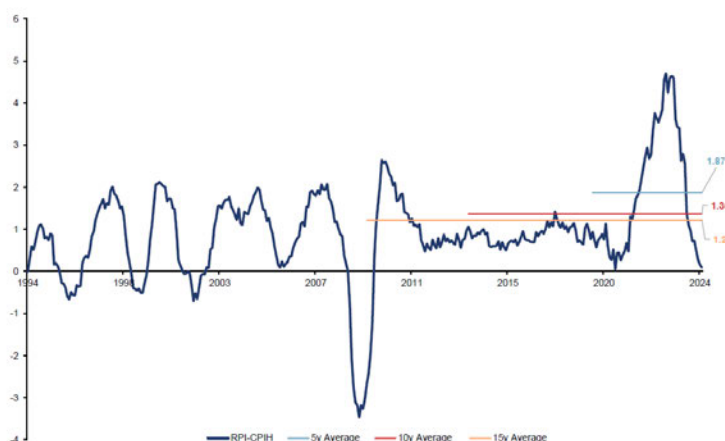
Ofgem decided in its SSMD to continue to exclude derivatives for the purpose of calibrating the cost of debt allowance but made one exception for the use of cross currency swaps to return foreign currency liabilities to GBP liabilities. This confirms that Ofgem considers the post swap GBP equivalent costs of foreign currency issuance.

Ofgem stated in its SSMD that it will confirm the allowance to be granted for additional borrowing costs (ABC) at DD as its intention is to seek additional data from networks. In addition to this, Ofgem confirmed its intention to assess evidence presented by gas distribution networks as to the existence of a 'negative halo' effect for the gas sector. As NGT and other gas networks submitted at the SSMC, there is evidence that the allowance for ABC should be increased, primarily reflecting market data on an increased cost of facilities and a higher cost of carry for gas networks given the comparatively short tenors currently

available. As such, NGT continues to support the evidence presented in the NERA report⁵¹ when providing our response to the SSMC and the additional evidence presented in respect of cost of carry specific to the gas sector.

Furthermore, the matter of the RPI/CPIH wedge and planned index convergence in 2030 needs to be carefully considered by Ofgem. After this date networks with index-linked debt or similar products are likely to incur additional costs to convert existing agreements.

. This is not yet mature analysis and therefore we assess this estimate as low-cost confidence at this stage. It is also likely that where specific clauses are absent from agreements or a compensation deal be struck between parties, that a process of litigation will result. Whilst we understand the principle that financing strategy is a network's choice, another key principle of the RIIO framework is to hold networks whole for factors they cannot control. This is a sector wide issue (as noted in this subchapter – Treatment of Inflation), the majority of regulatory networks utilise a proportion of index-linked debt and such instruments are valid tools in a balanced strategy), the convergence of RPI and CPIH is not in a networks' control, nor was it a stated policy at the time of signing these agreements. Furthermore, NGT's financing strategy, including RPI-linked instruments, was put in place at a time when allowances and RAV were indexed by RPI, a relationship that has been changed by the decision to move to CPIH as the referenced index at RIIO-GT2 and to grant a nominal allowance for 70% of average borrowings costs at RIIO-GT3.



Source: Goldman Sachs analysis of OBR data - September 2024

Holding networks accountable to costs they cannot control could unnecessarily increase financing costs, ultimately increasing costs to consumers and therefore accounting for this cost appears a required course of action which can be partly addressed in the short-term by at least continuing the RPI-CPIH allowance at the level proposed in NERA's report (18-23bps) into the final year of RIIO-GT3. However, the costs associated with addressing this matter, coupled with the impact of networks having to redeem instruments before maturity driven by potentially accelerating asset lives, are inherently uncertain at this point; this low-cost confidence arising from the fact that legal procedures have not yet progressed and other than referencing existing deltas between RPI and CPIH, the market is yet to reliably price the necessary action. Further work is required to ensure debt providers and networks are aligned on the impact of index convergence and a final decision on asset lives is required to fully understand that impact. As such, it is NGT's view that Ofgem should include a targeted UM in RIIO-GT3 to ensure additional borrowing cost allowances can be calibrated at a level that fairly reflect the sector costs. At the very least, a decision on this aspect of additional borrowing costs should remain open past DD to allow time for it to be properly considered.

It is also important to underline that the estimated ABC in NERA's report is common to the sector. It does not therefore fully address NGT-specific costs incurred in course of meeting licence obligations i.e., facilities to provide for network balancing costs,

⁵¹ NERA Full Report prepared for ENA on Additional Cost of Borrowing for RIIO-3 Price Control dated 22 February 2024

supplier of last resort and/or swings of cash flow caused by fluctuations in shrinkage costs etc and therefore should be viewed as a minimum allowance.

We support a methodology for the cost of debt allowance to be a fair and reasonable estimate of the actual cost of debt likely to be incurred by a notionally geared, efficient network company. However, there are certain specific considerations that we believe should be addressed.

- Throughout the SSMC, the SSMD and related stakeholder engagement sessions, Ofgem has referred to differentiating sectors depending on the specific investment needs of those sectors and should evidence suggest there is a need to reflect different sector risks in how cost of debt is calibrated. At RIIO-GT2, expected debt costs were based on average costs for the full sector (i.e., the networks with an aligned RIIO timetable, being electricity transmission (ET), gas transmission (GT) and gas distribution (GD)). At the SSMC, NGT appointed Economic Insight (EI) to assess the most appropriate comparator group for RIIO-GT3 and its work⁵² demonstrates there is strong evidence of an increase in risk for gas networks relative to electricity and to RIIO-GT2, which manifests as a higher cost of borrowing and lower tenures for the gas sector. As such, it is appropriate to assess NGT's efficient costs against a comparator group of GT and GD, which provides an appropriate balance of reflecting the divergent risk between electricity and gas and maintaining a comparator that extends beyond NGT alone.
- Ofgem has decided to introduce a RAV-weighted assessment for all ET networks but retain the RIIO-GT2 unweighted approach for Gas networks.⁵³ Ofgem's main rationale for not introducing this to gas networks is the level of RAV growth, which is anticipated for gas networks to be substantially lower than electricity. However, NGT's business plan would result in RAV growth for RIIO-GT3 and therefore we assert that at a minimum, a fair assessment of the amount of new debt networks need to raise, particularly in the counterfactual scenario that NGT proposes is appropriate, is considered when arriving at forecast average debt costs. In the Finance Annex of the SSMD paragraph 2.67, Ofgem stated that embedded debt data will be utilised to assess the quantum of new debt required to refinance existing instruments, as well as considering new debt requirements. The majority of new debt NGT requires in RIIO-GT3 is to replace existing agreements and therefore it is crucial that the assessment of average costs takes into account the rate at which refinancing will occur, which work performed by EI on NGT's behalf, observations of market data and experience of recent debt raising transactions will be significantly more expensive than the debt being refinanced (c.6.4% according to latest analysis).⁵⁴

At the SSMD, we commissioned EI to update the benchmarking work performed at the SSMC to take into account the final business plan and latest market data, which indicates a borrowing cost of c.4.7% (nominal, excluding ABC) for the RIIO-GT3 period (assuming retention of a 45-year asset life) and c.4.4% for the sector as a whole.⁵⁵ This work demonstrates that whilst on embedded debt on average has a forecast cost of c.4.1-4.2%, new debt (whether refinancing existing facilities or raising additional debt) is forecast to cost c.6.2-6.5%.⁵⁶ However, EI's work was only able to utilise debt book data for other networks in the public domain and as such, is not completely equivalent to the assessment Ofgem will ultimately perform on receipt of networks' business plans. We also recognise that calibrating cost of debt allowances for one network in isolation is not consistent with the principles of the RIIO framework. Acknowledging that Ofgem will perform its own analysis of network cost data as part of its DD, we have worked with other members of FEN (i.e., the GDNs) to share (on a confidential basis) high level proportions of new and embedded debt driven by business plans for RIIO-GT3 to perform a preliminary analysis of the nominal gas sector cost of debt over RIIO-GT3. By applying these high-level proportions of new and embedded debt to the benchmarked market data sourced by EI, this initial analysis showed that based on Ofgem's base case, estimated total sector costs are c.4.7% in nominal terms over RIIO-GT3 for GDNs and NGT combined. This excludes derivatives and ABC as per Ofgem's position at SSMD. With no accelerated depreciation, estimated total sector costs are c.4.79% for GDNs and NGT combined. Assuming the established approach of establishing the IBoxx trailing average that best aligns to the average cost of borrowing, our alternative financial package adopts this estimate. We also note the required adjustment to such trailing averages required for ED2 (55 bps), which early analysis of IBoxx trailing averages for 10-20 years demonstrates may be necessary for RIIO-GT3.

⁵² Economic Insight Report - Efficient cost of debt for gas transmission at RIIO-3 dated 5 March 2024, page 14-15, Section 4B

⁵³ Ofgem's RIIO-3 SSMD Finance Annex, page 19, paragraph 2.29

⁵⁴ Economic Insight Report - Efficient cost of debt for gas transmission at RIIO-3 dated 25 October 2024, page 4 - Figure2

⁵⁵ Economic Insight Report - Efficient cost of debt for gas transmission at RIIO-3 dated 5 March 2024, page 21, Section 5 - Table 1

⁵⁶ Economic Insight Report - Efficient cost of debt for gas transmission at RIIO-3 dated 25 October 2024, page 3 and 4 - Figure 1 and 2

Ofgem will perform its own analysis of the mix of embedded and new debt in networks' and the gas sector's business plan submissions ahead of DD, as well as reaching a preliminary decision on investment plans for RIIO-GT3, which may impact networks' financing plans. As such we will continue our engagement with Ofgem on this matter once it has had the opportunity to perform this analysis.

Treatment of Inflation

At the SSMD, to address the so-called 'leverage effect', Ofgem selected an option that grants a nominal allowance for fixed rate debt but removes CPIH indexation from the relevant portion of RAV measured under the notional structure (i.e., 70% of 60% being 42%). As stated in the Finance Annex of the SSMD paragraph 2.93, under this option, the portion of RAV that is aligned to the notional fixed rate assumption would be delinked from outturn inflation to avoid compensating investors twice, whereas the indexation of the RAV for Index-linked debt (ILD) and equity would be unaffected. It however stated that whilst the proportion of ILD in the notional structure would be re-assessed at DD, it is not expected to change materially from the 30% adopted at RIIO-GT2. Given the evidence NGT presented at the SSMC, and the fundamental principles inherent in how the notional company is calibrated, we agree with this conclusion. As such, cost of debt allowances for ILD will continue to be granted as a CPIH-real allowance, adopting the same 2% long-run estimate of CPIH inflation used in RIIO-GT2.

EI was appointed by NGT to analyse the use of ILD for the notional company. It reviewed theoretical and empirical evidence and concluded in its report⁵⁷ that it can be economically beneficial for companies to issue ILD due to several reasons (i.e., lower borrowing costs), more stable real borrowing costs, and greater alignment between their assets and liabilities. Its report provided evidence, not only regarding regulated companies, but also companies in more competitive markets that benefit from issuing ILD. EI also explained how issuing ILD can lead to downstream benefits to their customers, including through lower and more stable prices and improved service quality. According to their analysis, 60% of energy network companies and 100% of water companies have some level of ILD. As such, available theoretical and empirical evidence does not provide any robust reason to differ from the 30% ILD assumption applied at RIIO-GT2 and therefore we support Ofgem's proposal in the SSMD.

4.3 Overall Weighted Average Cost of Capital (WACC) and semi-annual WACC

The overall WACC that is set for a price control is an estimate of the cost of capital for the notional network, and so is a weighted average of the allowed cost of debt and cost of equity for the notional network company, where these are weighted using the notional gearing which was assumed in estimating the cost of equity and cost of debt. Using the values for cost of equity, cost of debt and notional gearing in this plan, the vanilla WACC is 3.99% real relative to CPI in Ofgem's base case assumption and 4.36% in our alternative financial package.

Ofgem introduced a semi-nominal WACC in its Finance Annex of the SSMD paragraph 8.91 to calculate the allowed rate of return, which considers inflation as part of its calculation but does not fully adjust for it (unlike a real WACC). As explained above, in subchapter 4.2 – Treatment of Inflation, Ofgem's proposal to adopt a semi-nominal cost of debt and WACC approach means that returns are partially protected against inflation. Ofgem proposed a semi-nominal WACC calculation by using the values for cost of equity, inflation linked and fixed debt along with the application of two inflation indexes (splice and CPIH long-run) that are used to calculate real and nominal WACC which then finally brings together a final semi-nominal WACC. The semi-annual WACC in Ofgem base case assumption is 4.78% and 5.48% in NGT alternative financing scenario.

Table 2: Ofgem base case assumptions and NGT Business Plan values for WACC in RIIO-GT3

Real, relative to CPI	Ofgem base case assumption	NGT BP Assumption
Assumed notional gearing	60%	60%
CAPM CoE	5.43%	6.48%
Assumed CoD	2.90% (Including ABC of RIIO-GT2)	3.37% (Including ABC of 57bps)
Vanilla WACC	3.92%	4.61%
Semi-nominal WACC	4.78%	5.48%

4.4 Other finance issues

There are several other financial issues outside of the cost of capital calculation which need to be addressed:

⁵⁷ Economic Insight Report - Index-linked debt for the notional company dated 25 October 2024, page 3-4, Section 2

- Regulatory depreciation and economic asset lives;
- Capitalisation rates;
- Taxation; and
- Pension scheme established deficit funding.

4.4.1 Regulatory depreciation and asset lives

Regulatory depreciation of the RAV does not correspond to a physical asset base but rather to the network's unrecovered financial investment and retained performance. Whilst not directly linked to physical assets, the technical and economic lives of the current asset base provide a useful reference against which to review the regulatory depreciation profile that directly impacts the depreciation charge. The charge should reflect the benefit consumers derive from the network services they receive and have regard to intergenerational fairness of the associated charge.

