

UK National Grid  
Transmission

nationalgrid

**Gas Transmission**  
Our performance

2014/15



# Welcome



Welcome to Gas Transmission's second performance summary under RIIO (Revenue = Incentives + Innovation + Outputs).

This document is aimed at our customers, stakeholders and end consumers.

In our RIIO contract we agreed to deliver a series of outputs for our customers and stakeholders across the eight year RIIO period. Here we outline how we're performing and what activities we plan to carry out in the future to make our performance even better for our customers.

In 2014/15 Gas Transmission accounted for just 2.2% of the typical consumer's dual fuel energy bill. However the transmission element of the gas network is fundamental to securing the reliability of an end consumers gas supply.

As you'll see from the information in this document, we performed strongly in 2014/15. We remain on track to deliver our RIIO outputs – reliability, environment, customer satisfaction, customer connections – and safety continues to underpin everything we do.

Over 2014/15 we have made investments in the gas National Transmission System (NTS) to maintain its reliability (page 6) and ensure our system has minimal impact on the environment

(page 8). We have found alternative solutions which are more economical and will allow us to pass a proportion of these savings onto end consumers (page 3) and we have reassessed the phasing of our work to ensure we deliver work as efficiently and therefore as economically as possible by the end of the eight year RIIO period (page 2). Additionally, we have been able to deliver benefits to system users and end consumers through our performance under our incentive schemes as outlined in our performance scorecard (pages 4 and 5). We have also made some significant improvements in the service we provide to customers and stakeholders (page 11) and have followed a new approach to how we engage with stakeholders (page 9). This area continues to be a focus for us.

Alongside this report we have published our data tables, detailing actual expenditure for 2014/15 and forecast expenditure for the remainder of RIIO-T1. To view the tables, please visit <http://www.talkingnetworkstx.com/our-performance.aspx>.

We hope you find our performance summary useful and we welcome your feedback. For more investor-related information then please follow the relevant link <http://investors.nationalgrid.com/>.

**John Pettigrew**  
Executive Director

# Who we are and what we do

We are the owner and the operator of the gas National Transmission System (NTS) in Great Britain.

The NTS plays a vital part in the secure transportation of gas and facilitation of the competitive gas market. It is a network of pipelines, presently operated at pressures of up to 94 bar, which transports gas safely and efficiently from coastal terminals and storage facilities to exit points from the system. At the exit points, the gas is transferred to Distribution Networks (DNs) for onward transportation to domestic and industrial customers, or to directly connected customers including storage sites, power stations, large industrial consumers and interconnectors (pipelines to other countries).

- 23** compressor stations
- 4,760** miles of high-pressure pipeline
- 175** offtake points
- 8** Distribution Networks that we connect to
- 94 bar** is our maximum operating pressure

# Executive summary

Gas Transmission performed strongly in 2014/15. For the £18 that an end consumer pays for the gas transmission element of a typical energy bill we have:

- provided a safe and reliable system
- reduced our impact on the environment
- improved our customer and stakeholder satisfaction levels
- provided customers' with access to the system.

Content/output area	Highlights	Detail
<b>Customer bill</b>	<ul style="list-style-type: none"> <li>■ Our costs make up £18 of the average dual fuel customer bill</li> <li>■ Our total spend in 2014/15 was £297m</li> <li>■ £22.4m to be passed back to consumers.</li> </ul>	Page 3
<b>Safety and reliability</b>	<ul style="list-style-type: none"> <li>■ 100% reliability of exit supply for our system</li> <li>■ 97% critical compressor unit availability compared to 90% target</li> <li>■ £57m spent in maintaining the health of our assets</li> <li>■ Developed strategy of efficient delivery of our asset health programme for the eight year period.</li> </ul>	Page 6–7
<b>Environment</b>	<ul style="list-style-type: none"> <li>■ 19% reduction of greenhouse gas emissions in 2014/15 compared to 2013/14</li> <li>■ Reduction of 475 tonnes of gas vented from our compressors compared to 2013/14</li> <li>■ £32.7m invested in our compressor units so they comply with European legislation.</li> </ul>	Page 8–9
<b>Customer satisfaction</b>	<ul style="list-style-type: none"> <li>■ 7.6 out of 10 for our customer satisfaction compared to a score of 7.2 for 2013/14</li> <li>■ 7.9 out of 10 for our stakeholder satisfaction compared to a score of 7.8 for 2013/14.</li> </ul>	Page 10–11
<b>Customer connections</b>	<ul style="list-style-type: none"> <li>■ 7 gas connection applications received</li> <li>■ No occasions of stopping users from using the system in the way their agreements specified</li> <li>■ 4 maintenance days called against a target of 45 days</li> <li>■ Demand forecasting error reduced to the lowest in five years.</li> </ul>	Page 12–13

