

Gas Transmission



Delivering your future gas transmission system

National Grid Gas Transmission's draft
business plan 2021-26

nationalgrid

July 2019

Who we are and what we do

We are National Grid Gas Transmission (NGGT) and we are proud to own, manage and operate the high-pressure gas national transmission system (NTS) in Great Britain (GB). Our network is a gas superhighway that connects our nation; we balance supply and demand on a day-to-day basis to make gas available when and where it's needed. We develop, maintain, and operate an economic and efficient network and we facilitate competition in the supply of gas in GB to keep energy costs to consumers as low as possible.

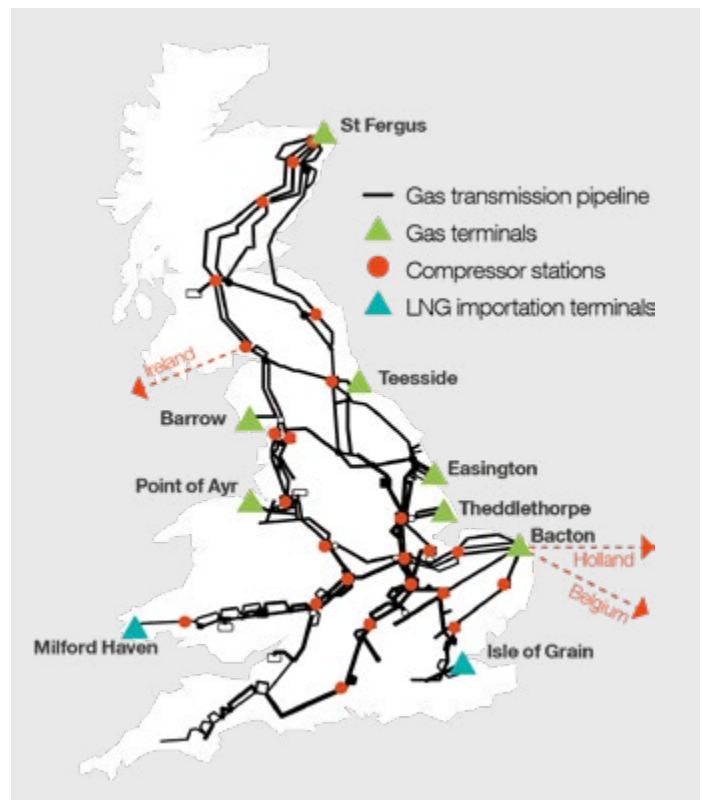
We are at the heart of the energy system as the combined gas transmission system operator (TSO), undertaking both the gas transmission owner and system operator roles. Today, gas delivers three times as much energy as electricity; it keeps 80% of the UK's 28 million homes¹ warm and comfortable, generates electricity and fuels industrial and manufacturing processes. Failure to supply gas (especially to vulnerable consumers), and any major uncontrolled release of gas from the high-pressure network, are both potential threats to life and property.

The network includes pipes and compressor stations. They connect production through terminals to the distribution systems. In the UK, gas enters the transmission system through importation, reception terminals, storage facilities and interconnectors. From our Gas National Control Centre (GNCC), we meet changing customer needs by optimising the physical configuration of assets and utilising commercial tools. Compressor stations located along the network play a vital role in keeping large quantities of gas flowing through the system to the areas of demand. The network must be kept constantly in balance, which is achieved by buying, selling and using stored gas.

Part of a leading FTSE 100 company with a social purpose

We are part of National Grid plc. We support the highest standards of governance required by the London and New York stock exchanges. We are committed to being a responsible business. We want to be a force for positive social and environmental change so we act responsibly in everything we do, and also in the way we do it. This belief is fundamental to the way we work at National Grid.

Our gas transmission network



Our gas transmission network comprises approximately:

7,660 km

of high pressure pipeline

600

above ground installations

24

compressors sites

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729317/Energy_Consumption_in_the_UK_ECUK_2018.pdf

National Grid Gas Transmission

Welcome to our draft business plan

We are an organisation with a purpose: we bring energy to life.

That purpose drives our vision to do two things: exceed the expectations of our customers, shareholders and communities today and make possible the energy systems of tomorrow.

We believe our nation should have a clean, reliable energy system to help address the effects of climate change, improve the quality of the air we breathe and power growth and prosperity in our economy for future generations.

We are committed to continue delivering a safe, reliable and resilient network for homes, businesses and communities both today and into the future. And to play our part in decarbonising Great Britain's energy system so that the transition to a clean energy system is fair and leaves no-one behind. We want to achieve all of this at the lowest possible cost for current and future bill payers.