There are two aspects which determine the regulatory depreciation profile:

- The length of time over which the investment is to be recovered (the regulatory asset life); and
- The rate at which depreciation is charged; that is the phasing of the costs charged to customers over the asset life.

The technical life of our investments varies significantly with the type of asset. Pipeline assets have a technical life more than 45-years, whereas investments in IT projects can have a much shorter technical life. At RIIO-GT2, 45-years was considered a suitable average life of the investments made to retain as the regulatory asset life and RIIO-GT3 investment plans including c.£2.5bn in asset health spend on networks assets that have a life of up to 65-years and c.£1bn of investment in IT or cyber security assets (life up to 10 years) broadly illustrates that as a fair average going forward.

Forecasts of future gas demand broadly illustrate that annual demand is expected to decline, although scenarios do offer different assessments of the amount of gas being used by 2050. At RIIO-GT2, a Sum of Digits depreciation method (previously straight line) was introduced partly to accelerate the recovery of RAV. At RIIO-GT3, Ofgem considers it necessary to review regulatory asset lives for gas networks for RIIO-GT3, primarily to ensure that the risk of RAV stranding is addressed while the highest number of networks users is available to spread the full cost over. NGT supports the assertion that networks should ultimately recover the full cost of assets from network users. However, it is important to consider that existing natural gas assets can and should be repurposed to support the adoption of new technologies that drive the transition to net zero. If an appropriate mechanism to identify, value and transfer natural gas assets to a hydrogen/CCS business can be established, this will help mitigate the stranding risk for a significant portion of the existing natural gas RAV, avoiding decommissioning costs in the process, as well as providing benefits to the users of new technologies given that current research suggests the cost of repurposing existing assets is significantly lower than constructing new assets⁵⁸ and lead times are likely to be shorter. As such, in our response to the SSMD, we illustrated the potential of repurposing transmission assets for hydrogen or CCS use, which significantly mitigates the cost to existing users of addressing both the stranding risk, but also the costs of decommissioning gas transmission assets. Furthermore, as described later in this Chapter there is a growing evidence base for the retention of a significant gas transmission network in 2050.

At the SSMD, Ofgem concluded that it is appropriate to accelerate the recovery of RAV via depreciation allowances for all gas networks; that is, reduce the regulatory asset life to ensure the RAV is recovered by 2050, 2050 being adopted given the UK's net zero target. Ofgem did however recognise the likelihood of a proportion of NGT's assets being repurposed, but also the likelihood that a further proportion would still be in use after 2050 to provide connections primarily to providers of intermittent power generation and industry. Furthermore, it also acknowledged that the consumer bill impact of adjusting NGT's regulatory asset life is relatively limited compared to the GDNs, offering some flexibility in the timing of making such a decision.

Evidence considered

As Ofgem requested at the SSMD, we have summarised below current evidence available from key external organisations such as the NIC and NESO, but also analysis performed by research groups and ourselves on the expected usage of the gas transmission network by 2050. All scenarios conclude that a gas transmission network is required well into the future to support intermittent power generation and to ensure industries reliant on a gas can continue to operate in the UK, but it is important to note at this stage the inherent uncertainty in all projections, particularly given forecasts are being generated ahead of key

⁵⁸ The European Hydrogen Backbone work, page 17, Table 1: <https://ehb.eu/files/downloads/ehb-report-220428-17h00-interactive-1.pdf>

government decisions, notably its response to the NIC's Second Infrastructure Assessment (expected in 2025) and the decisions on hydrogen for domestic home heating due in 2026.

- **The NIC's Second Infrastructure Assessment conclusions on the need for a hydrogen backbone** – while the Commission recommended that government should not support the rollout of hydrogen for domestic heating,⁵⁹ it did make clear the importance of incentivising investment in large scale hydrogen and gas with carbon capture and storage power generation capacity.⁶⁰
Decarbonising the industrial sector will require switching from fossil fuels to a mix of electricity, hydrogen and fossil fuels abated with CCS, and the NIC called on government to provide clarity on the decarbonisation routes open to industry and where applicable infrastructure will be available and by when.⁶¹ Core networks of infrastructure are essential for transmitting and storage purposes to back up industrial decarbonisation and provide the fuel required to generate low carbon electricity,⁶² primarily driven by the variability of renewable generation that will require more flexibility to meet demand at all times of the day and year. This flexibility is currently provided by unabated gas fired generation able to respond relatively quickly, but this needs to be replaced by low carbon alternatives such as hydrogen or abated natural gas⁶³ supported by appropriate transmission infrastructure.
At least eight TWh of hydrogen storage capacity would be needed by 2035⁶⁴ which will provide sufficient storage to manage times when there are shortfalls in electricity supply. As noted in the report, there is less than one TWh of hydrogen storage in the UK today and the lead times for developing hydrogen storage can take up to 10 years. Recommendations in the NIC's report include the Government should have a business model in place to enhance hydrogen fired generation by 2024 and ensure that by 2030 multiple large scale power stations are deployed for both gas generation with CCS and hydrogen fired generation, alongside a target to establish a minimum of eight TWh of large-scale hydrogen storage to be in operation by 2035;⁶⁵
- **Project Union submissions** – in parallel with the development of the natural gas-only RII0-GT3 business plan, NGT is developing detailed plans for the hydrogen backbone project, known as Project Union. Project Union facilitates the construction of c.2500 km of hydrogen transmission pipelines and provides hydrogen connections to power stations and heavy industrial users crucial to maintaining energy supplies and the UK industrial base in a net zero environment. Each proposed leg of Project Union has its own mix of new and repurposed assets, that mix depending on the assets already in place in each geographical location and the resilience requirements of that area. Ongoing UM applications for FEED studies for each leg detail the expected proportions of new and repurposed pipelines based on pre-FEED studies;

⁵⁹ NIC Technical annex: hydrogen heating dated October 2023, page 59, paragraph 3: [NIA-2-Technical-annex-hydrogen-heating-Final-18-October-2023.pdf](#)

⁶⁰ [The Second National Infrastructure Assessment dated October 2023, page 11, paragraph 1](#)

⁶¹ [The Second National Infrastructure Assessment dated October 2023, page 12, paragraph 3](#)

⁶² [The Second National Infrastructure Assessment dated October 2023, page 12, paragraph 4](#)

⁶³ [The Second National Infrastructure Assessment dated October 2023, page 40, last paragraph](#)

⁶⁴ [The Second National Infrastructure Assessment dated October 2023, page 43, paragraph 4](#)

⁶⁵ [The Second National Infrastructure Assessment dated October 2023, page 43-44, Recommendation 2 & 3](#)



- **NESO demand forecasts** – these illustrate where abated or non-abated gas-fired power generation is likely to still be in place in 2040 and 2050 to support renewable generation, as well as providing forecasts of the expected throughput on gas networks at those point;
- **NESO Clean Power 2030 report**⁶⁶ – NESO assumes that most of today’s gas-fired generation plants remain on the system post 2030 and beyond, driven primarily by the need to ensure a secure system by providing flexible power generation to balance demand and supply risks. NESO supports this by demonstrating that such flexible, non-weather dependent generation potentially enables a lower cost 2030 system that takes pressure off other delivery challenges, particularly given the need if targets are to be met for alternative generation sources (on- and offshore wind, solar etc) to deploy more on average per year up to 2030 than has ever been done before. This further illustrates the gas transmission network as an “insurance policy” for the UK’s energy system and its likely enduring use; and
- **NGT analysis supported by external research of the role of gas-fired generation** to provide peak, intermittent generation at both 2040 and 2050.

Whilst this illustrates c.84% reduction in the volume of natural gas transported through the network, the decrease in the flow of molecules is only c.35%.

⁶⁶ NESO Report - Clean Power 2030: <https://www.neso.energy/document/346651/download>

Total forecast flows only illustrate one factor; however, it is equally important (if not more so given the role of gases in the future energy mix) to consider peak demand. According to Aurora Energy's research based on the net zero scenario utilised in the NIC's modelling, the size of the dispatchable thermal fleet is projected to increase from its current state to facilitate system balancing and intermittent power generation:

Furthermore, the geographic location of this fleet is widespread, indicating very limited areas of the current network that will not still be in use, particularly when the role of interconnectors or importation terminals is considered:

This analysis demonstrates that there is a likelihood that most of the existing network will either be repurposed or retained post-2050. This would imply that action to accelerate the depreciation profile of the NGT RAV is not necessary at RIIO-GT3 but should be monitored and re-assessed as more certain forecasts of demand mix become available. As Ofgem itself notes its SSMD, the impact on consumer bills of accelerating depreciation is relatively limited for NGT,⁶⁷ which by the same logic as is the potential consequence of delaying such a decision. Furthermore, this relatively early analysis of the usage of the network illustrates that accelerating depreciation prematurely may result in current natural gas consumers being over-charged for assets when future customers may still benefit from such assets or they may be transferred into other business models, the same applying to industrial or power generation customers. Furthermore, a premature acceleration of asset lives may require networks to redeem financing instruments earlier than expected, which is likely to incur significant and potentially unnecessary costs.

Asset Transfer Values – recovery of RAV by existing consumers

⁶⁷ Ofgem's RIIO-3 SSMD Finance Annex, page 174-175, paragraph 8.43

To fully assess the potential of repurposing assets to mitigate the costs to natural gas consumers, it is necessary to consider how transfers from the existing regulated business may be facilitated.

NGT has been working with Frontier to assess how such asset transfer and valuation mechanisms could be established and the options available to Ofgem and NGT. The matter is complicated by the way RAV is constructed in UK regulated entities; in that it represents a number of allowances to be recovered over future periods, rather than being akin to a register of individual assets. This means that any methodology to establish a fair value of the assets being transferred between the natural gas RAV and a hydrogen or CCS RAV needs to make assumptions on the best and fairest way of assigning a value to the asset being transferred. A variety of methodologies have been assessed and presented to DESNZ and Ofgem at a principles-level and were summarised in our SSMC response. This is an important judgement as establishing a practical methodology that finds the most appropriate balance of fairness between current natural gas customers and future hydrogen, or CCS customers is crucial in facilitating the net zero transition. Key principles being employed to establish this mechanism have already been presented to DESNZ and Ofgem and discussions will continue, but in summary any mechanism needs to address the following considerations to unlock timely repurposing:

- A framework is needed to unlock the benefits of repurposing given the development of a distinct business model for hydrogen/CCS and to ensure efficiency (rather than assessing the value of each individual asset at each transfer event);
- RAV should be conserved to prevent customers under or over-paying for assets;
- A reasonable estimate of RAV must be derived – a range of options are available (as summarised below), but a key consideration is avoiding distortion of the remaining natural gas RAV; and
- Investors may place a different value on an asset to its RAV – RAV should be conserved under any methodology being considered but any premium generated may serve to further mitigate decommissioning costs to remaining natural gas customers.

Several methods of estimating the value of assets held in the RAV are being considered, which have varying degrees of feasibility and accuracy:

‘Bottom-up’ approaches:

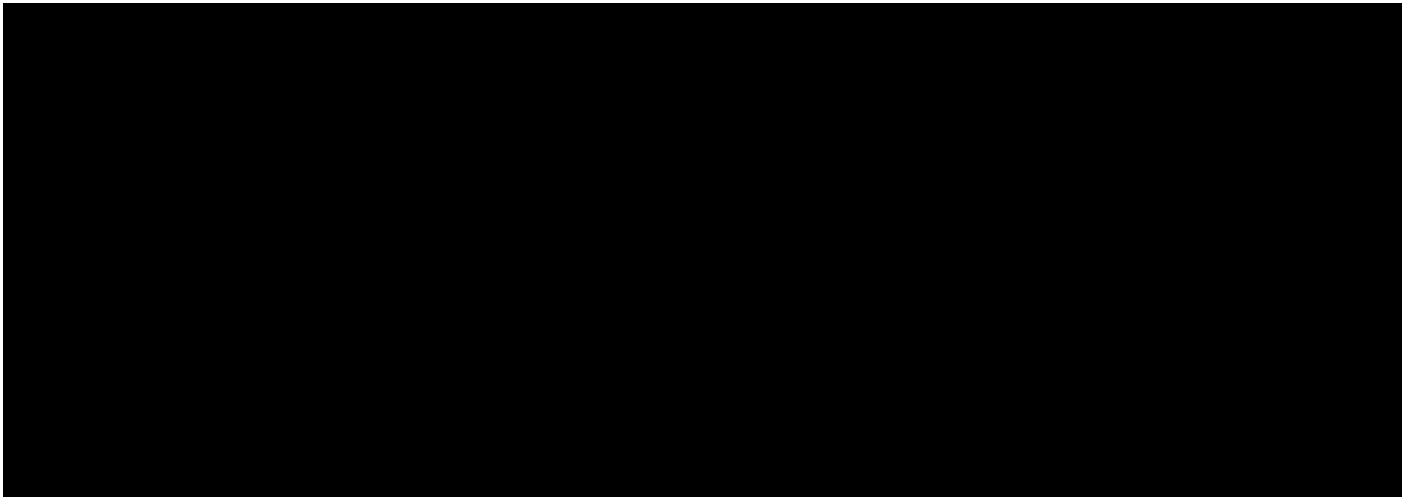
- Historic cost – potentially difficult to extract/estimate given construct of the RAV and not necessarily connected to properties of relevant asset value within the RAV; and
- Replacement cost, such as Modern Equivalent Asset Value – unlikely to align with the RAV of the wider network and therefore likely to overestimate value of asset.