## RIO principles

RIO introduces a range of new principles that are relevant to our performance.

RIO-T1 is the first period under the Transmission RIO framework. It started in 2013/14 and lasts for eight years. Under this framework we have a set of outputs, as outlined on pages 4 and 5, that we have agreed with stakeholders. We deliver these outputs in return for a revenue allowance that we have agreed with our regulator Ofgem.

RIO also introduced a range of new principles which are relevant to our performance, so we've outlined them below.

For more information on our innovation activities please visit <http://www2.nationalgrid.com/uk/our-company/innovation/>

### Revenue is affected by sharing mechanism

One of the new principles introduced under the new RIO framework is the concept of the sharing factor. This works by sharing any over or underperformance against allowances between us and end consumers. Under this, for every £1, 56p of any efficiency we achieve is passed onto customers. Therefore, when we have achieved an efficiency, this flows through to ultimately reduce customer bills. The opposite is also true, so under performance, i.e. spending more than allowances to deliver the output will mean this efficiently incurred overspend is shared between us and end consumers.

### Incentivising different behaviours

Another way that our revenue is affected is through our performance in the different incentives agreed as part of the RIO framework. For instance, stakeholders want us to improve how we work with them and our customers, detail of which is in the Performance Scorecard and in the table on the website; [www.talkingnetworkstx.com/our-performance.aspx](http://www.talkingnetworkstx.com/our-performance.aspx).

### Innovation drives continuous improvement

Innovation is at the heart of the RIO regulatory framework and we work to find a better way in everything we do. The RIO contract introduced two funds to support innovation projects: the Network Innovation Allowance (NIA) and the Network Innovation Competition (NIC). Further detail on this and the types of projects that we are working on can be found in the link on the left.

### Outputs delivered change allowances

In some areas, the outputs to be delivered over the RIO-T1 period are uncertain. This could be because we were uncertain of the volume of work required to be delivered or because of new legislation emerging. To address this, we have two opportunities to apply to Ofgem for further funding in specific areas, the first in May 2015 and the second in May 2018.



## Our impact on customer bills

Our regulatory framework defines our allowances, our performance against that determines the revenues we can recover from our customers.

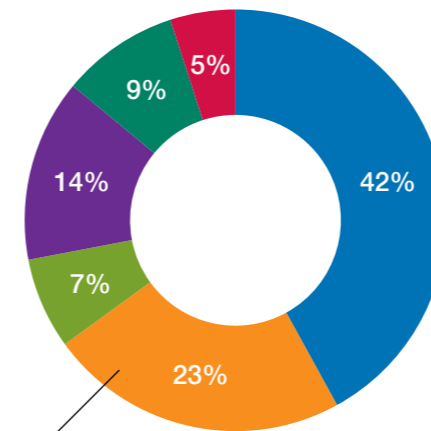
The RIO framework determines our regulatory cost allowance and the revenues that we are allowed to recover. This has been set by Ofgem through to 2021. In return for these cost allowances we have committed to deliver the outputs our stakeholders have asked us for. All of our outputs can be seen on the following two pages, along with how we have performed against these in 2014/15 and how we anticipate we'll perform against these by 2021.

### Customer bill impact

Approximately £18 of an average domestic customer bill in 2014/15 related to National Grid's Gas Transmission services. This represents 2.2% of a typical dual fuel energy bill.

We expect that this element of a domestic bill will rise by less than £1 by 2021.

### Understanding the dual fuel energy bill



National Grid Gas Transmission's proportion of the customer bill is a tenth of the network costs section.