Even though the precise pathway to achieve the government's recent commitment to Net Zero² by 2050 is uncertain, it is clear gas has an important role to play in supporting the transition to low carbon electricity, heat, industry and transport at the lowest cost and with least disruption to consumers. We are fully committed to playing our part in this transition.

That is why this draft plan matters. Against the backdrop of uncertainty, it covers a crucial five-year period from 2021 to 2026. It sets out what we will do to support a reliable, cleaner whole energy system, improve services for our customers and it describes our commitments to enhance the environment.

The plan we have set out will help us to make a positive impact on society for the benefit of everyone. We balance the needs of today's and tomorrow's consumers by delivering our commitments. We will keep our portion of domestic consumers' energy bills at or below £10³ in the short-term, and invest for the longer-term to keep energy flowing, maintain security of supply in a digital age and enable the transition to low carbon electricity, heat and transport.

We are proud to provide an essential service and our core values reflect the responsibilities that go with that:

Safety above everything We always do the right thing We find a better way

We continue engagement with you on this draft plan and will take comments on board for our next draft plan in October.

² <https://www.gov.uk/government/news/pm-theresa-may-we-will-end-uk-contribution-to-climate-change-by-2050>

³ Excluding inflation



Part 1

Executive summary

1. A message from our Chair

Great Britain is highly dependent on a safe, reliable and resilient gas transmission system.

Presently, 80% of homes rely on natural gas for heating as do many businesses, commercial properties and public buildings such as schools and hospitals. Gas is also crucial for many large-scale industrial processes. Gas is used for 40% of electricity generation, supporting the removal of coal and providing flexible back-up for intermittent generation.

For the future, we recognise the urgent need to tackle climate change. We support the government's commitment to Net Zero by 2050 and recognise gas has an important role to play in supporting the transition to low carbon electricity, heat, industry and transport. It provides the reliability and flexibility to support growth in renewable generation and it gives Great Britain options to decarbonise commercial vehicles and industry. Perhaps most importantly, gas can also help to decarbonise heat, the biggest source of UK carbon emissions, at the lowest cost and with least disruption to consumers.

To provide this essential service to society today and into the future we have carried out our largest-ever listening exercise with you for this draft plan, which reflects our collective thinking. For the first time, we have built our plan around your feedback. Our independent stakeholder user group scrutinised our proposals as we have built our plan, challenging us to respond directly to your views; we hope the resulting draft is both easy to understand and clear on what we will deliver to you and why it matters. Our plans must deliver long-lasting benefits for energy consumers.

Our commitment to you is to maintain a world-class gas network that supplies gas when and where it's needed while keeping our costs as low as possible, in a way that's sustainable and safe. We will do this for today's and tomorrow's customers and consumers and we'll help to deliver the least cost pathway to decarbonise our energy system.

To meet this commitment, we must address some challenges. Within the changing energy landscape, we are managing an ageing network with many assets at the end of their design life. Now's the time when we must make some important decisions on replacing, maintaining or decommissioning them. These decisions have long-term impacts on cost, risk and the level of network capability we offer to stakeholders, so we will be engaging closely with you about our network capability framework. We will also consider further the potential implications of the government's commitment to Net Zero by 2050 and discuss that with you over the summer.

Finally, this is a draft plan, reflecting the input we have received so far. We are still listening to your views and we will engage further before making the final submission to our regulator, Ofgem, in December.

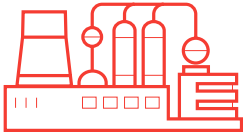


Nicola Shaw
Chair of National Grid
Gas Transmission

2. How we have delivered in RIIO-1

Our RIIO-2 plan is based on our strong track record for delivering value for consumers in the current regulatory period. We have taken learnings from RIIO-1 to inform how we can better deliver in RIIO-2, carrying forward delivery performance, cost performance and innovation benefits.

Annually, we produce a regulatory report pack that is provided to Ofgem and published on our website. This has allowed all stakeholders to understand how we have performed throughout the RIIO-1 period and it is available here⁴.



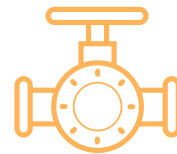
Keeping the gas flowing

We have maintained reliability and efficiently facilitated the delivery of 99.9896% of gas requirements for customers, allowing consumers to use gas as and when they want.



Improving customer and stakeholder satisfaction

Our customer and stakeholder satisfaction scores are increasing. Customer satisfaction has gone from 7.1 to 7.8, and stakeholder satisfaction from 7.7 to 8.1.



