

System Operator Incentives

Supporting Information 2022/23

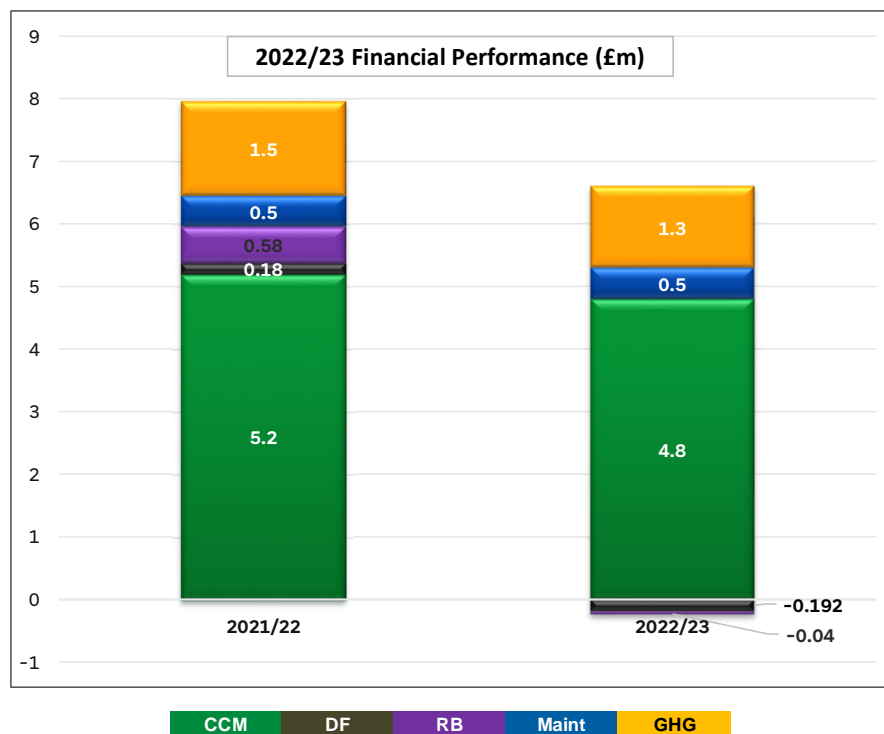
Version 1: August 2023



Introduction

- This report provides a summary of the National Gas Transmission (NGT) Financial Incentive Schemes and performance for Financial Year 2022/23, this summary has been created to provide greater transparency following feedback received through responses to consultation papers and in industry events.
- The incentive arrangements covered in this report are part of the RIIO-2 Framework, which started in April 2021 and will conclude at the end of March 2026.
- The incentives covered are Capacity Constraint Management, Demand Forecasting D-1, Residual Balancing, Maintenance and Greenhouse Gas Compressor Emissions.
- NGT is subject to licence obligations and the incentives are regularly reported to and monitored by Ofgem.
- These incentive arrangements are designed to minimise the overall cost of system operation leading to benefit for consumers, to influence our behaviour to minimise the impact on the market, to consider environmental impacts and to support the efficient operation of the wholesale gas market.

2022/23



Incentive	Licence Benchmark
Capacity Constraint Management (CCM)	<p>Target = £8.5m</p> <p>Value = +£5.2m to -£5.2m</p> <p>NGT retain 14% of non-obligated capacity (entry and exit) revenue under the incentive.</p> <p>Sharing Factor = 39% NGT, 61% to industry.</p>
Demand Forecasting D-1 (DF)	<p>Target = error of 8.35mcm/day adjusted up to a further 1mcm dependent upon the extent of additional short cycle storage injection capability connected to the NTS.</p> <p>Value = +£1.5m to -£1.5m</p>
Residual Balancing (RB)	<p>Linepack Performance Measure (LPM)</p> <p>Target: 2.8mcm/d change.</p> <p>For the shoulder months (Oct, Nov, Feb & Mar) = 2.8mcm/d to 5.6mcm/d.</p> <p>Price Performance Measure (PPM)</p> <p>Target: 1.5% of System Average Price (SAP).</p> <p>Combined Annual Value = +£1.6m to -£2.8m</p>
Maintenance (Maint)	<ol style="list-style-type: none"> Changes – minimisation of changes initiated by NGT – Target 7.25% of the total maintenance plan days in the year. Use of Days – (VO) – Target 11 days. Use of Days – (ex VO) – Target align 75% of customer impacting. <p>Value = +£0.5m to -£1.5m</p>
Greenhouse Gas Emissions (GHG)	<p>Target = 2,897 tonnes.</p> <p>Venting reference price = £2,104/tonne.</p> <p>Value = +£1.5m to -£1.5m</p>