Bill breakdown available from Ofgem, visit <https://www.ofgem.gov.uk/information-consumers/domestic-consumers/understanding-energy-bills>

- Wholesale costs
- Network costs
- Environmental & social costs
- Supplier operating costs
- Pre-tax margin
- VAT

# £18

of an average domestic customer bill in 2014/15 related to National Grid Gas Transmission services

# <£1

Forecast increase to the domestic customer bill for National Grid Gas Transmission services

# £22.4m

To be passed back to consumers for 2014/15 performance

# Our performance scorecard

**Red** – Missed an annual output and forecast to miss the remainder of our eight year output

**Green** – successful achievement of an annual output and on-target to meet the remainder of our eight year output

**Amber** – Missed annual output but on target to progress towards the remainder of our eight year output/successful achievement of annual output and risk of failure of the remainder of our eight year output

Safety		
Our output	Target	Performance
Comply with HSE legislation	100%	Complied
Meet requirements for Critical National Infrastructure	As agreed by DECC/Ofgem	Complied

Reliability and availability		
Our output	Target	Performance
Meet constraint management targets	£31.11m allowable costs for entry/exit capacity	£0.15m actual cost
Deliver benchmark performance for maintenance outage days	44.65 days	4 maintenance days called
Minimise National Grid driven changes to maintenance planning	1.015 days	No National Grid driven changes
Deliver accurate 13:00 day ahead demand forecasting	8.95mcm average forecast error	8.07mcm average forecast error
Deliver accurate demand forecasting at the two to five days ahead stage	16mcm average forecast error	12.55mcm average forecast error
Meet targets for the difference in the amount of gas held in our pipes on our network from the beginning to the end of the day	<2.80mcm average daily change	1.61mcm average daily change
Meet our targets for minimising our impact when we have to enter the market to balance supply and demand	Average daily difference between max and min price paid to be within 1.5% of System Average Price (SAP)	Difference 0.97% of SAP
Meet target for Transmission Support Services and for Constrained Liquefied Natural Gas & Long Run contracting	£8.7m allowable cost	£0m cost
Deliver existing capacity obligations in accordance with UNC, Licence and Gas Act		System issues impacted a minority of auctions. All charges corrected
Meet our targets for investing in our assets to maintain their health (NOMs targets)	Achieve RP1 – RP4 targets for each category specified in the licence by the end of RIIO-T1	On track to deliver eight year targets
Procure operating margins in an economic and efficient manner	Incur operating margins costs efficiently and publish report on the steps taken to promote competition	Operating margins strategy aligned to target, report published on time
Maintain our security of supply obligations in Scotland (Network flexibility)	Delivery of network flexibility projects	Network analysis completed
Deliver pipeline solution to manage the closure of a Liquefied Natural Gas storage facility at Avonmouth	Deliver solution by 2018	Risk based solution developed
Complete preliminary engineering and planning activities in preparation for the replacement of Feeder 9 (pipeline that runs across the Humber Estuary)		On track to replace Feeder 9, planning application to be submitted May 2015

Environment outputs		
Our output	Target	Performance
Meet our targets for the amount and the cost of the gas we use to run the network	<3,999GWh usage target and <£87.9m cost target	3,543GWh actual usage and £77.2m actual cost
Meet greenhouse gas emissions targets	<2,829 tonnes	2,857 tonnes
Report on our greenhouse gas emissions		Published in our annual report
Install new electric drive compressors at Peterborough and Huntingdon to ensure compliance with the Integrated Pollution Prevention and Control (IPPC) legislation. Deliver asset solution in 2019/20		On track to deliver asset solution in specified timescales
Install new compressor units at Aylesbury to ensure compliance with the Industrial Emissions Directive (IED)		On track to deliver alternative solution in specified timescales
Develop an integrated and cost-effective plan to ensure the remainder of our compressor units are compliant with IPPC and IED		On track to deliver plan in May 2015

Customer satisfaction outputs		
Our output	Target	Performance
Measure the way we have satisfied our customers and stakeholders <i>We use an external research company to carry out annual satisfaction surveys with our customer and stakeholder base.</i>	Customer 6.9/10 Stakeholder 5/10	Achieved a score of 7.6 for the customer element and 7.9 for stakeholder element
Achieve stakeholder engagement discretionary reward <i>The stakeholder engagement incentive scheme is a submitted report and panel assessment about how we engaged with our stakeholders in 2014/15 and the changes we made as a result.</i>	5.0/10	Achieved a score of 6.25