Investing in the health of our assets

We met our Network Output Measures (NOMs) targets by investing £100m more than our regulatory allowances to maintain the health of our assets.



Protecting the gas network

We have upgraded the physical security of key infrastructure sites and improved our data centres to protect against external threats.



Innovating to reduce costs

We have provided value of £4 for every £1 invested in innovation.



Serving new customers

Our Customer Low Cost Connections (CLoCC) project substantially reduces the time and cost to connect for new customers.



Reduced environmental impact

All-time low rate of nitrogen oxide (NOx) resulting from the investment strategy we have made on the network.



World-class safety performance

We have achieved zero injuries to the public and world-leading safety performance.



Delivering value for money

We have driven efficiency across our business, including a £45m saving by the end of RIIO-1 through our UK efficiency programme.

⁴ <https://www.nationalgridgas.com/about-us/business-planning-riio/how-were-performing>
<https://www.nationalgridgas.com/sites/gas/files/documents/National%20Grid%20Gas%20SO%20Incentive%20Supporting%20Information%202017-18%20v10.pdf>

3. Building a stakeholder-led plan

We have built our plan by listening and incorporating feedback from our customers, stakeholders and consumers. Over the last two years, we have carried out our most extensive ever listening exercise to understand your priorities and future requirements. We have undertaken engagement connecting with more than 500 stakeholders, 3,000-plus domestic consumers and 1,000 major energy users.

Together with National Grid Electricity Transmission (NGET), we were the first network to establish our independent stakeholder user group. They have been challenging and reviewing how we engage with stakeholders in developing our business plan.

We have provided more information about our emerging ideas for our business plan to you, our stakeholders, than ever before including a consultation in February 2019⁵. Thank you for your feedback.

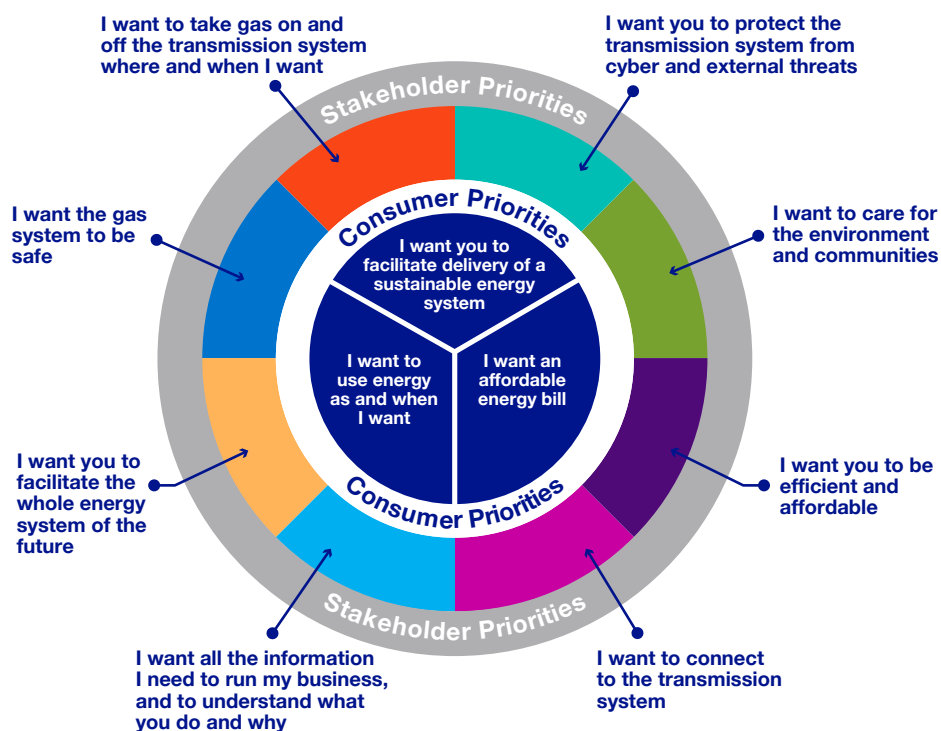
What you've said

We've built our draft business plan around what you've said. As consumers, you've told us your three main priorities:

- **I want an affordable energy bill** – Our network and facilitation of the market allows our customers to supply gas to where and whom they want, helping keep wholesale costs low to the ultimate benefits of consumers.