Performance

Incentive	22/23 performance
Capacity Constraint Management	Achieved annual incentive revenue of £4.81m which includes £0.17m (post sharing) of incentive revenue from sales of £3.1m of Non-Obligated Entry and £1.33m (post sharing) of incentive revenue from sales of £24.3m of Non-Obligated Exit capacity. This was due to increases in short term NTS Entry & Exit Capacity sales primarily at the Bacton NTS Exit Point. In January a constraint occurred at Milford Haven and this resulted in locational actions to address the constraint. A total of 4.1mcm was sold at MH and a corresponding buy action of 1.8mcm was taken to maintain system balance.
Demand Forecasting D-1	The weighted average error was 8.97mcm against a target of 8.48mcm (Fixed target of 8.35mcm + storage adjuster of 0.1283mcm) resulting in a revenue loss of £192k. This was due to a challenging year with significant volatility in gas prices leading to challenges in forecasting, including storage changes. Additionally we saw high winds impacting both power and supply forecasting performance.
Residual Balancing	LPM: Achieved a daily average linepack performance of 2.5mcm/d over the year, compared to the 2.8mcm/d incentive target. PPM: The average price spread for residual balancing trades was 4% of SAP compared to the 1.5% target. Overall incentive loss of £42k due to volatile and challenging market experienced throughout the year coupled with a higher-than-average number of trading days.
Maintenance	The Summer Maintenance Period (Apr 22 – Oct 22) closed at the end of October 2022 with 125 days of customer impacting works of which 116 days were aligned. For the use of days non-VOs, we ended with 95 days of customer impacting work with 87 days being aligned and achieving maximum revenue of £500k as more than 75% of jobs were aligned. For the use of days (VOs), no changes initiated by NGT with all VOs being aligned with customer outages.
Greenhouse Gas Emissions	A total of 2,286 tonnes was vented. This represents 79% of the annual venting allowance and resulted in an incentive revenue of £1.28m. An 11% increase from last year in part due to high LNG supplies coupled with an increase in compressor usage to support customer requirements which included exports to the EU via interconnectors. Compressor running hours increased by 45%.

Financial Incentive Schemes

An overview of structure

Entry and Exit Capacity Constraint Management (CCM)

Purpose

The CCM Incentive is designed to incentivise NGT to maximise the release of capacity on the network and minimise constraint management costs through the efficient and economic operation of the NTS. We therefore release as much capacity as possible, develop effective constraint management strategies and make economic and efficient NTS investment and planning decisions.

Description

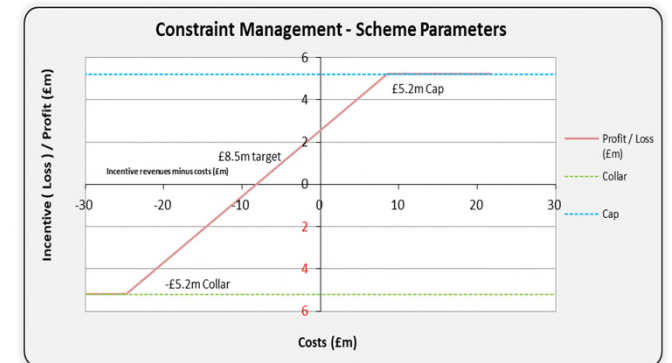
In the instances where NGT believes that customers' flow requirements cannot be accommodated; constraint management actions may be undertaken in accordance with the Uniform Network Code and System Management Principles Statement. These actions fall into two categories:

1. Operational constraint management – actions taken by NGT to manage day to day issues on the network. Examples of such day-to-day issues include mismatching supply and demand patterns, unavailability of compression or maintenance outages; and
 2. Investment constraint management – actions taken by NGT to manage longer term issues associated with provision of capacity on the network. Examples of such longer-term issues include where physical reinforcement is not delivered within the contracted timescale.
- There are a suite of commercial tools available to manage Capacity constraints, which include but are not limited to:

Scheme Parameters

Incentive revenue or penalty based on annual actual net costs being higher or lower than the incentive target and is based on a calculation that incorporates the RIIO-2 “Sharing Factor” which is 39%; the remaining 61% is passed back to Shippers.