Customer connections outputs		
Our output	Target	Performance
Achieve our obligated times for delivering extra space (capacity) on the system	Target of 24 months from the point of formal commitment	No incremental capacity requiring physical reinforcement requested
Meet timescales for connection applications as specified in UNC Modification 373	Acknowledge receipt of application in 2 business days and confirm that it is a competent connection application within 5 business days. Issue an Initial Connection Offer within 2 months, a Full Connection offer within 9 months and a Feasibility Study Report within 3 months of the acknowledgment of a Competent Connection Offer.	Timescales met
Comply with reasonable requests for a customer connection to the NTS		Compiled

## Safety and reliability output: today

We are committed to ensuring our network remains reliable and safe for our users both today and in the future.

In 2014/15 we achieved 100% of supply to users taking off gas from the network. In terms of users putting gas onto the network there was an unplanned event at the Teeside Terminal for part of a gas day, but this did not have an impact on downstream customers. All efforts were made to successfully return the ability to flow at the Teeside Terminal as quickly as possible, whilst maintaining the safe operation of the NTS.

One of our key activities is to ensure our compressor units, that are critical to the operation of the system, are available. In 2014/15 we achieved 97% of critical compressor unit availability against a target of 90%.

### Maintaining network health and reliability

The RIIO price control arrangements revised the way we report Network Output Measures (NOMs) and includes targets for the condition of the NTS at the end of the RIIO-T1 period. These targets drive how we invest to maintain a safe and reliable network. We must maintain the health of our assets to continue to ensure the safety of the public, and the reliability of their gas supply. As our assets are ageing it is imperative that we monitor their condition and criticality and thus their risk on the network so that we can focus our replacement activities on the areas of greatest need. By doing this we keep the public safe by avoiding any asset failure.

During 2014/15 we invested £57m in maintaining the health of our assets – which contributed to maintaining the safety and reliability of our network. Our asset health approach focuses on resolving issues identified with the condition or performance of our assets. Investment is prioritised according to the condition of the assets and their criticality to the safe operation of our network. We aim to deliver efficient asset health solutions by considering appropriate remedial activities, including refurbishment versus replacement. An increasing proportion of our assets are approaching the end of their design life. Additionally, our customers' requirements for more varied and flexible utilisation of the system continues to increase. To tackle these challenges and to deliver benefit to customers, we are working hard to deliver innovative solutions in a number of areas, one example of this is project GRAID as detailed in the case study.

### Case study Gas Robotic Agile Inspection Device (GRAID)

Project GRAID is a ground-breaking venture that helps to assess the health of our assets. For the first time, we have worked with partners to design and build a robotic inspection device that can determine the true condition of below-ground pipework at high-pressure gas installations.

By better understanding our assets we can focus our excavation and pipe replacement work and extend the life of assets that are in good condition.



**100%**  
of supply achieved to users taking gas from the network

**97%**  
winter critical compressor unit availability against a target of 90%

**£57m**  
invested in maintaining the health of our assets

## Safety and reliability output: future

### Network output measures – future strategy

We've been set eight year Network Output Measures (NOMs) targets and have plans in place to deliver against them. In order to meet these targets we have developed a high level plan to ensure we deliver our NOMs over the eight year period and have a detailed delivery plan for the next three years. These plans ensure we efficiently manage our assets over their whole life and optimise investment within RIIO-T1.

We will be investigating innovative ways to improve the health of our assets and maintain the safety of the system such as the High Altitude Aerial Surveillance project as detailed in the case study.

### Humber Estuary pipeline

A section of one of our pipelines that spans the Humber Estuary has become exposed due to the tidal currents. A temporary solution over the past five years involved placing gravel bags and concrete mattresses on the pipeline to keep it in place. But this is a critical pipeline and we know from previous experience of tidal conditions in the Humber Estuary that we need a permanent solution. We are seeking planning permission for a solution and expect to implement it during the current RIIO-T1 period.