- **I want to use energy as and when I want it** – Consumers expect us to provide a highly reliable service.
- **I want you to facilitate delivery of a sustainable energy system** – You want us to support the energy system transition whilst minimising disruption to your life and our impact on the environment. Throughout our stakeholder engagement we have promised to continue to listen and respond to your feedback. And throughout our consumer engagement programme we identified that the environment, particularly as we move towards a decarbonised energy system, is very important to consumers. We therefore amended our third priority to better reflect this. It was previously 'I want you to minimise disruption to my life.'

Against a backdrop of an uncertain energy landscape, we are mindful that there is a careful balance to be achieved in delivering these priorities for consumers. We will make critical decisions regarding replacing, maintaining or decommissioning our assets, as well as driving forward innovation to ensure the most fit for the future solutions. We will continue to engage on these important topics over the summer, alongside exploring with domestic consumers the overall acceptability of our plan.



⁵ <https://www.nationalgridgas.com/document/125911/download>

4. Our draft proposals and costs for RIIO-2 at a glance

This plan has been shaped by what we have heard against the priorities of our stakeholders and consumers; it is ambitious, innovative and will be challenging to deliver. We will work towards its goals with you, so that our actions are transparent, and we can deliver effectively on our commitments.

Our draft proposals forecast an average annual total cost in RIIO-2 at £599m (excluding pass through costs, potential customer triggered network reinforcement and real price effects). Below, we have presented what we plan to do against each stakeholder priority, organised into Ofgem's three output categories:

Maintain a safe and resilient network

I want the gas system to be safe
Forecast cost £14m per year

- Maintain our world-class level of safety whilst continuing to pursue our goal of zero harm to protect the public, our assets and people
- We will comply with legislation through routine and preventive safety activities

I want to take gas on and off the transmission system where and when I want
Forecast cost £288m per year

- Deliver the network capability that meets our stakeholders' needs
- Invest £888m in our asset health programme to maintain our current level of reliability and availability
- Invest in systems and capabilities to optimise operation of our network to ensure customers' requirements are met

I want you to protect the transmission system from cyber and external threats
Forecast cost £123m per year

- Invest £617m to improve resilience to cyber and physical attacks on the transmission system

Deliver an environmentally sustainable network

I want you to facilitate the whole energy system of the future – innovating to meet the challenges ahead.
Forecast cost £21m per year

- Play a leading role in the whole energy and decarbonisation debate
- Invest in capabilities and systems to understand the most efficient options for the future whole energy system
- Drive innovation to enable solutions for decarbonising the industry

I want you to care for the environment and communities
Forecast cost £72m per year

- Deliver two new commissioned compressors in RIIO-2 and complete five more by 2030 to improve air quality and reduce NOx emissions
- Reduce the carbon footprint of our business
- Take action at 77 redundant sites and assets, seeking to enhance the natural environment where possible
- Continue our support for the communities we work in and commit 0.3% of what we spend on major projects to supporting community initiatives

Meet the needs of consumers and network users

I want to connect to the transmission system
Forecast cost £2m per year

- Be more responsive to the needs of connection customers, improving our customer satisfaction scores
- Embed the improvements resulting from our Customer Low Cost Connections (CLoCC) project into business as usual, enabling standard connections for less than £1m in under 12 months

I want you to be efficient and affordable*

- Commit to 4% efficiency on our total capex across RIIO-2
- Build in 7.4% operational cost efficiency from our RIIO-1 UK efficiency programme
- Commit to a further 5.6% operational cost efficiency across RIIO-2
- Continue to benchmark, market test and use native competition throughout RIIO-2

I want all the information I need
Forecast cost £13m per year

- Enable competition and foster innovation by sharing our data openly wherever possible
- Collaborate and share data with network companies to build a whole system view
- Invest in our people and systems, to develop new capabilities allowing us to support more information sharing
- Provide more transparency around our financial and operational performance

***Business support costs to deliver against our key priorities – forecast cost £65m per year**

Pass through costs such as licence fees and tax – forecast cost of £170m per year

5. Consumer benefits

Our proposals will deliver consumer benefits as shown below in relation to our three consumer priorities:

Maintain a safe and resilient network

I want the gas system to be safe

“I want to use energy as and when I want” – our commitment to safety-related inspections, maintenance and asset replacement avoids unplanned downtime of network elements, which could disrupt continuity of gas supply.

“I want you to facilitate delivery of a sustainable energy system” – focus on zero harm protects society from potential disruption and damage to public health, business, transport and the natural environment.

I want to take gas on and off the transmission system where and when I want

“I want to use energy as and when I want” – enabling a wide range of supplies ensures gas is reliably available.