‘Top-down’ approaches:

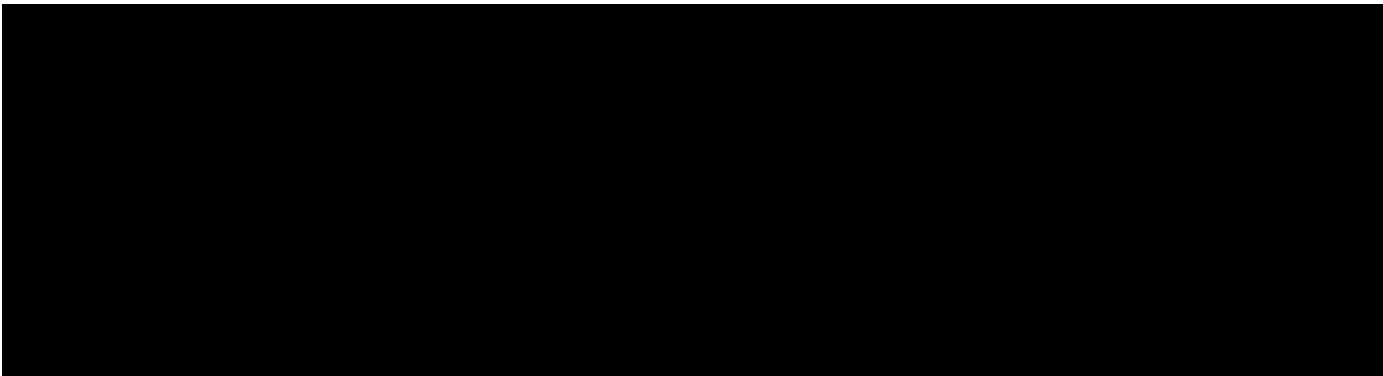
- Simple disaggregation, for example:
 - Average RAV/km;
 - Using bottom-up approach i.e., historic cost/MEAV; and
 - Based on outputs i.e., charges, volumes.

No one approach is wholly accurate or feasible and therefore a combination may be required to calibrate values but, in all cases, transferring assets within the same entity is likely to be more straightforward than an external transfer.

To illustrate the range of values that can be generated by the various options, we have considered NGT’s application to perform FEED activities for the East Coast Hydrogen leg of Project Union. Based on the estimate preferred route option indicated by pre-FEED studies, this section of Project Union will consist of [REDACTED] of pipeline, of which [REDACTED] can be delivered by asset repurposing. These repurposed assets equate to approximately 5% of the total length of the transmission network.



The network configuration is subject to change and therefore should be considered illustrative at this stage. However, we have adopted this current estimate to test a range of possible asset transfer valuation methodologies, as summarised below. These are split into two broad categories: RAV-related apportionment and other potential benchmarks:



A RAV-based apportionment model to arrive at a suitable and fair asset transfer value appears consistent with the key objectives of establishing a relatively simple, transparent and repeatable methodology. Discussions with Ofgem and DESNZ continue on this matter and no conclusions have yet been reached, and as such a value based on pipe length has been adopted for illustrative purposes.

Adopting this methodology and the assessment of the proportions of the existing network that will be retained or repurposed, it can be inferred that a fair value for repurposed assets can be established and can be recovered from future businesses in a manner that ensures existing consumers are not disadvantaged.

Conclusion

Given the analysis of future network usage, the relatively small impact on consumer bills, coupled with the uncertainty and variety of gas usage scenarios currently available, NGT believes that it is appropriate to maintain existing asset life parameters for RIIO-GT3 and delay a decision until the finalisation of hydrogen/CCS business models, further work has been performed on Project Union plans and Ofgem and DESNZ have had sufficient opportunity to scrutinise those plans.

Using the modelling parameters we included in our submission; the asset life decision would result in c.£813m of depreciation allowances being not recovered during the RIIO-GT3 period (using 45 years and 24 years as the two scenarios). We again emphasise that this is a simplified view based on the information currently available but does illustrate the relatively amounts that would be depreciated off the RAV, where it could be beneficial to wait for clear decision's by RIIO-GT4 (or equivalent).

We recognise that there is a balance to achieve between the impact on energy bills and affordability and ensuring we recover the investment in the RAV. However, given the analysis summarised above we believe the impact of delaying a decision until the position is more mature is not significant and does not risk a material impact on consumer bills in RIIO-GT4. To illustrate that point, as illustrated in Chapter 5 the difference between adopting Ofgem's base case financial package with an accelerated asset life and NGT's alternative package equates to £0.87 per year/consumer.

4.4.2 Capitalisation rates

Currently, the RIIO-GT2 framework uses natural capitalisation rate for expenditure on outputs captured in the baseline plan, with a separate capitalisation rate for spend within a UM, to reflect the higher proportion of capex likely to be incurred. We have carried out a review to understand whether a benefit remains of applying a split capitalisation rate to address financeability concerns arising due to uncertainty of investment programmes whilst also considering investor feedback regarding preference for a transparent price control framework which does not introduce unnecessary volatility.

Our view is that a single capitalisation rate is favourable due to the simplicity of application and explanation. Use of a split rate does not necessarily introduce greater accuracy and adds additional complexity to the framework without significantly reducing the impact on consumer bills.

Based on current plans, this results in:

- Gas transmission owner totex - 70.4% being treated as slow money and 29.6% as fast; and
- Gas system operator totex - 44.6% being treated as slow money and 55.4% as fast.

Any moves away from the natural capitalisation rate should be limited to marginal changes, otherwise the impact of bringing cash forward is unlikely to be sustainable in the long term, and it will create intergenerational mismatches in consumer bills.

If relevant, marginal changes can be affected through a split capitalisation rate across baseline and UM allowances, as was the case in RIIO-GT2.

4.4.3 Tax

Notional allowance

Ofgem made the decision in the Finance Annex of the SSMD paragraph 7.10 that the approach to calculate general tax allowance on a notional basis will be retained for RIIO-GT3 with a few updates to the methodology from RIIO-GT2. These updates comprise:

- The excess gearing glide path included in RIIO-GT2 will no longer be retained in RIIO-GT3 as most licensees will be at or within target gearing by the end of RIIO-GT2 based on the most recent RIIO-GT2 PCFM; and
- The 50% restriction on the use of losses brought forward, and capital allowance full expensing/first year allowances, will be incorporated into the calculation. This is in line with current UK tax legislation.

We consider these changes in methodology reasonable.

Tax Clawback

Ofgem has also decided in the Finance Annex of the SSMD paragraph 7.25 to revise the tax clawback methodology to include interest accretion net of paydown within the definition of net debt for the purposes of the tax clawback calculation, an approach which we also consider reasonable given it further aligns the tax clawback methodology with statutory basis on which NGT obtains relief for its finance costs.

4.4.4 Pensions

NGT, like other companies, incurs costs relating to the provision of pensions for its employees. These costs fall into several categories, including ongoing service costs on both its Defined Benefit (DB) and Defined Contribution (DC) schemes, and in relation to DB schemes additional costs associated with Pension Protection Fund (PPF) levies, Scheme Administration Costs and Deficit Repair Costs.

Ofgem has a long-standing commitment to the consumer funding of deficits in defined benefit pension schemes.⁶⁸ RIIO price controls therefore provide funding allowances for network companies' 'Pension Scheme Established Deficits' (PSEDs), where these allowances are set in accordance with Ofgem's established policy, which was last revised in April 2017.⁶⁹ This policy involves a triennial reset of PSED allowances, which is carried out at the same time for all the network sectors that Ofgem

⁶⁸ Ofgem's RIIO-2 SSMD Finance Annex, page 98 and 100, paragraph 7.45 & 7.62⁶⁹ Decision on Ofgem's policy for funding Pension Scheme Established Deficits dated 7 April 2017

⁶⁹ Decision on Ofgem's policy for funding Pension Scheme Established Deficits dated 7 April 2017

regulates (ED, GD, ET and GT). Ofgem set a new established deficit pension allowance effective from 1 April 2024.⁷⁰ As it explained in the Finance Annex of the SSMD, Ofgem has flagged that they may review the policy for funding PSEDs, but they have not made any update to the existing policy at the current time, and the outcome of any policy review would be effective from 1 April 2027 at the earliest. Network companies are therefore expected to assume pension allowances for the relevant portion of PSEDs during the next price control period follow the existing policy and we have assumed this.

During 2025 and early 2026 NGT's DB pension scheme will carry out its triennial actuarial valuation with an effective date of 31 March 2025 and, based on the existing policy, we'd expect new allowances (if any) following that valuation to be effective from 1 April 2027. As these are unknown, in line with Ofgem's guidance, for the purposes of this business plan we have assumed that the PSED allowances will continue at broadly the level that was set during Ofgem's most recent review in November 2023, with an assumption of zero pension scheme deficit costs and PSED allowances from 2028 onwards.

⁷⁰ Ofgem's RIIO-3 SSMD Finance Annex, page 199, paragraph 10.19

Chapter 5: Financeability assessment

Considering the analysis shown in earlier chapters, the scenarios we have included in our financeability assessment are summarised below. We reiterate that an alternative package is presented given the evidence resulting from market analysis and an assessment of the principles behind the RIIO framework and the UKRN Guidance. The SSMD outcome and the base scenario included in Ofgem's guidance meet financeability targets, however these outcomes are influenced by decisions on the treatment of inflation and asset stranding risks. It therefore remains important to consider the evidence presented to properly conclude on the investability of the RIIO-GT3 package, particularly the Cost of Equity given the outcome of cross checks.

Table 3: Financeability assessment scenarios

	SSMD	Base scenario	NGT alternative scenario
Cost of debt (midpoint)	2.90% ¹	2.90%	3.37%
Cost of equity (midpoint)	5.43%	5.43%	6.48%
Gearing	60%	60%	60%
WACC (CPIH-real, midpoint)	3.92%	3.92%	4.61%
Semi-nominal WACC	4.78%	4.78%	5.48%
Asset lives/ depreciation method	45 years, sum of digits	RAV recovery by 2050	45 years, sum of digits
CPIH RIIO-GT3 average	1.93%	1.93%	1.93%
Long-run CPIH	2.00%	2.00%	2.00%
Moody's credit rating	A3	A2	A3
AICR	1.77	1.82	1.86
FFO/Net Debt	13.18%	18.27%	14.19%

¹ assumption updated to reflect Ofgem BPFM

As summarised in the table above, these scenarios are considered financeable when assessed against the Moody's credit rating grid, AICR and S&P's FFO/Net Debt ratios. The table above is compiled for the notional company structure and NGT's 'best view' of totex spend (including expected spend under UMs), but as summarised in NGT_A01_Asset Management Plan (AMP)_RIIO_GT3 to this Annex, under the same financial parameters applying the actual company structure also results in financeable scenarios. The same is true for baseline scenario. All such scenarios, including the multiple stress tests required by Ofgem BPG, have been generated using Ofgem Business Plan Financial Model (BPFM) and results are summarised in NGT_A01_Asset Management Plan (AMP)_RIIO_GT3.

The worst performing stress test for base case and NGT's alternative scenario is the 'Low RoRE (base minus 2%)' scenario, which results in the lowest FFO/Net Debt of 16.11% and 17.23% for base case and NGT alternative scenario respectively. However, NGT is still considered financeable under the worst performing stress tests with an AICR higher than 1.4x for base and NGT alternative scenario and Moody's credit rating of A3 and A2 for base case and NGT alternative scenario respectively.

To supplement the use of Ofgem's BPFM, NGT has also utilised its own forecasting models to perform an assessment against the covenants included in its banking agreements, its agreements with pension trustees, the assessment criteria of the agencies that provide its credit ratings and its dividend and financial policies. This is an important assessment as while the 'actual' scenarios included in Ofgem's BPFM consider networks' actual debt book and gearing levels, financeability tests are ultimately still performed against notional company tests. While some are common to both assessments, not considering actual agreements with debt providers and equity shareholders risks undermining the key principles of financeability and investability. Adoption of the alternative financial package we propose satisfies these agreements.

The outcome that the base case parameters provided for by Ofgem's SSMD result in a financeable business case should not prevent a thorough assessment of market evidence that supports NGT's alternative financial package. As noted throughout this Annex, networks face a competition for capital given the significant infrastructure investment requirements across multiple industries. Not considering the realities of the financial markets networks operate in risks the energy sector not offering a sufficiently attractive package to equity investors in particular.

It is also important to consider the reaction of credit rating agencies to Ofgem's proposals in SSMD. As summarised earlier in this Annex, Moody's is performing an assessment of its rating criteria as certain ratios utilised in that assessment may no longer be fit for purpose. For example, the acceleration of the recovery of allowances from future periods due to the shortening of regulatory asset lives is likely to cause the AICR ratio in particular to be deemed no longer fit for purpose. Moody's is therefore likely to 'look through' this change and amend the thresholds for this ratio or replace it altogether. Fitch also referred in its response to Ofgem's SSMD⁷¹ that under the 'accelerated depreciation profile', cash post-maintenance interest coverage ratio (PMICR), under its current definition, would become less relevant and stated it could therefore introduce new credit metrics to better reflect some project finance-like features, or adjust the PMICR calculation, or place greater reliance on net debt/RAV and networks' financial policies.

⁷¹ Fitch Ratings Report - What Investors Want to Know: RIIO-3 Sector Specific Methodology Decision dated 14 November 2024, page 3, paragraph 5

Chapter 6: Impact on energy bills

The application of the RIIO-GT3 regulatory framework to our business plan determines the revenues we are allowed to recover through the price control period. Our revenues, for both Transmission Owner (TO) and System Operator (SO), are collected through National Grid's Transportation Charges, paid by all users of the National Transmission System (NTS) across Great Britain.

The NTS charges are paid by the customers of the SO; being Shippers who put gas on and take gas off the system and distribution networks. These customers pass the charges through to end consumers via suppliers. We consider the impact of our plan both on our customers and the end consumer.

The process for calculating the charges is complex and subject to the charging methodology in force at the time. When calculating the bill impacts, we make the simplifying assumption that the charging methodology will not change from its current form. This allows us to quantify the specific bill impacts associated with our business plan and to directly compare RIIO-GT3 charges with those under the previous price control.

6.1 Customer Bills

NGT's regulated business earns revenue for the transmission services provided during the year. In any one year, the revenue recognised may differ from the revenue allowed under our regulatory agreements and any such timing differences are adjusted against future prices.