### System flexibility

Our system must allow for flexible usage and customers' changing needs. We are reviewing the flexibility users might need, which may affect the way the system is managed and operated. We'll establish exactly what's required and what solutions are available to meet those needs. We will talk to stakeholders to help us to identify the best solution.

### Case study High Altitude Aerial Surveillance (HAAS)

Third party damage is the biggest threat to our high-pressure gas pipeline network. A ruptured pipe is very dangerous for the public or anyone working nearby, so we're continually seeking innovative ways to reduce the risk. Our High Altitude Aerial Surveillance project promises many safety benefits. Project HAAS will help us switch from helicopters, which were traditionally the best way to patrol our pipeline from the air, to fixed-wing aircraft (as shown in the picture) that fly higher and faster. During helicopter patrols a human observer manually records potential sightings or threats on the on-board computer. The aircraft will have a new automated system that identifies threats to the pipelines. This automated surveillance will reduce the risk of third party damage and make our pipelines safer.



For more information on the system flexibility project and how you can get involved please visit <http://www.talkingnetworkstx.com/System-Flexibility.aspx>



## Environment output: today

Reducing our impact on the environment, today and in the future, is important to us.

We have set a company-wide target to reduce our greenhouse gas emissions by 45% by 2020 compared to 1990 levels. In 2014/15 our greenhouse gas emissions fell by 19% compared to 2013/14.

The Gas Transmission network's largest impact on the environment is caused by the necessary emission of exhaust gases to the atmosphere when we run our compressor units to move gas around the network. By ensuring that the volume of gas used for this purpose was at the most efficient level we were able to reduce emissions by 475 tonnes in 2014/15 compared to the previous year.

### Environmental legislation

The new EU environmental policy, the Industrial Emissions Directive (IED), places stricter controls on industrial emissions, specifically emissions of carbon monoxide and nitrogen oxide from our compressor units. This means we will have to modify or replace some of our compressor units to meet the new limits. We have funding in place for the work on some of our affected units and can apply to Ofgem for further funding for our other affected units.

During 2014/15 we continued to carry out the necessary work on the units for which we received funding. This has included work at Peterborough, Huntingdon and Aylesbury. At Peterborough and Huntingdon the Front End Engineering Design (FEED) studies are complete and work is almost finished on the conceptual design phase. Tenders have been submitted for some of the new equipment needed for the work. We have continued to progress the innovative solution at Aylesbury as described in the "Gas Transmission Our Performance 2013/14" document last year. By reducing CO levels through installing an oxidation catalyst in the exhaust stack we are able to reduce the emissions at Aylesbury to the required levels. This solution drove financial savings which will be shared with end consumers.

In 2014/15 we also continued to develop our plan to make sure our remaining compressor units comply with the IED (as detailed in the case study) before submission to Ofgem in May 2015 for their decision.

For more information on our compressor re-opener submission please visit <http://www.talkingnetworkstx.com/IED-welcome.aspx>

### Case study Engaging with our stakeholders in the formation of our IED plans

We engaged extensively with stakeholders throughout 2014/15 in the development of our plan to ensure compliance with the future phases of the IED, we wanted to be sure that our decisions provide the network our customers and stakeholders require.

We commissioned a video to clearly explain the IED legislation and its impacts. We also held 4 workshops including one where we developed a scorecard to identify our stakeholders' priorities. We used this scorecard to assess the options, and published two written consultations.

We also partnered with Oxford Computing Consultants to produce an easy-to-understand version of our network analysis tool for stakeholders. This extensive engagement resulted in stakeholders helping us to develop our plan which we will submit to Ofgem in May 2015.



# 19%

Amount by which greenhouse gas emissions fell in 2014/15

# 475 tonnes

Amount by which we reduced the volume of gas released when running our compressor units

# 17

compressor units affected by the Industrial Emissions Directive

## Environment output: future

### IED

We will continue to work with Ofgem to agree the required works at the rest of our compressor units affected by the Industrial Emissions Directive (IED) following the submission of our plan in May 2015. Once this is agreed we will be undertaking the work on these units during the remainder of the RIIO-T1 period. An extensive volume of work will be required over the remaining years of the RIIO-T1 period to deliver these plans. We must deliver this programme of works with minimal disruption to network users. To do this, most of the work will be done during the summer.