“I want you to facilitate delivery of a sustainable energy system” – it is in consumers’ interests to keep future energy options open which we will deliver by determining and delivering the network capability our stakeholders need.

“I want an affordable energy bill” – reliability enables access to the lowest cost gas supplies, impacting the wholesale cost energy consumers incur.

I want you to protect the transmission system from cyber and external threats

“I want to use energy as and when I want” – improve the safety and resilience of the network to ride through and recover from malicious events that threaten to disrupt continuity of GB energy supplies.

Deliver an environmentally sustainable network

I want you to facilitate the whole energy system of the future – innovating to meet the challenges ahead

“I want you to facilitate delivery of a sustainable energy system” – defining the solutions for decarbonising heat, providing the costs and implications for consumers, to support a pathway that minimises disruption.

“I want an affordable energy bill” – whole energy system collaboration offers networks the potential to respond to changing needs and reduce consumer costs. Focusing on delivering and embedding innovation to deliver the energy transition ensures the most effective long-term solutions are taken forward.

I want you to care for the environment and communities

“I want you to facilitate delivery of a sustainable energy system” – cutting greenhouse gas emissions reduces our impact on climate change, with clear benefits for society including improved air quality. Improving biodiversity and reconstructing the environment when we have demolished a site brings positive benefits to nature and communities.

“I want an affordable energy bill” – responsible demolition protects future consumers from the costs of disposing of assets they may not have benefited from whilst promoting environment net gain activities.

Meet the needs of consumers and network users

I want to connect to the transmission system

“I want to use energy as and when I want” – making it easier for new sources to connect, so diverse domestic and international sources of gas can access our network efficiently.

“I want you to facilitate delivery of a sustainable energy system” – make it easier for lower carbon biogas and gas-powered vehicle refuelling stations to connect, assisting decarbonisation with minimal disruption to consumers.

“I want an affordable energy bill” – where possible we provide capacity without building new assets, facilitating liquidity in the competitive wholesale energy markets which keeps costs low for consumers.

I want you to be efficient and affordable

“I want an affordable energy bill” – embedding efficiencies, focusing on the most efficient and effective solutions and reducing returns from day one of the new price control will keep costs down for consumers.

Uncertainty mechanisms ensure spend is directed at maximum consumer benefit even when circumstances change.

Facilitation of the wholesale market, has a positive impact on the wholesale energy cost for consumers. Balancing costs between current and future consumers ensures fairness.

I want all the information I need

“I want an affordable energy bill” – our information and insights provide value for consumers by ensuring that the gas market runs smoothly. It also promotes competition in the wholesale market.

6. What drives our costs?

RIIO-2 expenditure

To achieve the outcomes our stakeholders want and need, our draft proposals forecast our average annual total costs in RIIO-2 at £599m, (excluding pass through costs, potential customer triggered network reinforcement and real price effects) an increase from £403m in RIIO-1.

£352m (per year) of our totex plan for RIIO-2 relates to three areas of investment:

- expenditure to maintain reliability with many assets at the end of their technical design life
- expenditure to increase resilience by protecting the transmission network from rising cyber and physical security threats
- expenditure to meet emissions legislation compliance by 2030.

The proposed investment directly links to our commitment to maintain a world-class gas network that supplies gas when and where it's needed, while keeping our costs as low as possible, in a way that's both sustainable and safe.

We are also mindful that to meet this commitment, we must get the balance right between network reliability and the cost to consumers today and into the future. Within the changing energy landscape, we are managing an ageing network with many assets at the end of their design life. The decisions we make today have lasting impacts on cost, risk and the level of network capability we offer to stakeholders. The plan reduces network capability in the future due to decisions we are making now and we want to ensure these trade-offs are fully understood. We will consult further with you to discuss the implications of these plans to ensure our proposals meet your needs.

A summary of the key drivers and levels of investment, based on stakeholder feedback to date, is:

- **Managing an ageing network with many assets at the end of their design life (£178m pa).**

We're experiencing more condition-related issues. We have started to deal with these issues in RIIO-1 by investing £100m over our allowances. For RIIO-2, we have provided evidence that we will need to increase our spending to maintain the health of our assets. We have tested the deliverability of our plan in the long term over a 10-year period, applied efficiencies derived through our focus on enhancing our capability in RIIO-1 and will continue to deliver our works using native competition.

For asset health work on our compressor fleet, we will test to ensure our proposed investments meet your current and future network capability needs. As we move forward, our asset decisions will need to be assessed using this approach.

To deliver the network capability you need and to maintain asset health across our network, we are forecasting a need to maintain a similar level of cost as proposed for RIIO-2 to at least 2030.