Our forecast revenue ranges for our draft business plan submission are:

Table 4: Forecast revenue ranges charged through Entry and Exit customer charges

£m (2023/24 price base)	2026/27	2027/28	2028/29	2029/30	2030/31	RIIO-GT2 average	RIIO-GT3 average
NG alternative scenario	1,518.6	1,589.3	1,618.7	1,596.5	1,601.3	1,433.6	1,584.9
Ofgem base scenario	1,613.1	1,706.0	1,756.9	1,755.3	1,770.5	1,433.6	1,720.4

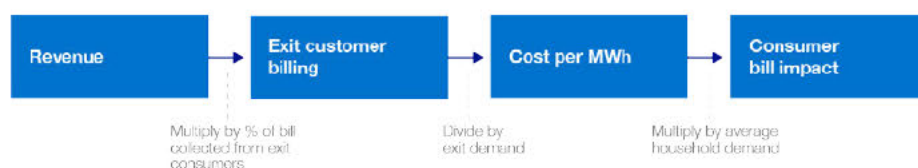
When calculating the consumer bill, we disclose annually, the working assumption employed is a 50%-50% split for entry and exit revenues. There will be deviation from this on an annual basis due to demand and revenue recovery timing variations. The BPFM Ofgem requests networks complete for submission calculates an average of the first three of RIIO-GT2 to estimate the proportion of NGT's revenue end consumers pay, resulting in an assumption of c.42% in the consumer bill scenarios described below.

6.2 Consumer Bills

We have calculated our consumer bill impact using the FES "2024 Holistic Transition" demand forecasts (aligned with December 2024 Business Plan submission) and a simple top-down approach that follows the methodology described by Ofgem. The consumer bill is expressed as NGT's NTS network charges passed on to households by suppliers. We will update this analysis using the FES "Counterfactual scenario" in our March 2025 submission, as per Ofgem's BPG.

We use the following four-step process to calculate the consumer bill impact:

Figure 2: Methodology for calculating gas bill impacts

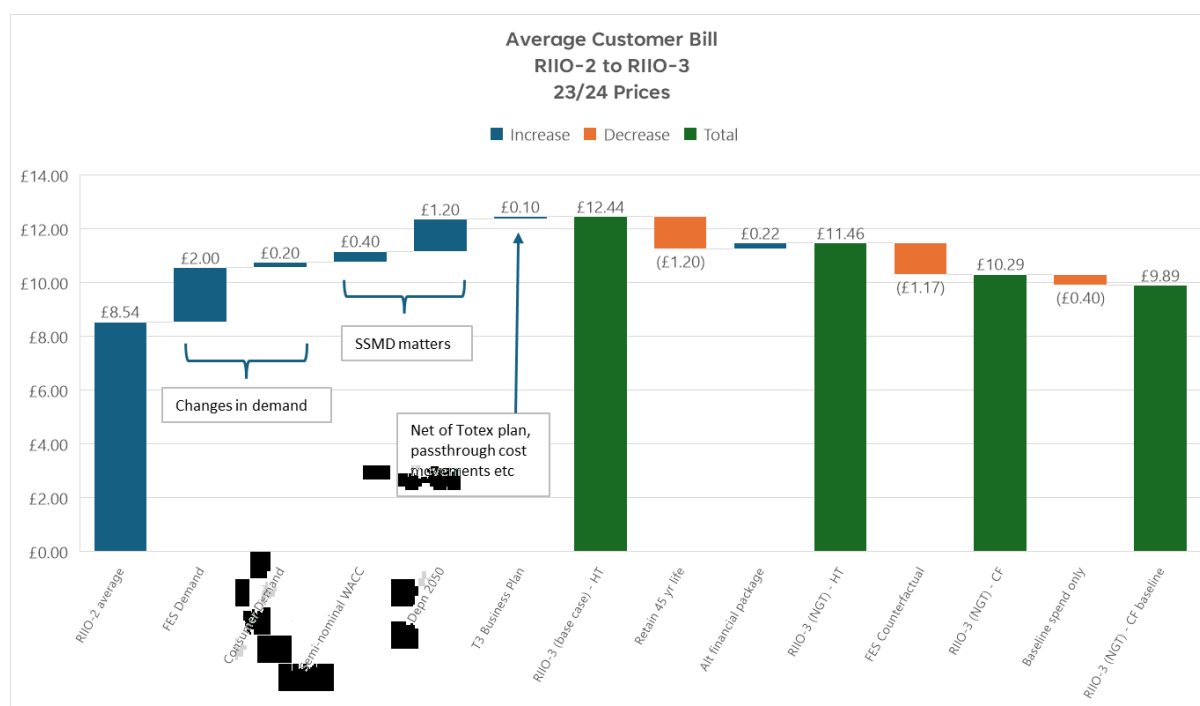


Using this methodology, on average across RIIO-GT3, NGT's direct charges to end consumers account for around less than one per cent of the average household gas bill.

All values are quoted in the equivalent of 2023-24 prices. This gives transparency to the impacts expected from our business plan by removing the effects of inflation on bills and is aligned to the totex values submitted in our business plan.

We first apply Ofgem's base case scenario financial parameters, both retaining the existing 45-year regulatory asset life and Ofgem's proposal of full RAV recovery by 2050 (Chapter 5, 'Financeability assessment'). Using the FES 2024 Holistic Transition scenario, on which the December business plan is based, this results in an average RIIO-GT3 consumer bill of £10.99 and £12.44 respectively. However, when updated to the FES 2024 Counterfactual scenario, on which our plan will ultimately be based, consumer bill estimates reduce to £9.96 (base financial parameters with 45-year life) and £11.16 (Ofgem base case).

Under our alternative package, the average RIIO-GT3 consumer bill is £10.29 (Counterfactual), which is an average increase in the annual bill of £1.75 compared with the average for RIIO-GT2, but £0.87 lower than Ofgem's base case scenario. We also note that consumer bills have been as high as £9.52 in RIIO-GT2. Our alternative package results in a bill of £9.89 if applied to baseline totex only. The drivers for these variances are summarised on the waterfall graph below:



The consumer bill resulting from our alternative financial package, whilst an increase on RIIO-GT2, represents a less than 1% share of the typical consumer bill in the UK.⁷²

Based on the results and feedback we have engaged with stakeholders to explain our portion of the consumer bill and how it is calculated the information is made publicly available at [NGT Annual Report and Accounts](#).⁷³ We retained the consistent methodology used in RIIO-GT2 price control assessments and for transparency purposes we disclose information each year. We will continue engaging with stakeholders throughout and contribute to development of our plan.

⁷² Energy cap set by Ofgem (1 Jan to 31 Mar 25): <https://www.ofgem.gov.uk/energy-price-cap>

⁷³ NGT Annual Report and Accounts 2023/24, page 3: [FY24 NGT Doc](#)

Chapter 7: Risk assessment

7.1 Introduction

NGT is operating in a complex environment which has seen radical changes over the last decade and one which continues to evolve, the implications of which are difficult to predict. The combination of political, economic, social and technological factors (“PEST”) is dramatically changing the way energy is produced, used and transported. The need for the UK energy system to decarbonise to facilitate government policies such as Clean Power 2030 and net zero 2050 and related regulatory decisions will further influence the future of networks such as ours.

The key driver to the underlying risk within a price control is understanding the impact of the changes in the framework on the likely range of cash flow volatility, so the outcomes will be key in informing our financeability assessment.

In support of our overall assessment of financial resilience of NGT, we’ve considered the key short- and longer-term risks relevant to gas transmission alongside the modelled scenarios to stress test the business plan on a notional company and an actual company basis for the RIIO-GT3 period. Our risk assessment has been conducted with reference to non-financial macroeconomic factors, listed below, considered the most relevant to NGT / the sector that would impact next price control and how these are mitigated. The PEST analysis is also used to assess the wider business environment and identify effective mitigation strategies.

Need to increase investment in the infrastructure in the UK

There is a need to significantly increase investment in infrastructure in the UK across multiple sectors. Inadequate access to human and materials resources at a reasonable cost would restrict NGT’s long-term ability to deliver the work required to fulfil its obligations.

NGT has identified several mitigation strategies to tackle insufficient level of resources caused by this increase in investment in UK infrastructure. Adopting a strategic workforce plan and investment in our operational workforce for the next price control is required to protect NGT’s ability to deliver the services that customers expect over the long term. Therefore, in response to Ofgem’s proposal and instruction to introduce a requirement for a Workforce and Supply Chain Resilience Strategy,⁷⁴ which is outlined in RIIO-GT3 SSMD – Overview,⁷⁵ we have included such an Annex in our business plan submission, which details the importance of attracting and retaining an appropriately skilled workforce. Furthermore, it details the rising importance of investing in trainees and training facilities within Operations to ensure NGT and the wider industry has access to appropriate resource in the future in which way NGT will be able to mitigate an ageing workforce. This is also discussed in our Cost Assessment and Benchmarking Approach.⁷⁶

There are challenging workforce and supply chain conditions which have negatively impacted procurement. NGT is planning to develop robust procurement strategies to secure sufficient materials in advance to avoid any failure in delivering commitments in RIIO-GT3 which not only includes the efficient procurement booking and strategically increasing stock levels. Our approach to these matters is also detailed in the Workforce and Supply Chain Resilience Strategy⁷⁷ submitted with our business plan.

In addition, along with other gas members of the ENA, NGT appointed KPMG to perform a detailed assessment of the cost exposures relevant to the gas sector in the current and next price control periods to investigate how effective the existing Real Price Effect (RPE) mechanism has been in providing networks and consumers protection against them. This work covered an assessment of the input category selection, the choice of indices and respective weighting in the RPE mechanism including forecasting of index performance.

Analysis carried out by KPMG⁷⁸ demonstrates that the RPE mechanism has been largely effective in RIIO-GT2 but recommends that certain elements are reassessed, notably considering applying RPEs to any input categories where a price index can be

⁷⁴ NGT_A13_Workforce and Supply Chain Resilience Strategy_RIIO_GT3

⁷⁵ Ofgem’s RIIO-3 SSMD, page 63, paragraph 6.130

⁷⁶ NGT_A12_Cost Assessment and Benchmarking Approach_RIIO_GT3

⁷⁷ NGT_A13_Workforce and Supply Chain Resilience Strategy_RIIO_GT3

⁷⁸ KPMG Report prepared for the ENA – RPE framework at RIIO-3 dated June 2024

identified, or a large or volatile wedge expected, utilising lagged indices to better capture the impact of price movements and re-considering the weighting of certain indices.⁷⁹ Given the significant price pressures in RIIO-GT2, KPMG advises retaining the RPE true-up approach introduced in RIIO-GT2 but it recommends considering certain refinements to how forecasts are produced, particularly in periods of high inflation.⁸⁰ NGT supports KPMG’s recommendations on appropriate refinements to the RPE mechanism, and believes implementation of these will provide protection to both networks and consumers from exogenous changes in input prices.

Volatility in financial markets

Volatility in financial markets is considered as another key risk given that gas transmission is not immune from the trends affecting the wider economy; economic changes, political events, or shifts in investor sentiment can impact the cost of capital, the valuation of assets, and the predictability of revenue streams. High market volatility can lead to fluctuations in commodity prices, exchange rates, and interest rates, which ultimately can increase financial risk for the network which may manifest itself as a risk to accessing adequate capital and/or capital at a reasonable cost. Volatility may also lead to financial and economic underperformance risking breaches of debt covenants or other funding agreements.

NGT maintains robust financing policies based on regulatory financial resilience requirements and the requirements of its agreements with debt and equity investors. We also closely monitor and manage the impact of market volatility, ensuring policies are reconsidered as necessary to ensure financial stability and maintain to resilience in an uncertain market environment.

Resilience to these factors is dependent on financing allowances being set at appropriate levels to ensure networks can access and maintain adequate capital. Such allowances therefore need to consider the realities of the markets that networks operate in when raising finance. As summarised in this Annex, our approach to assessing the financial package is evidence-based and supported by independent analysis. Chapter 4 summarises the key outcomes of this analysis, focusing on the importance of using market data, appropriate characteristics of the notional firm within the sector and accepted cross-checks techniques to ensure that the outcome of the methodologies employed to set returns is consistent with market data. Not calibrating the allowed return in this manner could create additional risk and leave networks more susceptible to volatile markets. Allowed returns need to remain adequate over the price control under a range of reasonably foreseeable circumstances. Our alternative package better reflects these risks with Ofgem’s package carrying a significant risk of failing to secure investability. We have also proposed an additional UM for the RIIO-GT3 period to account for specific market uncertainties that will be relevant during RIIO-GT3, notably the RPI-CPIH index transition for measuring inflation. Further details are included in paragraph 4.2.

Chapter 5 demonstrates how both Ofgem’s proposals in this area and NGT’s alternative evidence perform against financeability criteria for both notional and actual scenarios. Furthermore, stress tests have been performed against these scenarios, notably tests for the impact of market volatility (i.e., scenario 2 and 3 on the impact of changes in interest rates, scenarios 4 to 9 on inflation), the results of which are summarised in Appendix A1.

Net zero

In June 2019, the Government committed to a 100% reduction of Greenhouse Gas (GHG) Emissions by 2050 compared with 1990 levels with the Climate Change Act 2008.⁸¹ This is referred to as the net zero target. The Government stated that net zero means “any emissions would be balanced by schemes to offset an equivalent amount of GHG from atmosphere, such as planting trees or using technology like carbon capture and storage”.⁸²

The transition to a net zero economy presents significant challenges for all networks, including gas transmission. As the global commitment to reducing GHG intensifies, gas networks face multiple financial, regulatory and operational risks. These risks stem from uncertainties in legislation, fluctuations in capital markets, access to adequate capital, and the cost of climate change adaptation. Failing to address these risks effectively could lead to stranded assets, increased costs, and reduced competitiveness. Evolving government policies and regulations aimed at reducing carbon emissions may introduce uncertainty

⁷⁹ KPMG Report prepared for the ENA - RPE framework at RIIO-3 dated June 2024, page xi

⁸⁰ KPMG Report prepared for the ENA - RPE framework at RIIO-3 dated June 2024, page xviii

⁸¹ The Climate Change Act 2008 (2050 Target Amendment) Order 2019 ([legislation.gov.uk](https://www.legislation.gov.uk))

⁸² UK becomes first major economy to pass net zero emissions law - GOV.UK (www.gov.uk), last paragraph

for gas transmission businesses. The timeline for implementing policies and regulations on methane emissions and mandates for transitioning to low-carbon gases like hydrogen may be unclear and subject to political changes. Uncertainty in capital markets regarding the pace of this shift and continuing uncertainty in regulatory policy and government decisions could affect the ability of gas transmission to secure financing, as noted in our stakeholder analysis. Investing in infrastructure that becomes obsolete due to stricter emissions regulations or technological advancements could result in stranded assets and this could be a significant challenge for NGT given the ongoing need to maintain a resilient network. This misallocation of capital could harm profitability and negatively impact future cash flows.