We will investigate the possibility of using new technology to make our compressor units compliant with the requirements of IED. Specifically we will undertake an innovation project to assess the possibility of using a new type of catalytic converter to reduce the NOx emissions. The completion of this project will mean we can consider using this technology to comply with future environmental legislation.

### Future environmental legislation

The Medium Combustion Plant (MCP) directive aims to improve human health and reduce the environmental impact of combustion plant. It will limit emissions from some of our smaller, older units. This legislation is likely to come into effect by 2025 with a derogation for Gas Transmission until 2030. We have 26 units that might be affected. Over the coming years we will be continuing to influence the formation of this legislation, to assess its impact on our network and to ultimately formulate our plans to ensure our affected compressor units comply.

By reducing emissions from our compressor units we are reducing emissions to the atmosphere. This results in cleaner air with less pollutants which is beneficial to human health and the safety of the public.



**Our target for the amount of gas we have to release when running our compressor units in 2015/16 is 2,744 tonnes. That's a reduction of 113 tonnes from the levels achieved in 2014/15. This equates to the energy consumed by 500 houses.**



## Customer satisfaction output: today

We will continue to work hard to improve our customer service and stakeholder engagement.

We survey our customers and stakeholders on an annual basis. Our customer and stakeholder satisfaction scores were both better in 2014/15 than in the previous year. Our stakeholder engagement score, which is assessed by an independent panel, also increased.

These increases in scores reflect the work we have undertaken in this area to improve the service we provide to our customers and stakeholders. 2014/15 saw us develop and expand our activities to increase our business-wide focus on meeting our customers' and stakeholders' requirements, including the introduction of new tools and techniques to support improvements, further training of our employees to enhance their skills and change their behaviours, and better action planning based on the feedback provided to us by our customers and stakeholders. Some examples included:

### Customer seminars

In July 2014 we held the second of our Gas Customer Seminars where customers can discuss matters that concern them. Topics suggested by customers for this year's seminar were Future Energy Scenarios, the IED, an overview of the Planning & Advanced Reservation of Capacity Agreement (PARCA) process and connecting to the NTS. The seminar brought together a variety of customers for a very informative debate. Feedback was positive and we will hold a third Gas Customer Seminar in 2015/16.

### Customer journey mapping

Over the last two years we have worked with our customers and stakeholders to map their journey through the connections process. This has helped us to understand from a customer's perspective where we can improve. We are using feedback to improve our processes and to increase customer satisfaction.

### Training/Performance excellence

Our staff are being trained to provide excellent customer and stakeholder service. The courses which are run by our Academy and split by customer and stakeholder, are tailored to different skill levels. They cover a range of models, behaviours and tips on how to provide better service to everyone we deal with. Around 500 people across our transmission businesses completed the training this year. We have also rolled out performance Excellence across the business. This embraces the principles of *lean* and introduces new ways of ensuring that customers and stakeholders are at the heart of our business; particularly when improving our processes to remove waste and efficiently deliver what our customers want from us.

# 7.6

Score we received out of 10 for customer satisfaction compared to 7.2 in 2013/14

# 7.9

Score we received out of 10 for stakeholder satisfaction compared to 7.8 in 2013/14

# 6.25

Score we received out of 10 for stakeholder incentive reward, 0.5 above our score achieved in 2013/14

## Customer satisfaction output: future

Listen. Discuss. Act: Our approach to customer and stakeholder management will continue to be embedded into our business.

We are continuing to roll out our customer and stakeholder strategy as we further understand our stakeholders' needs and incorporate their drivers for change into the way that we work with them. One of the focus areas has been increasing capability of staff and we will continue this in the future, also making sure that we review our Academy courses and continuously improve their content to maximise their effectiveness.