- **Timely delivery of emissions legislation compliance by 2030 (£51m pa).** We have 28 compressor units that are subject to the Medium Combustion Plant Directive (MCPD) and we need to make decisions now on the solutions. Based on the network capability you have currently indicated that you need, we are proposing limiting new compressor installations to two in RIIO-2 and a further five in RIIO-3. For a further 21 compressor units we are exploring decommissioning and derogation solutions and will test this with you during the summer, before finalising our plans.
- **Protecting the transmission network from rising cyber and physical security threats (£123m pa).** We are working with the Department for Business, Energy & Industrial Strategy (BEIS), Ofgem in their joint role as competent authority, and with the Health and Safety Executive (HSE) to assess our existing cyber protection capability and confirm the further works that will be required to protect against these threats.

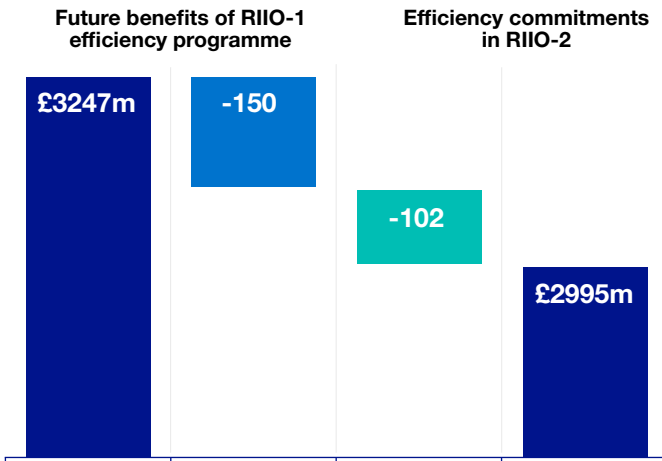
Being more efficient to deliver value for money

To deliver our proposals as cost-effectively as possible we have challenged ourselves to drive efficiencies across our activities. We have done this by:

- building in the future benefits of our stretching UK efficiency programme, **saving £150m** over the full RIIO-2 period
- making an ambitious commitment to further **reduce our operating costs by £22m**. This represents a further 5.6% improvement in our operating productivity by the end of RIIO-2, nearly three times the government's forecast of UK productivity growth. The outcome of our total operational cost efficiencies will mean our RIIO-2 costs are 13% lower by the end of the RIIO-2 period than today's level
- building in the benefits of our past successful engineering and asset management innovations to include a 4% efficiency on our direct capital investments, **saving £80m**.

What drives our costs? continued

Figure 5.1
Five year total efficiency benefits



In addition to the efficiency improvements and commitments we have applied, we have challenged ourselves to focus on the most effective and efficient activities that will deliver the network capability needs of our stakeholders. We have proposed a plan on future compressors over RIIO-2 and RIIO-3 that will result in the remaining 21 compressors being decommissioned or derogated at a cost that's significantly lower than replacing these units. This has the potential to **save consumers over £300m in RIIO-2 and £263m in RIIO-3.**

Overall, we are reducing the costs of delivering your priorities in RIIO-2 by **£552m.**

We are conscious that undertaking our activities effectively has a more far-reaching impact on consumer bills than the cost of our activities alone. By facilitating the effective functioning of the gas market we have a positive impact on the wholesale energy cost for consumers. This impact was supported by a recent study by EY. This concluded that even with perfect foresight and not taking account of an unexpected short-term shock, failure to maintain the existing capability of the NTS could have significant impacts on GB consumers, adding up to £877m per annum to electricity wholesale prices by 2035.

Financial framework

We have developed our business plan to deliver on our stakeholders' priorities and provide value for money. Part of this is ensuring that our draft plan balances the needs of investors with the needs of consumers today and into the future. Getting an appropriate financial framework which is transparent, robust and reflects the risks and long-term nature of the investments is vital in ensuring networks are able to fund future infrastructure efficiently and sustainably. Within our plan, we propose an appropriate base return due to shareholders (called the "cost of equity") which rewards them for the risk that they take in investing in a transmission business:

- we recognise that there are economic reasons why the cost of equity should be lower in the RIIO-2 period than it was in RIIO-1 but not to the extent Ofgem has indicated in their RIIO-2 Sector Specific Methodology document published in May.
- our plan assumes a base return of 5.5% which is consistent with our response to Ofgem's December 2018 RIIO-2 framework consultation, as this level of return better reflects the risks of running a transmission business and gives a more sustainable long-term risk/reward balance.
- the financial package we propose incentivises networks to innovate so we can deliver stakeholders' needs in the uncertain whole energy system transition.