As the gas transmission business transitions toward net zero, it will require significant investment in infrastructure upgrades, technology innovation e.g., hydrogen blending, and potentially CCS. Access to adequate capital is crucial for maintaining operational efficiency and meeting regulatory requirements. Without sufficient funding, NGT could struggle to transition, leading to stranded assets. Restricted access to capital could prevent the business from financing key infrastructure transitions, leading to long-term losses or reliance on more expensive sources of financing. In addition to this, inadequate capital could delay essential projects, ultimately making it difficult to meet regulatory timelines for emissions reduction.

Gas transmission infrastructure is vulnerable to the physical impacts of climate change, such as extreme weather events. Adapting infrastructure to be resilient to these changes, while also transitioning to net zero, will require significant capital investment. Without adequate adaptation, gas transmission infrastructure could face disruptions from climate related events, leading to downtime failure of critical assets. This could cause delays in revenue generation and add significant financial burdens.

NGT continues to proactively engage with policymakers and implement a clear net zero transition plan that signals commitment to long-term sustainability to both regulators and investors. NGT continues engagement with its stakeholders as the RII-GT3 business planning period emerges and consumer feedback is being sought on specific topics e.g., intergenerational fairness, helping to define the appropriate action. We also continue with financial stakeholders, investors and rating agencies to ensure we understand concerns around the future of the gas market and can design our business plan and financial policies accordingly. NGT continues to invest in resilient infrastructure and incorporating climate adaptation costs into long-term financial planning to mitigate adverse impacts of climate change. As summarised in Chapter 4, our alternative financial package is presented based on the analysis by organisations such as the NIC and NESO that demonstrates how the existing gas transmission network will need to evolve to facilitate net zero and Clean Power 2030 before it.

Global political uncertainty

Global political uncertainty can significantly impact regulated industries, such as gas transmission businesses, which rely on stable regulatory environments and long-term investment horizons. In particular, the outcome of political events like national elections can lead to substantial changes in regulatory frameworks, market conditions, and investment certainty. Depending on the political party in power, energy and climate policies may shift, affecting the regulatory landscape and investment environment, as indeed they have since the UK General Election in 2024.

International elections, such as the U.S. presidential election in 2024, have wide-reaching implications for the global energy market and financial systems. The winner of major international elections has the power to influence regulatory frameworks that can either accelerate or stymie growth across energy sectors. Policies on energy infrastructure, emissions reduction, and decarbonisation can shape the global market trends and direct investments toward or away from certain energy sources, including natural gas, hydrogen, CCS and renewables.

To assess the impact of the risk, NGT considered the key initiatives announced by The Labour Party, after it won the UK election, and has begun implementing its energy transition policies. Labour launched its Great British Energy policy to set up a new, publicly owned, clean energy company aimed at reducing energy bills and advancing the UK's transition to net zero. The initiative is primarily focused on investing in renewable energy sources like wind, solar hydrogen and nuclear, positioning them as the backbone of the UK's electricity generation. The other initiative of The Labour Party is to reach net zero power generation by 2030 which will have potential impact on the use of gas general electricity in the UK but will also require the acceleration of the implementation of new technology i.e., hydrogen and CCS.

As noted in Chapter 4.4.1, whilst there is forecast to be a reduction in natural gas usage and therefore transmission volumes over the coming years, such policies do indicate an enduring use for the transmission network. However, political and regulatory policy uncertainty and the potential for a negative reaction from financial markets because of a lack of clarity may result in NGT encountering difficulty in securing capital at a reasonable cost. As previously noted, NGT continues to engage with its stakeholders in government and Ofgem to work towards such policy clarity, helping ensure that policies and the regulatory

framework is calibrated in a way that facilitates the transition to new technologies. This includes the identification, valuation and transfer of assets to be repurposed but also an appropriate asset lives remaining methane assets.

The impact of the war in Ukraine is another factor in a broader assessment of global political uncertainty. The ongoing conflict has had significant global repercussions, particularly in the energy sector. The war has exacerbated volatility in energy markets, leading to supply disruptions, sharp spikes in natural gas prices, and a rise in the cost of key materials, such as steel, used in gas infrastructure. This has resulted in higher operational expenses, which may not always be passed on to consumers due to regulatory price controls, and introduce revenue uncertainty, while rising material costs and supply chain disruptions could delay critical infrastructure projects and inflate capital expenditures. To mitigate the impact of such issues on our network obligations, NGT maintains significant working capital reserves to allow it to protect consumers and network users from the impacts of market volatility, a factor in our proposals for additional borrowing costs. In particular, the significant increase in energy prices caused a significant number of retailers to exit the market and increased shrinkage costs, both of which requires NGT to act and absorb potentially significant cashflows. Furthermore, the additional volume the gas network dealt with in resupplying Europe illustrated the need to invest to maintain a resilient network, as described elsewhere in our business plan.

NGT's short-term mitigating strategies have focused on securing available supply and protecting consumers via the mitigation strategies noted above and discussed throughout this document. However, many governments in the US, EU and elsewhere have adopted new policies that give a major boost to investments in clean energy and efficiency such as growth in renewables.

NGT aims to remain agile, with flexible investment strategies that can adapt shifts in regulatory focus. NGT strongly advocates investing in energy transition technologies, such as hydrogen-ready infrastructure, can help hedge against regulatory risks but requires policy and regulatory clarity as soon as possible to ensure networks can progress investment plans and raise efficiently priced capital to do so.

Major elections can also trigger volatility in financial markets, impacting borrowing costs for both governments and networks. Market instability can lead to higher interest rates and increased costs of borrowing, which are critical factors for capital-intensive industries like gas transmission.

As summarised earlier in this chapter 'Volatility in financial markets' paragraph 3, ensuring the allowed return granted to networks takes sufficient regard to market data and the realities of the financial markets network operates is key to mitigating such risks, ensuring networks can raise and retain capital efficiently and withstand potential volatility in those markets. The results of Ofgem's-prescribed set of common stress test scenarios demonstrate that NGT is financeable in RIIO-GT3 period under both notional and actual assumptions of base case and NGT alternative scenarios when market volatility is considered with several different assumptions i.e., high interest rate (scenario 3), high inflation (scenarios 4, 6 and 8). The outcome of the financial stress test scenarios is explained in detail in NGT_Business_Plan_Financial_Model_(BPFM)_Commentary_RIIO-GT3, which NGT will treat as evidence to support its mitigation strategies referred in this Chapter, that informs the financial projections throughout RIIO-GT3.

Appendix A1: Revenue and scenario outcomes

A1.1 Allowed revenue breakdown and summary financial statements under Ofgem's business planning assumptions

Table 5 and Table 6 summarise the calculated revenue breakdown and financial statements under Ofgem's financial package for the base case included in Ofgem's BPG. We base the cashflow and income statements and balance sheet position on maintaining a gearing ratio of 60% in line with the notional company.

Table 5a: Financial statements based on Ofgem's base case assumptions including RAV recovery by 2050 – Notional Company

Notional Regulatory Financial Position						
	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Regulatory financial position						
Closing Core RAV	£m nominal	7,802.9	8,059.0	8,301.0	8,310.8	8,248.0
Closing SO RAV	£m nominal	197.7	236.2	265.4	278.7	287.0
Non-core RAV (after transfers)	£m nominal	-	-	-	-	-
RAV	£m nominal	8,000.6	8,295.2	8,566.4	8,589.4	8,535.0
Net debt	£m nominal	(4,785.1)	(4,942.4)	(5,067.9)	(4,935.0)	(4,715.1)
Equity	£m nominal	3,215.5	3,352.8	3,498.5	3,654.5	3,819.9
Supporting analysis for financial position						
Nominal RAV						
Opening RAV (at prior year nominal)	£m nominal	7,725.7	8,000.6	8,295.2	8,566.4	8,589.4
Inflation	£m nominal	76.8	89.9	96.1	99.4	99.6
Opening RAV (before transfers)	£m nominal	7,802.5	8,090.5	8,391.4	8,665.7	8,689.1
Transfers	£m nominal	-	-	-	-	-
Opening RAV (after transfers)	£m nominal	7,802.5	8,090.5	8,391.4	8,665.7	8,689.1
Net additions (after disposals)	£m nominal	799.4	856.9	884.8	695.5	661.6
Depreciation	£m nominal	(601.4)	(652.2)	(709.8)	(771.8)	(815.7)
Closing RAV	£m nominal	8,000.6	8,295.2	8,566.4	8,589.4	8,535.0

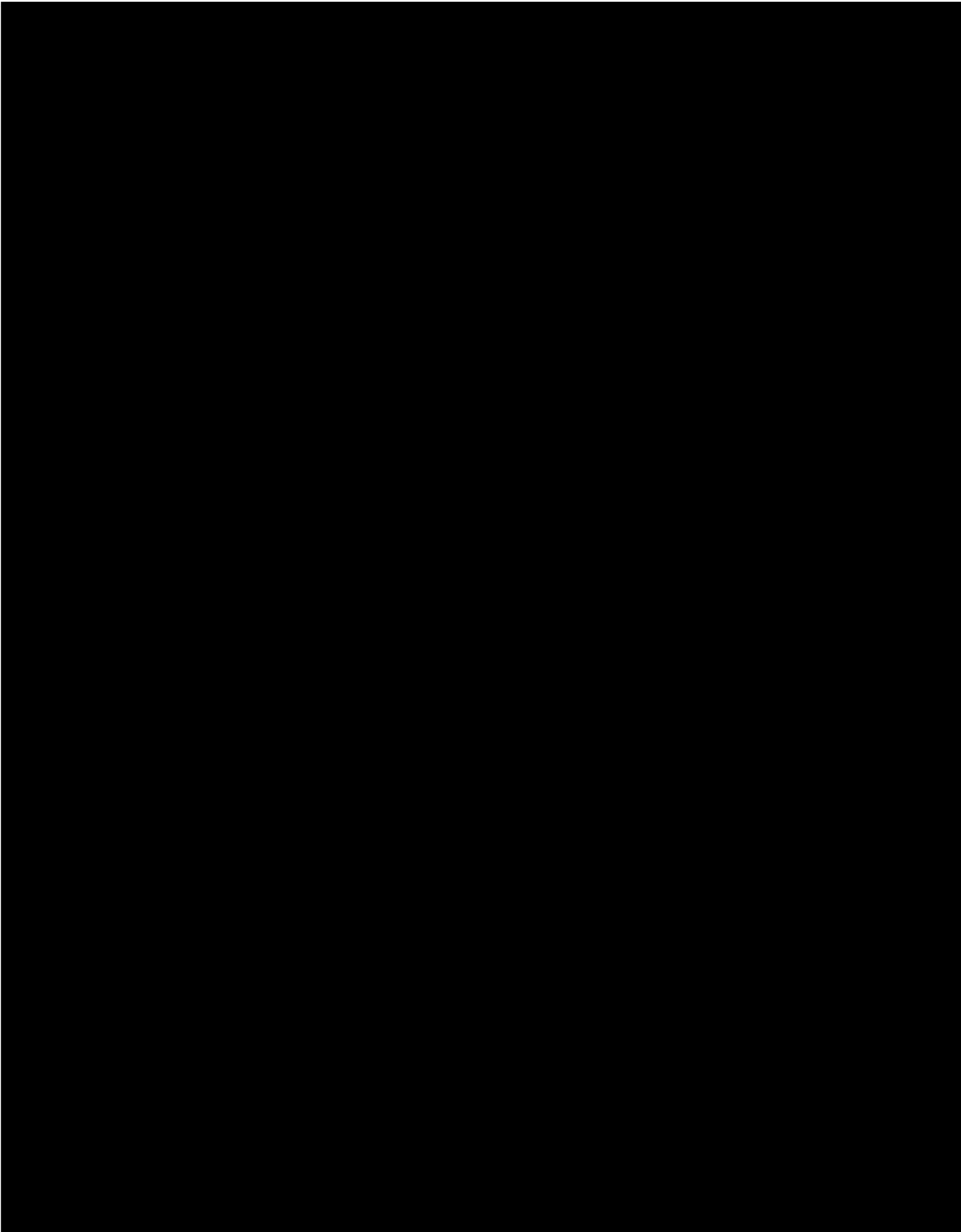
	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Supporting analysis for financial position						
Equity						
Opening equity (before inflation uplift on opening RAV)	£m nominal	3,981.7	3,215.5	3,352.8	3,498.5	3,654.5
Inflation	£m nominal	76.8	89.9	96.1	99.4	99.6
Opening equity (after inflation uplift on opening RAV)	£m nominal	4,058.6	3,305.4	3,449.0	3,597.9	3,754.1
RAV adjustment from previous price controls (share to equity)	£m nominal	-	-	-	-	-
Earnings after tax (after regulatory depreciation)	£m nominal	144.4	146.9	152.3	159.7	168.2
Regulatory dividend	£m nominal	(96.0)	(99.5)	(102.8)	(103.1)	(102.4)
Movement in equity (before issuance)	£m nominal	4,106.9	3,352.8	3,498.5	3,654.5	3,819.9
Equity issued	£m nominal	-	-	-	-	-
Impact of debt re-set (start of RII03)	£m nominal	(891.5)	-	-	-	-
Closing equity	£m nominal	3,215.5	3,352.8	3,498.5	3,654.5	3,819.9
PAT (using regulatory depreciation)						
PAT (per regulatory earnings statement below)	£m nominal	144.4	146.9	152.3	159.7	168.2
less: excess fast money	£m nominal	-	-	-	-	-
add back: retained outperformance	£m nominal	-	-	-	-	-
Adjustment for regulatory depreciation (if statutory depreciation is applied)	£m nominal	-	-	-	-	-
PAT (after regulatory depreciation)	£m nominal	144.4	146.9	152.3	159.7	168.2
Reconciliation of cash flows to movement in net debt						
Opening net debt	£m nominal	(4,635.4)	(4,785.1)	(4,942.4)	(5,067.9)	(4,935.0)
Closing net debt	£m nominal	(4,785.1)	(4,942.4)	(5,067.9)	(4,935.0)	(4,715.1)
Movement in net debt	£m nominal	(149.7)	(157.3)	(125.5)	132.9	219.9
Add back: principal inflation accretion	£m nominal	23.7	27.6	29.3	29.3	28.2
Net cash flow	£m nominal	(126.0)	(129.7)	(96.2)	162.2	248.1