It is important that we strive to continue to make improvements for our customers to ensure that we provide the best possible service. One of the ways we have been doing this is to review our process for surveying our customers and stakeholders. We will survey a wider range of customers and stakeholders than ever before and in a more timely manner, whilst ensuring that we are asking the right questions to each group. We will also improve the way we use the output of the surveys to drive specific, measurable actions that can be clearly monitored and embedded across the business. This will ensure that we deliver the improvements our customers and stakeholders have told us are important to them. Themes for improvement from our 2014/15 surveys included producing plain English guidance and supporting documents for our technical material, carrying out end to end process mapping, improving communication and accessibility and holding more seminars and forums to discuss customer issues.

### Changing Focus

Other improvements will see us review the way we currently collate and share experience of our customer and stakeholder interactions across our business. Not only will this reduce waste and facilitate more productive interactions for us, it will ultimately lead to better experiences for our customers and stakeholders when they deal with us, reducing the points of contact within our business and reducing potential duplication of work, therefore making better use of their time.

### Energising seminars

We hold a variety of forums and seminars across the business and we are going to utilise these much more effectively in the coming year. We will seek feedback on our activities, make sure that we are telling our customers what they want to hear and give them the opportunity to raise any issues and challenge us.



### Continuing on our journey

*"This has been an exciting year that has seen us further develop our customer and stakeholder ambition and strategy for the transmission business. It's very encouraging to see our stakeholders agreeing that things are improving."*

**Nicola Medalova –  
Head of Customer and  
Stakeholder for Transmission**



## Customer connections output: today

A connection to the gas National Transmission System is essential for our customers to either input or offtake gas from the network.

Several factors influence the case for developing gas power generation projects in the UK. For example, the decline of world coal prices means the requirement for gas generation is lower. Our Future Energy Scenarios (FES) indicate that this is likely to change from 2018/19 when more gas fired power generation will be needed as a backup for renewable generation.

### Planning and Advanced Reservation of Capacity Agreement (PARCA) development

The arrangements previously in place for customers to secure a gas connection to the system and purchasing space or 'capacity' on it were not aligned and posed a barrier for our customers to connect. Additionally, the implementation of the 2008 Planning Act meant there were long delays which added to customers frustration. Throughout 2014/15 we have been working closely with our customers to develop a solution to overcome these issues. This resulted in PARCA being implemented in April 2015. This will align the connections and capacity processes and will reduce the required timescales.

### System maintenance

We have to maintain our network so the system remains safe and reliable. Customers want us to minimise the disruption to them during maintenance. In 2014/15 we reduced the number of maintenance days to 4 and completed the work in that time. We did this by better aligning our maintenance work with customer outages. We also found new ways of carrying out maintenance activities to minimise customer impact.

### Forecasts

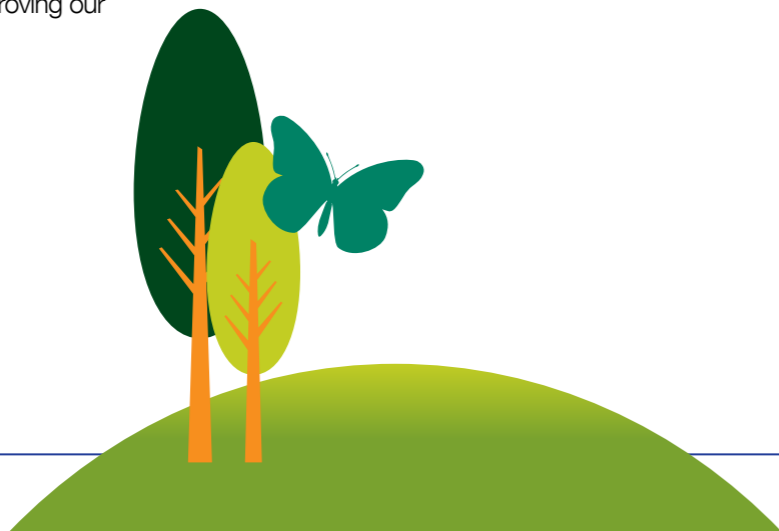
We publish national forecasts of gas demand over a range of timescales. This helps the industry balance its supply and demand positions. In 2014/15 our demand forecasting error was the lowest in five years. We did this by improving our process and modelling capabilities.