We consider Ofgem's proposals for return are incorrect because they involve errors in the approach, arbitrary adjustments and the selective use of available evidence. Our assumption of 5.5% better reflects the risk of running a gas transmission business and provides a sustainable long-term risk/return balance. The base return we propose enables and encourages us to innovate to meet the huge challenges required to deliver the clean energy system of the future.

Use of an appropriate return is important to the resilience of the energy sector as a whole, but nowhere is it more pronounced than in transmission, where the uncertainty and complexity of investment required, and the scale and pace of market disruption is markedly higher than in other sectors. We have also seen growth in the cyber threat to our assets and the risk of political intervention in our operations over the last few years. These are risks which as a network we are best placed to manage because our customers and consumers do not have the ability to mitigate.

7. Our impact on energy bills

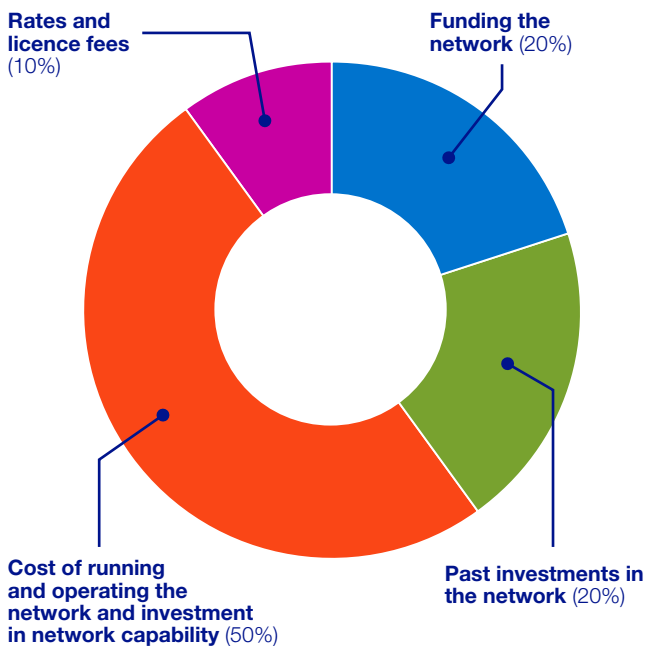
Our plan keeps our portion of a domestic end consumer's energy bill at or below £10 per year before inflation.

Whilst the increased expenditure required to deliver our RIIO-2 proposals brings an additional ~70p to the domestic end consumer bill, we can finance and make all the investments in our draft plan without increasing our part of the bill by:

- accepting a lower return from day one of the next price control period
- embedding savings in our underlying operating costs to reduce them by 13% from 2018 to 2026
- including 4% efficiency in our direct capital investments.

We will check our plan and its costs with domestic consumers through acceptability testing.

How our £10 per year portion of the domestic bill breaks down



Funding the network: upfront spend comes with an associated cost of raising funds, this is similar to the interest paid on a loan.

Past investments in the network: the cost of past investments in the gas networks is spread so consumers pay over the life of the assets. This portion relates to cost in prior regulatory periods.

Cost of running and operating the network and investment in network capability: the cost of work to deliver network capability within the current regulatory period is spread so consumers pay over the life of the assets. This also covers the day-to-day costs of running and operating a safe and reliable network.

Rates and licence fees: the obligatory charges that we have to pay in order to operate.

Ofgem has not finalised the financial model which will calculate revenue for RIIO-2 but using the figures set out in this plan, we estimate that our underlying revenue in RIIO-2 will be broadly flat compared to the average level in RIIO-1. There will be annual fluctuations from the underlying trend due to regulatory framework items such as uncertainty mechanisms and past investment adjustments. We are proposing changes to the framework, which will reduce these fluctuations, so for this draft plan we have focused on explaining the underlying revenue trends. The final framework will impact on the actual bill consumers and our customers incur. We are working with our customers and industrial and commercial consumers so they can understand the potential implications of the plan on them and we will provide further information once Ofgem has finalised the financial model to calculate revenues for RIIO-2.