	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Regulatory earning statement						
EBITDA						
Operating revenue	£m nominal	1,713.3	1,847.0	1,940.2	1,977.2	2,034.1
Less fast pot expenditure	£m nominal	(392.1)	(428.2)	(436.3)	(348.9)	(335.0)
Less pass-through expenditure	£m nominal	(142.8)	(157.1)	(158.7)	(158.3)	(160.2)
Less equity issuance cost	£m nominal	-	-	-	-	-
Less other costs	£m nominal	(185.8)	(188.1)	(189.7)	(192.4)	(190.3)
EBITDA	£m nominal	992.6	1,073.7	1,155.5	1,277.6	1,348.6
Earnings before interest and taxes (EBIT)						
Less depreciation (Regulatory)	£m nominal	(601.4)	(652.2)	(709.8)	(771.8)	(815.7)
EBIT	£m nominal	391.2	421.5	445.7	505.7	532.9
Regulatory earning statement						
Profit before tax (PBT)						
Less net interest paid (excluding principal inflation accretion)	£m nominal	(190.5)	(204.5)	(213.3)	(216.4)	(214.5)
Less net interest paid (principal inflation accretion)	£m nominal	(23.7)	(27.6)	(29.3)	(29.3)	(28.2)
PBT	£m nominal	177.0	189.4	203.1	260.1	290.1
Profit after tax (PAT)						
Less tax paid	£m nominal	(32.7)	(42.5)	(50.8)	(100.4)	(121.9)
PAT	£m nominal	144.4	146.9	152.3	159.7	168.2
Retained earnings						
Less dividends paid	£m nominal	(96.0)	(99.5)	(102.8)	(103.1)	(102.4)
Retained earnings for the year	£m nominal	48.4	47.4	49.5	56.6	65.8

	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Regulatory cash flow statement						
Funds from operations (FFO)						
Operating revenue	£m nominal	1,713.3	1,847.0	1,940.2	1,977.2	2,034.1
Less total operating costs	£m nominal	(720.7)	(773.3)	(784.7)	(699.6)	(685.5)
Net cash flow from operations	£m nominal	992.6	1,073.7	1,155.5	1,277.6	1,348.6
Less net interest paid (excluding principal inflation accretion)	£m nominal	(190.5)	(204.5)	(213.3)	(216.4)	(214.5)
Less tax paid	£m nominal	(32.7)	(42.5)	(50.8)	(100.4)	(121.9)
FFO	£m nominal	769.5	826.8	891.4	960.8	1,012.2
Retained cash flow (RCF)						
Less dividends paid	£m nominal	(96.0)	(99.5)	(102.8)	(103.1)	(102.4)
RCF	£m nominal	673.5	727.2	788.6	857.7	909.7
Net cash flow before financing						
Net slow pot expenditure	£m nominal	(799.4)	(856.9)	(884.8)	(695.5)	(661.6)
add back: retained outperformance	£m nominal	-	-	-	-	-
Less pre-vesting and post-vesting disposal proceeds	£m nominal	-	-	-	-	-
Net cash flow before financing	£m nominal	(126.0)	(129.7)	(96.2)	162.2	248.1
Change in net debt						
Equity issuance	£m nominal	-	-	-	-	-
Net cash flow from financing	£m nominal	-	-	-	-	-
Change in net debt	£m nominal	(126.0)	(129.7)	(96.2)	162.2	248.1

Table 5b: Financial statements based on Ofgem's base case assumptions including RAV recovery by 2050 – Actual Company

1. *Journal of the American Medical Association*, 2000; 283: 2689-2693.



A1.2 Allowed revenue breakdown and summary financial statements under our alternative financial package

The table below summarises the calculated revenue breakdown and financial statements under our alternative financial package.

Table 6a: Financial statements based on our alternative financial package – Notional Company

Notional Regulatory Financial Position						
	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Regulatory financial position						
Closing Core RAV	£m nominal	7,937.6	8,351.4	8,777.3	8,999.7	9,170.3
Closing SO RAV	£m nominal	197.7	236.2	265.4	278.7	287.0
Non-core RAV (after transfers)	£m nominal	-	-	-	-	-
RAV	£m nominal	8,135.3	8,587.6	9,042.7	9,278.4	9,457.3
Net debt	£m nominal	(4,889.0)	(5,170.6)	(5,443.5)	(5,484.3)	(5,456.6)
Equity	£m nominal	3,246.3	3,417.1	3,599.1	3,794.1	4,000.7
Supporting analysis for financial position						
Nominal RAV						
Opening RAV (at prior year nominal)	£m nominal	7,725.7	8,135.3	8,587.6	9,042.7	9,278.4
Inflation	£m nominal	76.8	91.4	99.5	104.9	107.6
Opening RAV (before transfers)	£m nominal	7,802.5	8,226.7	8,687.2	9,147.5	9,386.0
Transfers	£m nominal	-	-	-	-	-
Opening RAV (after transfers)	£m nominal	7,802.5	8,226.7	8,687.2	9,147.5	9,386.0
Net additions (after disposals)	£m nominal	799.4	856.9	884.8	695.5	661.6
Depreciation	£m nominal	(466.7)	(496.0)	(529.3)	(564.7)	(590.4)
Closing RAV	£m nominal	8,135.3	8,587.6	9,042.7	9,278.4	9,457.3

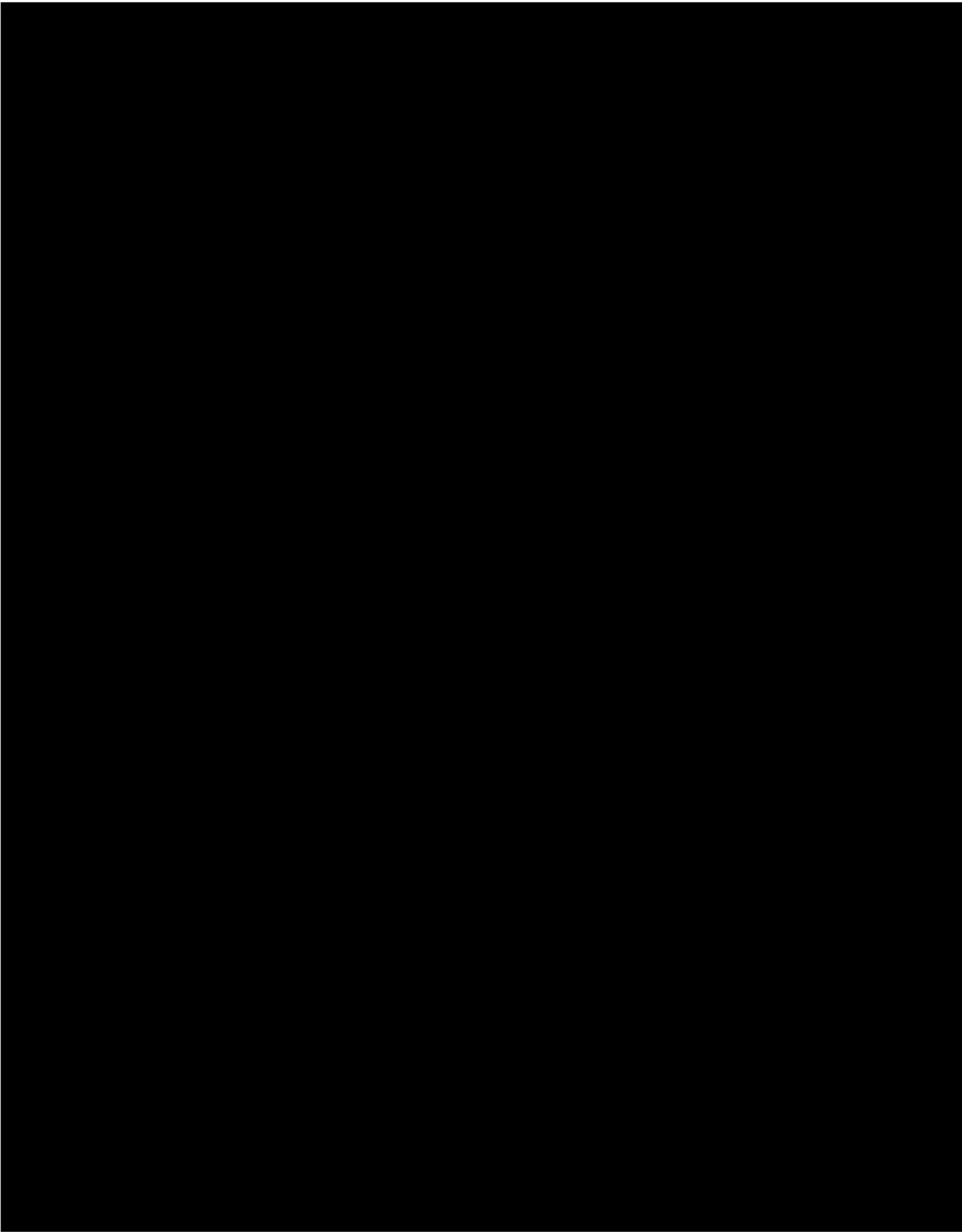
	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Supporting analysis for financial position						
Equity						
Opening equity (before inflation uplift on opening RAV)	£m nominal	3,981.7	3,246.3	3,417.1	3,599.1	3,794.1
Inflation	£m nominal	76.8	91.4	99.5	104.9	107.6
Opening equity (after inflation uplift on opening RAV)	£m nominal	4,058.6	3,337.7	3,516.6	3,704.0	3,901.7
RAV adjustment from previous price controls (share to equity)	£m nominal	-	-	-	-	-
Earnings after tax (after regulatory depreciation)	£m nominal	176.7	182.4	191.0	201.4	212.5
Regulatory dividend	£m nominal	(97.6)	(103.1)	(108.5)	(111.3)	(113.5)
Movement in equity (before issuance)	£m nominal	4,137.7	3,417.1	3,599.1	3,794.1	4,000.7
Equity issued	£m nominal	-	-	-	-	-
Impact of debt re-set (start of RIIO3)	£m nominal	(891.5)	-	-	-	-
Closing equity	£m nominal	3,246.3	3,417.1	3,599.1	3,794.1	4,000.7
	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Supporting analysis for financial position						
PAT (using regulatory depreciation)						
PAT (per regulatory earnings statement below)	£m nominal	176.7	182.4	191.0	201.4	212.5
less: excess fast money	£m nominal	-	-	-	-	-
add back: retained outperformance	£m nominal	-	-	-	-	-
Adjustment for regulatory depreciation (if statutory depreciation is applied)	£m nominal	-	-	-	-	-
PAT (after regulatory depreciation)	£m nominal	176.7	182.4	191.0	201.4	212.5
Reconciliation of cash flows to movement in net debt						
Opening net debt	£m nominal	(4,635.4)	(4,889.0)	(5,170.6)	(5,443.5)	(5,484.3)
Closing net debt	£m nominal	(4,889.0)	(5,170.6)	(5,443.5)	(5,484.3)	(5,456.6)
Movement in net debt	£m nominal	(253.6)	(281.6)	(273.0)	(40.8)	27.7
Add back: principal inflation accretion	£m nominal	23.9	28.5	31.0	31.9	32.0
Net cash flow	£m nominal	(229.7)	(253.1)	(242.0)	(8.9)	59.7

	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Regulatory earning statement						
EBITDA						
Operating revenue	£m nominal	1,612.8	1,720.7	1,787.6	1,798.2	1,839.8
Less fast pot expenditure	£m nominal	(392.1)	(428.2)	(436.3)	(348.9)	(335.0)
Less difference in fast pot expenditure pre-TIM and post-TIM	£m nominal	-	-	-	-	-
Less pass-through expenditure	£m nominal	(142.8)	(157.1)	(158.7)	(158.3)	(160.2)
Less equity issuance cost	£m nominal	-	-	-	-	-
Less other costs	£m nominal	(185.8)	(188.1)	(189.7)	(192.4)	(190.3)
EBITDA	£m nominal	892.2	947.4	1,002.9	1,098.6	1,154.3
Earnings before interest and taxes (EBIT)						
Less depreciation (Regulatory)	£m nominal	(466.7)	(496.0)	(529.3)	(564.7)	(590.4)
EBIT	£m nominal	425.4	451.4	473.6	534.0	563.9
Profit before tax (PBT)						
Less net interest paid (excluding principal inflation accretion)	£m nominal	(224.2)	(236.9)	(249.9)	(257.3)	(257.6)
Less net interest paid (principal inflation accretion)	£m nominal	(23.9)	(28.5)	(31.0)	(31.9)	(32.0)
PBT	£m nominal	177.4	186.1	192.7	244.7	274.3
Profit after tax (PAT)						
Less tax paid	£m nominal	(0.6)	(3.7)	(1.6)	(43.3)	(61.8)
PAT	£m nominal	176.7	182.4	191.0	201.4	212.5
Retained earnings						
Less dividends paid	£m nominal	(97.6)	(103.1)	(108.5)	(111.3)	(113.5)
Retained earnings for the year	£m nominal	79.1	79.4	82.5	90.1	99.0

	Units	2026/27	2027/28	2028/29	2029/30	2030/31
Regulatory cash flow statement						
Funds from operations (FFO)						
Operating revenue	£m nominal	1,612.8	1,720.7	1,787.6	1,798.2	1,839.8
Less total operating costs	£m nominal	(720.7)	(773.3)	(784.7)	(699.6)	(685.5)
Net cash flow from operations	£m nominal	892.2	947.4	1,002.9	1,098.6	1,154.3
Less net interest paid (excluding principal inflation accretion)	£m nominal	(224.2)	(236.9)	(249.9)	(257.3)	(257.6)
Less tax paid	£m nominal	(0.6)	(3.7)	(1.6)	(43.3)	(61.8)
FFO	£m nominal	667.3	706.9	751.3	798.0	834.8
Retained cash flow (RCF)						
Less dividends paid	£m nominal	(97.6)	(103.1)	(108.5)	(111.3)	(113.5)
RCF	£m nominal	569.7	603.8	642.8	686.6	721.3
Net cash flow before financing						
Net slow pot expenditure	£m nominal	(799.4)	(856.9)	(884.8)	(695.5)	(661.6)
add back: retained outperformance	£m nominal	-	-	-	-	-
Less pre-vesting and post-vesting disposal proceeds	£m nominal	-	-	-	-	-
Net cash flow before financing	£m nominal	(229.7)	(253.1)	(242.0)	(8.9)	59.7
Change in net debt						
Equity issuance	£m nominal	-	-	-	-	-
Net cash flow from financing	£m nominal	-	-	-	-	-
Change in net debt	£m nominal	(229.7)	(253.1)	(242.0)	(8.9)	59.7

Table 6b: Financial statements based on our alternative financial package – Actual Company

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A.1.3 BPFM scenario outcomes: base case (notional)

Outcomes for each of the scenarios included in the BPFM are summarised below.