**7\***  
gas connection applications received in 2014/15 (\*Two were subsequently withdrawn)

**3\*\***  
gas connection offers accepted in 2014/15 (\*\*An additional two are outstanding)

**1**  
Planning and Advanced Reservation of Capacity Agreement applications received in 2014/15

For more information on our system operator incentives please visit <http://www2.nationalgrid.com/uk/industry-information/gas-system-operator-incentives/>



## Customer connections output: future

Changes in the energy sector mean that customers can now see value in connecting to the gas National Transmission System (NTS) in a way they couldn't before. In particular, customers developing indigenous gas supplies (such as biomethane or shale gas) might want to connect to the NTS because of its location or because of the benefits of connecting to a higher pressure network. We must be flexible because traditional NTS connections don't meet the needs of these new customers. These newer sources of gas will be increasingly important because of Government policy on emissions reductions and the commitment to increase the energy security in the UK.

### Case study Network Innovation Competition (NIC) Project CLoCC (Customer Low Cost Connections)

This year's NIC, Project CLoCC, aims to reduce both the cost and time of connecting to the NTS. We'll do this by challenging every aspect of the connection process, focusing on three key areas:

- **Optimised commercial processes** designed to meet the requirements of non-traditional customers
- **Innovative connection solutions** tailored to the needs of unconventional gas connections at high pressure. This includes a global technology watch, concept designs and a field trial of the proposed engineering connection solution(s)
- **A visual online platform** to help the customer. The innovative tool will use geographical data, network analysis and customer information so customers can compare and assess suitable options for an NTS connection.

By developing these three key areas, Project CLoCC aims to provide a service that will make it easier to connect the unconventional gas market. Our target is to deliver connections within a year and cost less than £1m.





# How to contact us and other useful links

If you have questions or opinions on this performance summary, please get in touch with us:

## Email:

[talkingnetworkstransmission@nationalgrid.com](mailto:talkingnetworkstransmission@nationalgrid.com)  
or using the feedback link on our Talking Networks website  
[www.talkingnetworkstx.com](http://www.talkingnetworkstx.com)

For further details on our total spend, forecasts and incentive performance and how this affects allowances, go to [www.talkingnetworkstx.com/our-performance.aspx](http://www.talkingnetworkstx.com/our-performance.aspx) to look at the tables published there.

To find out more about customer bills and the impact of network costs, visit [www.ofgem.gov.uk/information-consumers/domestic-consumers/understanding-energy-bills](http://www.ofgem.gov.uk/information-consumers/domestic-consumers/understanding-energy-bills)

For information on our innovation activities, visit <http://www2.nationalgrid.com/uk/our-company/innovation>

To see how this fits in with how the energy network powers your home, visit [www.ofgem.gov.uk/network-regulation-riio-model/energy-network-how-it-works-you](http://www.ofgem.gov.uk/network-regulation-riio-model/energy-network-how-it-works-you)

To find out more about our electricity business and the market we operate in, visit <http://media.nationalgrid.com/factsheets/>

For further information on our financial performance, visit our dedicated website at <http://investors.nationalgrid.com/>

This document contains certain statements that are neither reported financial results nor other historical information. These statements are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended.

These statements include information with respect to National Grid plc's financial condition, its results of operations and businesses, strategy, plans and objectives.

Words such as 'anticipates', 'expects', 'should', 'intends', 'plans', 'believes', 'outlook', 'seeks', 'estimates', 'targets', 'may', 'will', 'continue', 'project' and similar expressions, as well as statements in the future tense, identify forward-looking statements. Furthermore, this document, which is provided for information only, does not constitute summary financial statements and does not contain sufficient information to allow for as full an understanding of the results and state of affairs of National Grid plc and its subsidiaries, including the principal risks and uncertainties facing National Grid plc, as would be provided by the full Annual Report and Accounts, including in particular the Strategic Report section and the 'Risk factors' on pages 173 to 176 of National Grid plc's latest Annual Report and Accounts. Copies of the most recent Annual Report and Accounts are available online at [www.nationalgrid.com](http://www.nationalgrid.com) or from Capita Registrars. Except as may be required by law or regulation, National Grid plc undertakes no obligation to update any of its forward-looking statements, which speak only as of the date of this document. The content of any website references herein do not form part of this document.



## Smell gas?

Please call the 24-hour gas emergency line: 0800 111 999