Balancing costs between current and future consumers

Given the need for investment in RIIO-2 and beyond, and the changing future energy landscape in relation to gas usage as we decarbonise Great Britain's energy system, it is important we, and our regulator Ofgem, take account of the balance of cost that current and future consumers will pay. There are two areas of our plan which reflect our initial views in these areas for RIIO-2:

- Ofgem proposes a move to a new Consumer Prices Index (CPIH) metric for indexing our revenues, which will increase bills for today's consumers but lead to lower costs to consumers in the future. Whilst we are supportive of this change it should be neutral to consumers and investors and not be used as a tool to reduce the cost of equity for the transmission business, which should reflect the risks and long-term nature of the investments.
- To manage and recognise the uncertainty driven by the future transition to a net zero carbon economy we have proposed, and will consult further on, accelerated regulatory depreciation during RIIO-2. This is aimed at matching revenue with the usage of our assets and managing the potential risk to future consumers given the uncertainty linked to the energy transition.

8. Summary and next steps

We are confident our business plan is underpinned by solid foundations. We have embraced the new enhanced engagement arrangements introduced for RIIO-2 to thoroughly challenge and review our business plan. Already, this has brought significant improvements to the draft plan and we will continue to listen and act on the challenges as we build further versions. We have used techniques such as external benchmarking, engineering justification reports and cost-benefit-analysis (CBA) to make sure our plans are robust and we have built in efficiencies and benefits from innovation realised in RIIO-1. We have modelled key financial assumptions, including accelerated depreciation and asset lives and we are confident that our plan is deliverable across RIIO-2 and RIIO-3.

Next steps

This is our draft plan and builds on what we have heard from our February 2019 consultation on 'shaping the gas transmission system of the future'.

- During the summer we want to talk to you again to make sure this plan delivers the network capability you need now and into the future. This process might change the draft plan content, the total cost and the impact on consumer and customer bills.
- We will be reflecting on Ofgem's RIIO-2 decision document published in May 2019 and will set out more detail on incentives and other mechanisms Ofgem has proposed in our October draft plan.
- We will engage with you on the potential implications of the government's commitment to Net Zero by 2050 and talk to you about the potential role and activities that we should include,

either in our plan or by ensuring the regulatory mechanisms around whole energy systems allow us to propose solutions for your long-term needs.

- We have identified that the proposed project at our Bacton terminal may meet the criteria of competition as defined by Ofgem in their May 2019 decision document. In addition, it is possible that the solution to reinforce the network in south Wales will meet the competition criteria if the customer progresses with this scheme. We will discuss these with Ofgem to decide how they should be taken forward.
- Once Ofgem has finalised the financial model to calculate revenues for RIIO-2, we will provide further information to help industrial and commercial consumers understand the potential implications of the plan on them.
- We will carry out nationally representative quantitative domestic consumer research to test whether our proposals hit the mark.
- We will continue the dialogue with you on our plan and will take comments on board for our next draft plan in October, alongside comments from our independent stakeholder user group and the RIIO-2 Challenge Group.

We welcome your continued input and feedback throughout 2019 to ensure this plan delivers for you now and into the future.

9. Our plan for assuring our final business plan

The board of National Grid Gas has been fully involved in developing this draft plan. For our final business plan in December we are planning for our board, including our sufficiently independent directors, to provide formal assurances on the quality of our plan. Board members of our parent company, National Grid plc, have also been involved in developing this draft plan. This page describes the assurance processes that we will follow for our final business plan in December.

Our plan uses accurate, high-quality information

We have in place a programme to make sure that our board members have the information and confidence they need to assure our final business plan.

We have a strong control and assurance culture built on the tough rules that apply to us such as the London Stockmarket listing rules, the UK's corporate governance code and the USA's Sarbanes-Oxley requirements for publicly-listed companies. Our RIIO-2 assurance plan builds on these strong existing assurance systems.

We have performed a full risk assessment of our RIIO-2 business plan and designed an assurance plan using the following three lines of assurance:

- business unit management
- internal independent team
- external or internal audit

We have engaged an external expert consultancy to independently review and advise us on our risk assessment and planned assurance approach and we will complete our assurance work for our final business plan in December.

The statements we will ask our Board to make on the final business plan

We are working towards providing our Board with the confidence to make statements in relation to the following areas:

- the board's ownership of the overall long-term strategy that underpins the plan.
- the quality of the underlying information.
- the quality of our cost forecasts, including how they are value for money.
- meeting our statutory and licence obligations.

Our National Grid gas transmission board members



Nicola Shaw
Chair



Phil Sheppard
Director Gas
Transmission



Chris Bennett
Director
Regulation



Alan Foster
Chief Financial
Officer



Fintan Slye
Director
System Operator



Dr Cathryn Ross
Sufficiently
independent director



Dr Clive Elphick
Sufficiently
independent director



Alexandra Lewis
Treasurer