Table 7a: Stress Test Scenario on Ofgem Base Case Scenario – Notional Company

Scenario	Description	Moody's Credit Rating Target: $\geq$ Baa1	AICR (Moody's) Target: $\geq 1.4x$	FFO/Net Debt (S&P)
1	Base case	A2 (6.2)	1.83	18.27%
2	High Interest Rate (Base plus 2%)	A2 (6.2)	1.81	18.85%
3	Low Interest Rate (Base minus 2%)	A2 (6.3)	1.87	17.71%
4	High Inflation (Base plus 2%)	A2 (6.2)	1.85	18.58%
5	Low Inflation (Base minus 2%)	A2 (6.4)	1.81	17.95%
6	High CPIH Inflation Divergence (Base plus 0.5%)	A2 (6.2)	1.82	18.19%
7	Low CPIH Inflation Divergence (Base minus 0.5%)	A2 (6.2)	1.84	18.34%
8	High RPI Inflation Divergence (Base plus 0.5%)	A2 (6.2)	1.83	18.27%
9	Low RPI Inflation Divergence (Base minus 0.5%)	A2 (6.2)	1.83	18.27%
10	Totex Outperformance (Base plus 10%)	A2 (6.0)	1.97	19.73%
11	Totex Underperformance (Base minus 10%)	A3 (6.8)	1.70	16.99%
12	High RORE (Base plus 2%)	A2 (5.8)	2.21	20.65%
13	Low RORE (Base minus 2%)	A3 (6.9)	1.48	16.11%
14	High Index-Linked Debt (Base plus 10%)	A2 (6.2)	1.87	18.22%
15	Low Index-Linked Debt (Base minus 10%)	A2 (6.2)	1.80	18.31%
16	NGT – Convergence of CPIH/RPI by 2030 (RPI 3% match)	A2 (6.2)	1.86	18.39%
17	NGT – Convergence of CPIH/RPI by 2030 (CPIH 2% match)	A2 (6.2)	1.83	18.27%
18	NGT – 64% / 74% Capitalisation Rate	A2 (6.2)	1.85	18.61%
19	NGT – 50% increase of UMs	A2 (6.4)	1.80	17.81%

A.1.4 BPFM scenario outcomes: base case (actual)

Outcomes for each of the scenarios included in the BPFM are summarised below.

Table 7b: Stress Test Scenario on Ofgem Base Case Scenario – Actual Company

Scenario	Description	Moody's Credit Rating Target: $\geq$ Baa1	AICR (Moody's) Target: $\geq 1.4x$	FFO/Net Debt (S&P)
1	Base case	A2 (5.7)	2.35	19.19%
2	High Interest Rate (Base plus 2%)	A2 (5.7)	2.45	20.22%
3	Low Interest Rate (Base minus 2%)	A2 (5.8)	2.29	18.42%
4	High Inflation (Base plus 2%)	A2 (5.7)	2.45	19.56%
5	Low Inflation (Base minus 2%)	A2 (5.7)	2.27	19.00%
6	High CPIH Inflation Divergence (Base plus 0.5%)	A2 (5.7)	2.36	19.18%
7	Low CPIH Inflation Divergence (Base minus 0.5%)	A2 (5.7)	2.37	19.40%
8	High RPI Inflation Divergence (Base plus 0.5%)	A2 (5.7)	2.38	19.25%
9	Low RPI Inflation Divergence (Base minus 0.5%)	A2 (5.7)	2.34	19.33%
10	Totex Outperformance (Base plus 10%)	A2 (5.7)	2.57	20.32%
11	Totex Underperformance (Base minus 10%)	A3 (6.1)	2.12	17.90%
12	High RORE (Base plus 2%)	A2 (5.7)	2.84	21.22%
13	Low RORE (Base minus 2%)	A3 (6.6)	1.86	17.03%
14	High Index-Linked Debt (Base plus 10%)	A2 (5.7)	2.29	19.03%
15	Low Index-Linked Debt (Base minus 10%)	A2 (5.7)	2.43	19.54%
16	NGT – Convergence of CPIH/RPI by 2030 (RPI 3% match)	A2 (5.7)	2.38	19.31%
17	NGT – Convergence of CPIH/RPI by 2030 (CPIH 2% match)	A2 (5.7)	2.35	19.19%
18	NGT – 64% / 74% Capitalisation Rate	A2 (5.7)	2.42	20.56%
19	NGT – 50% increase of UMs	A2 (5.7)	2.26	19.27%

A.1.5 BPFM scenario outcomes: alternative financial package (notional)

Outcomes for each of the scenarios included in the BPFM are summarised below.

Table 8a: Stress Test Scenario on NGT Alternative Financial Package – Notional Company

Scenario	Description	Moody's Credit Rating Target: $\geq$ Baa1	AICR (Moody's) Target: $\geq 1.4x$	FFO/Net Debt (S&P)
1	Base case	A3 (6.7)	1.86	14.19%
2	High Interest Rate (Base plus 2%)	A2 (6.1)	1.90	20.15%
3	Low Interest Rate (Base minus 2%)	A2 (6.0)	1.97	18.91%
4	High Inflation (Base plus 2%)	A2 (6.2)	1.95	19.86%
5	Low Inflation (Base minus 2%)	A2 (6.2)	1.90	19.16%
6	High CPIH Inflation Divergence (Base plus 0.5%)	A2 (6.2)	1.92	19.42%
7	Low CPIH Inflation Divergence (Base minus 0.5%)	A2 (6.2)	1.93	19.60%
8	High RPI Inflation Divergence (Base plus 0.5%)	A2 (6.2)	1.92	19.51%
9	Low RPI Inflation Divergence (Base minus 0.5%)	A2 (6.2)	1.92	19.51%
10	Totex Outperformance (Base plus 10%)	A2 (5.8)	2.07	21.12%
11	Totex Underperformance (Base minus 10%)	A2 (6.5)	1.79	18.11%
12	High RORE (Base plus 2%)	A2 (5.6)	2.28	22.05%
13	Low RORE (Base minus 2%)	A2 (6.5)	1.59	17.23%
14	High Index-Linked Debt (Base plus 10%)	A2 (6.2)	1.96	19.46%
15	Low Index-Linked Debt (Base minus 10%)	A2 (6.2)	1.89	19.57%
16	NGT – Convergence of CPIH/RPI by 2030 (RPI 3% match)	A3 (6.7)	1.88	14.31%
17	NGT – Convergence of CPIH/RPI by 2030 (CPIH 2% match)	A3 (6.7)	1.86	14.19%
18	NGT – 64% / 74% Capitalisation Rate	A3 (6.5)	1.87	14.49%
19	NGT – 50% increase of UMs	A3 (6.9)	1.83	13.82%

A.1.6 BPFM scenario outcomes: alternative financial package (actual)

Outcomes for each of the scenarios included in the BPFM are summarised below.

Table 8b: Stress Test Scenario on NGT Alternative Financial Package – Actual Company

Scenario	Description	Moody's Credit Rating Target: $\geq$ Baa1	AICR (Moody's) Target: $\geq 1.4x$	FFO/Net Debt (S&P)
1	Base case	A2 (6.1)	2.48	15.57%
2	High Interest Rate (Base plus 2%)	A2 (5.7)	2.71	21.55%
3	Low Interest Rate (Base minus 2%)	A2 (5.7)	2.73	20.32%
4	High Inflation (Base plus 2%)	A2 (5.7)	2.78	20.99%
5	Low Inflation (Base minus 2%)	A2 (5.7)	2.67	20.95%
6	High CPIH Inflation Divergence (Base plus 0.5%)	A2 (5.7)	2.77	21.12%
7	Low CPIH Inflation Divergence (Base minus 0.5%)	A2 (5.7)	2.68	20.82%
8	High RPI Inflation Divergence (Base plus 0.5%)	A2 (5.7)	2.80	21.19%
9	Low RPI Inflation Divergence (Base minus 0.5%)	A2 (5.7)	2.66	20.75%
10	Totex Outperformance (Base plus 10%)	A2 (5.7)	2.81	21.28%
11	Totex Underperformance (Base minus 10%)	A2 (5.7)	2.48	19.67%
12	High RORE (Base plus 2%)	A2 (5.7)	3.08	22.21%
13	Low RORE (Base minus 2%)	A2 (5.7)	2.22	18.79%
14	High Index-Linked Debt (Base plus 10%)	A2 (5.7)	2.70	20.97%
15	Low Index-Linked Debt (Base minus 10%)	A2 (5.7)	2.85	21.52%
16	NGT – Convergence of CPIH/RPI by 2030 (RPI 3% match)	A2 (6.1)	2.51	15.69%
17	NGT – Convergence of CPIH/RPI by 2030 (CPIH 2% match)	A2 (6.1)	2.48	15.57%
18	NGT – 64% / 74% Capitalisation Rate	A2 (6.1)	2.54	16.81%
19	NGT – 50% increase of UMs	A2 (6.1)	2.46	15.96%

A.1.7 FBP Outputs: Ofgem Base Case (notional)

FBP outputs from BPFM is provided below for Ofgem base case sensitivity.

Table 9a: FBP Outputs of Credit Ratio Summary

Ofgem Base Case – FBP Outputs											
	Units	2026/27	2027/28	2028/29	2029/30	2030/31	2026/27	2027/28	2028/29	2029/30	2030/31
Live outputs											
Credit Ratio Summary											
		RIIO-3 Live Outputs					Base (notional)				
FFO interest cover ratio (including accretions)	Scalar	4.48	4.44	4.55	4.79	5.05	4.48	4.44	4.55	4.79	5.05
FFO interest cover ratio (cash interest only)	Scalar	5.04	5.04	5.18	5.44	5.72	5.04	5.04	5.18	5.44	5.72
Adjusted interest cover ratio (post-maintenance interest cover ratio)	Scalar	1.88	1.85	1.85	1.87	1.92	1.88	1.85	1.85	1.87	1.92
FFO/Net Debt	%	16.08%	16.73%	17.59%	19.47%	21.47%	0.16	0.17	0.18	0.19	0.21
Net Debt/Closing RAV	%	59.81%	59.58%	59.16%	57.45%	55.24%	0.60	0.60	0.59	0.57	0.55
Dividends as % of Equity RAV	%	3.11%	3.11%	3.10%	3.06%	3.04%	0.03	0.03	0.03	0.03	0.03
Dividend cover ratio (using statutory depreciation)	Scalar	1.50	1.48	1.48	1.55	1.64	1.50	1.48	1.48	1.55	1.64

Table 9b: FBP Outputs of Allowed Revenue Breakdown

Ofgem Base Case – FBP Outputs											
	Units	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Summary financial information											
Allowed revenue breakdown											
Fast money		169.9	210.7	251.6	311.2	315.3	392.1	428.2	436.3	348.9	335.0
Pass-through expenditure	£m nominal	129.0	154.7	135.7	124.7	131.8	142.8	157.1	158.7	158.3	160.2
Depreciation	£m nominal	361.7	394.1	418.2	434.8	452.0	601.4	652.2	709.8	771.8	815.7
Return	£m nominal	194.8	203.8	234.8	258.7	270.7	359.0	380.0	396.2	406.6	412.0
Equity issuance cost	£m nominal	7.9	-	-	-	-	-	-	-	-	-
Base revenue	£m nominal	863.2	963.3	1,040.5	1,129.5	1,169.7	1,495.4	1,617.4	1,700.9	1,685.7	1,723.0
Return adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Directly remunerated service adjustment	£m nominal	(3.6)	-	(0.1)	-	-	-	-	-	-	-
Business plan incentive	£m nominal	(4.7)	(5.1)	(5.4)	(5.6)	(5.6)	-	-	-	-	-
Output delivery incentive	£m nominal	4.0	4.4	4.7	4.8	4.9	-	-	-	-	-
Other revenue allowances	£m nominal	255.1	729.4	189.0	231.7	228.7	185.3	187.1	188.5	191.1	189.2
Calculated revenue (before tax)	£m nominal	1,114.1	1,692.0	1,228.6	1,360.5	1,397.7	1,680.6	1,804.5	1,889.4	1,876.8	1,912.2
Tax allowance	£m nominal	41.8	37.6	51.3	50.8	25.7	32.7	42.5	50.8	100.4	121.9
Tax allowance adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Calculated revenue	£m nominal	1,155.8	1,729.6	1,279.9	1,411.3	1,423.3	1,713.3	1,847.0	1,940.2	1,977.2	2,034.1
Less directly remunerated services adjustment	£m nominal	3.6	-	0.1	-	-	-	-	-	-	-
Recalculated revenue (without DRS adjustment)	£m nominal	1,159.4	1,729.6	1,280.0	1,411.3	1,423.3	1,713.3	1,847.0	1,940.2	1,977.2	2,034.1

Table 9c: FBP Outputs of Regulatory financial position

	Units	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Summary Financial Information											
1) Regulatory financial position											
Closing RAV	£m nominal	6,450.6	6,941.6	7,287.0	7,542.2	7,725.7	8,000.6	8,295.2	8,566.4	8,589.4	8,535.0
Closing Net debt	£m nominal	(3,659.3)	(3,622.6)	(3,573.0)	(3,644.8)	(3,744.0)	(4,785.1)	(4,942.4)	(5,067.9)	(4,935.0)	(4,715.1)
Equity	£m nominal	2,791.3	3,318.9	3,714.0	3,897.4	3,981.7	3,215.5	3,352.8	3,498.5	3,654.5	3,819.9
RAV											
Opening RAV (at prior year nominal)	£m nominal	-	6,450.6	6,941.6	7,287.0	7,542.2	7,725.7	8,000.6	8,295.2	8,566.4	8,589.4
Inflation (uplift from previous year to current nominal)	£m nominal	-	566.0	385.0	205.0	117.8	76.8	89.9	96.1	99.4	99.6
Opening RAV (before transfers)	£m nominal	6,567.1	7,016.6	7,326.6	7,491.9	7,660.0	7,802.5	8,090.5	8,391.4	8,665.7	8,689.1
Transfers	£m nominal	-	-	-	-	-	-	-	-	-	-
Opening RAV (after transfers)	£m nominal	6,567.1	7,016.6	7,326.6	7,491.9	7,660.0	7,802.5	8,090.5	8,391.4	8,665.7	8,689.1
Net movements on non-core RAV	£m nominal	-	-	-	-	-	-	-	-	-	-
Net additions (after disposals)	£m nominal	245.2	319.1	378.6	485.1	517.7	799.4	856.9	884.8	695.5	661.6
Depreciation	£m nominal	(361.7)	(394.1)	(418.2)	(434.8)	(452.0)	(601.4)	(652.2)	(709.8)	(771.8)	(815.7)
Closing RAV	£m nominal	6,450.6	6,941.6	7,287.0	7,542.2	7,725.7	8,000.6	8,295.2	8,566.4	8,589.4	8,535.0

Table 9d: FBP Outputs of Regulatory financial position

	Units	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Summary Financial Information											
1) Regulatory financial position											
Equity											
Opening equity (before inflation uplift on opening RAV)	£m nominal		2,791.3	3,318.9	3,714.0	3,897.4	3,981.7	3,215.5	3,352.8	3,498.5	3,654.5
Inflation uplift on opening RAV	£m nominal		566.0	385.0	205.0	117.8	76.8	89.9	96.1	99.4	99.6
Opening equity (after RPI uplift on opening RAV)	£m nominal	2,795.6	3,357.3	3,704.0	3,919.0	4,015.2	4,058.6	3,305.4	3,449.0	3,597.9	3,754.1
RAV adjustment from previous price controls (share to equity)	£m nominal	-	-	-	-	-	-	-	-	-	-
Earnings after tax (after regulatory depreciation)	£m nominal	73.1	44.9	97.5	68.9	59.3	144.4	146.9	152.3	159.7	168.2
Regulatory dividend	£m nominal	(77.4)	(83.3)	(87.4)	(90.5)	(92.7)	(96.0)	(99.5)	(102.8)	(103.1)	(102.4)
Movement in equity (before issuance)	£m nominal	2,791.3	3,318.9	3,714.0	3,897.4	3,981.7	4,106.9	3,352.8	3,498.5	3,654.5	3,819.9
Equity issued	£m nominal	-	-	-	-	-	-	-	-	-	-
Impact of debt re-set	£m nominal	-	-	-	-	-	(891.5)	-	-	-	-
Closing Equity	£m nominal	2,791.3	3,318.9	3,714.0	3,897.4	3,981.7	3,215.5	3,352.8	3,498.5	3,654.5	3,819.9

Table 9e: FBP Outputs of Regulatory financial position

	Units	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Summary Financial Information											
1) Regulatory financial position											
PAT											
PAT (per regulatory earnings statement below)	£m nominal	61.0	14.0	75.6	98.2	98.6	144.4	146.9	152.3	159.7	168.2
less: excess fast money	£m nominal	-	-	-	-	-	-	-	-	-	-
add back: retained outperformance	£m nominal	12.2	31.0	21.9	(29.3)	(39.3)	-	-	-	-	-
Adjustment for regulatory depreciation (if statutory depreciation is applied)	£m nominal	-	-	-	-	-	-	-	-	-	-
PAT (after regulatory depreciation)	£m nominal	73.1	44.9	97.5	68.9	59.3	144.4	146.9	152.3	159.7	168.2
Reconciliation of cash flows to movement in net debt											
Opening net debt	£m nominal	(3,771.5)	(3,659.3)	(3,622.6)	(3,573.0)	(3,644.8)	(4,635.4)	(4,785.1)	(4,942.4)	(5,067.9)	(4,935.0)
Closing net debt	£m nominal	(3,659.3)	(3,622.6)	(3,573.0)	(3,644.8)	(3,744.0)	(4,785.1)	(4,942.4)	(5,067.9)	(4,935.0)	(4,715.1)
Movement in net debt	£m nominal	112.2	36.6	49.7	(71.8)	(99.1)	(149.7)	(157.3)	(125.5)	132.9	219.9
Add back: principal inflation accretion	£m nominal	40.0	93.1	58.4	29.8	17.0	23.7	27.6	29.3	29.3	28.2
Net cash flow	£m nominal	152.3	129.7	108.1	(42.0)	(82.2)	(126.0)	(129.7)	(96.2)	162.2	248.1

Table 9f: FBP Outputs of Regulatory income statement

	Units	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Summary Financial Information											
2) Regulatory income statement											
Operating revenue	£m nominal	1,159.4	1,729.6	1,280.0	1,411.3	1,423.3	1,713.3	1,847.0	1,940.2	1,977.2	2,034.1
Less fast pot expenditure	£m nominal	(169.9)	(210.7)	(251.6)	(311.2)	(315.3)	(392.1)	(428.2)	(436.3)	(348.9)	(335.0)
Less difference in fast pot expenditure pre-TIM and post-TIM	£m nominal	10.2	21.4	17.1	(15.1)	(21.0)	-	-	-	-	-
Less pass-through expenditure	£m nominal	(129.0)	(154.7)	(135.7)	(124.7)	(131.8)	(142.8)	(157.1)	(158.7)	(158.3)	(160.2)
Less equity issuance cost	£m nominal	(7.9)	-	-	-	-	-	-	-	-	-
Less other costs		(233.4)	(729.9)	(189.9)	(233.0)	(229.1)	(185.8)	(188.1)	(189.7)	(192.4)	(190.3)
EBITDA	£m nominal	629.6	655.7	719.8	727.2	726.1	992.6	1,073.7	1,155.5	1,277.6	1,348.6
Less depreciation (Regulatory)	£m nominal	(361.7)	(394.1)	(418.2)	(434.8)	(452.0)	(601.4)	(652.2)	(709.8)	(771.8)	(815.7)
EBIT	£m nominal	267.9	261.6	301.6	292.4	274.1	391.2	421.5	445.7	505.7	532.9
Less net interest paid (excluding principal inflation accretion)	£m nominal	(127.2)	(119.4)	(118.6)	(115.7)	(135.1)	(190.5)	(204.5)	(213.3)	(216.4)	(214.5)
Less net interest paid (principal inflation accretion)	£m nominal	(40.0)	(93.1)	(58.4)	(29.8)	(17.0)	(23.7)	(27.6)	(29.3)	(29.3)	(28.2)
PBT	£m nominal	100.6	49.2	124.5	146.8	122.1	177.0	189.4	203.1	260.1	290.1
Less tax paid	£m nominal	(39.6)	(35.2)	(48.9)	(48.6)	(23.4)	(32.7)	(42.5)	(50.8)	(100.4)	(121.9)
PAT	£m nominal	61.0	14.0	75.6	98.2	98.6	144.4	146.9	152.3	159.7	168.2
Less dividends paid	£m nominal	(77.4)	(83.3)	(87.4)	(90.5)	(92.7)	(96.0)	(99.5)	(102.8)	(103.1)	(102.4)
Retained earnings for the year	£m nominal	(16.4)	(69.3)	(11.9)	7.7	5.9	48.4	47.4	49.5	56.6	65.8

Table 9g: FBP Outputs of Regulatory cash flow statement

	Units	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Summary Financial Information											
3) Regulatory cash flow statement											
Operating revenue	£m nominal	1,159.4	1,729.6	1,280.0	1,411.3	1,423.3	1,713.3	1,847.0	1,940.2	1,977.2	2,034.1
Less total operating costs	£m nominal	(529.9)	(1,073.9)	(560.2)	(684.0)	(697.2)	(720.7)	(773.3)	(784.7)	(699.6)	(685.5)
Net cash flow from operations	£m nominal	629.6	655.7	719.8	727.2	726.1	992.6	1,073.7	1,155.5	1,277.6	1,348.6
Less net interest paid (excluding principal inflation accretion)	£m nominal	(127.2)	(119.4)	(118.6)	(115.7)	(135.1)	(190.5)	(204.5)	(213.3)	(216.4)	(214.5)
Less tax paid	£m nominal	(39.6)	(35.2)	(48.9)	(48.6)	(23.4)	(32.7)	(42.5)	(50.8)	(100.4)	(121.9)
FFO	£m nominal	462.7	501.1	552.2	562.9	567.6	769.5	826.8	891.4	960.8	1,012.2
Less dividends paid	£m nominal	(77.4)	(83.3)	(87.4)	(90.5)	(92.7)	(96.0)	(99.5)	(102.8)	(103.1)	(102.4)
RCF	£m nominal	385.3	417.8	464.8	472.4	474.9	673.5	727.2	788.6	857.7	909.7
Net slow pot expenditure	£m nominal	(245.2)	(319.1)	(378.6)	(485.1)	(517.7)	(799.4)	(856.9)	(884.8)	(695.5)	(661.6)
Less pre-vesting and post-vesting disposal proceeds	£m nominal	-	-	-	-	-	-	-	-	-	-
Net cash flow before financing	£m nominal	152.3	129.7	108.1	(42.0)	(82.2)	(126.0)	(129.7)	(96.2)	162.2	248.1

Table 9h: FBP Outputs of Financial Ratios

Ofgem Base Case – FBP Outputs											
	Units	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Financial Ratios											
RIIO-3 implied credit rating	Text						A2	A2	A2	A2	A2
Annual implied credit rating	Text	-	-	-	-	-	A2	A2	A2	A2	A2
Annual credit rating score	index	-	-	-	-	-	6.39	6.39	6.39	6.39	5.99
Adjusted interest cover ratio (post-maintenance interest cover ratio)	scalar	1.79	1.90	2.13	2.11	1.86	1.88	1.85	1.85	1.87	1.92
Adjusted interest cover ratio (post-maintenance interest cover ratio), adjusted	scalar	1.75	1.84	2.08	2.06	1.82	1.84	1.81	1.81	1.83	1.87
AICR, adjusted (Moody's)	scalar	1.75	1.84	2.08	2.06	1.82	1.84	1.81	1.81	1.83	1.87
FFO / Net Debt	%	12.65%	13.83%	15.46%	15.44%	15.16%	16.08%	16.73%	17.59%	19.47%	21.47%
FFO / Net Debt, adjusted	%	12.57%	13.74%	15.37%	15.38%	15.09%	15.99%	16.63%	17.48%	19.36%	21.35%
FFO / Net Debt, adjusted (Moody's)	%	12.57%	13.74%	15.37%	15.38%	15.09%	15.99%	16.63%	17.48%	19.36%	21.35%
FFO interest cover ratio (including accretions)	scalar	3.5	2.9	3.8	4.7	4.6	4.5	4.4	4.6	4.8	5.1
FFO interest cover ratio (including accretions), adjusted	scalar	3.4	2.8	3.7	4.6	4.5	4.4	4.3	4.4	4.7	4.9
FFO interest cover ratio (cash interest only)	scalar	4.6	5.2	5.7	5.9	5.2	5.0	5.0	5.2	5.4	5.7
FFO interest cover ratio (cash interest only), adjusted	scalar	4.5	5.0	5.5	5.7	5.1	4.9	4.9	5.1	5.3	5.6
Nominal PMICR	scalar	3.0	3.7	3.6	3.1	2.4	2.0	2.0	2.0	2.1	2.1
Nominal PMICR, adjusted	scalar	3.0	3.6	3.5	3.0	2.4	2.0	2.0	2.0	2.0	2.1
RCF/Net Debt	%	10.53%	11.53%	13.01%	12.96%	12.68%	14.07%	14.71%	15.56%	17.38%	19.29%
RCF/Net Debt, adjusted	%	10.45%	11.44%	12.93%	12.90%	12.61%	13.98%	14.61%	15.46%	17.27%	19.18%
Net Debt/Closing RAV (aka Modelled Gearing)	%	56.73%	52.19%	49.03%	48.33%	48.46%	59.81%	59.58%	59.16%	57.45%	55.24%
EBITDA/RAV	%	9.76%	9.45%	9.88%	9.64%	9.40%	12.41%	12.94%	13.49%	14.87%	15.80%
RoRE (NPV neutral RAV)	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dividend cover	scalar	0.79	0.17	0.86	1.09	1.06	1.50	1.48	1.48	1.55	1.64
Dividend/Regulated equity (NPV neutral RAV)	%	3.02%	3.03%	3.04%	3.06%	3.07%	3.11%	3.11%	3.10%	3.06%	3.04%