- Target = £8.5m
- Value = +£5.2m to -£5.2m
- (14% scaling for revenues from non-obligated capacity sales)
- Sharing Factor = 39% NGG, 61% Shippers



Residual Balancing (RB)

Purpose

In our role as the Residual Balancer, we may take residual balancing actions to balance supply and demand on the gas day by buying or selling gas via the On the Day Commodity Market (OCM).

The residual balancing scheme incentivises us to balance supply and demand on the gas day and to minimise the impact we have on the market when we deem it necessary to trade gas to balance the network.

There are two elements to this incentive scheme

1. Price Performance Measure (PPM)
2. Linepack Performance Measure (LPM).

Description

PPM: Evaluates the impact NGT has on the market in its residual balancing role by measuring the price range of our trading actions compared to the System Average Price (SAP). This incentivises the NGT to minimise the impact it has on market prices. The PPM is the difference between the highest and lowest price NGT trades on a day, divided by SAP. The target or breakeven point is a price spread of 1.5% of SAP.

LPM: Minimise any changes between opening and closing NTS linepack over a Gas Day (i.e. to achieve a balance between the supply and demand on each Gas Day). This is intended to ensure that any system imbalances are resolved on the relevant day, so that the costs of resolving any imbalances are targeted to those responsible for the imbalance. The target or breakeven point is a linepack change of 2.8mcm, with a performance dead band between 2.8 and 5.6 mcm/day for the months of October, November, February and March.

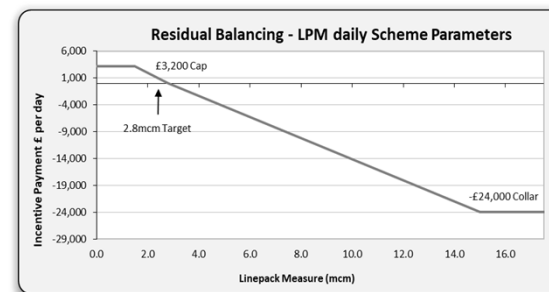
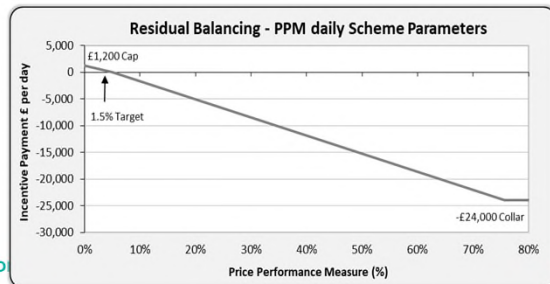
The sum of all the daily payments for the PPM and LPM under the Residual Balancing incentive are annually capped at £1.6m and collared at £2.8m.

PPM Parameters

If the PPM is less than 1.5% on a given Gas Day, then NGT receives an incentive payment up to a maximum of £1,200 per day. Conversely if the PPM is above 1.5%, then NGT incurs a penalty up to a maximum of £24,000 per day, which is the penalty for a trading range equal to 76% or more of SAP.

LPM Parameters

If the LPM is less than 2.8mcm on a given Gas Day, then NGT receives an incentive payment up to a maximum of £3,200. This maximum applies at 1.5mcm, so there is no incentive for NGT to balance the system beyond this point. Conversely if the LPM is above 2.8mcm, then NGT incurs a penalty up to a maximum of £24,000. For a single day which is the penalty for linepack movement of more than 15mcm.



Day ahead Demand Forecasting (DF)

Purpose

NGT are incentivised to publish national gas demand forecasts over a range of timescales to the industry.

These national demand forecasts are for day ahead (D-1) and for two to five days ahead (D-2 to D-5, reputational incentive only), these are a key tool for the UK gas industry in ensuring the economic balancing of gas supply and demand.

Description

NGT has an incentive breakeven target of an annual weighted average absolute forecast error of 8.35mcm/day. However, there is an adjustment to this target for the level of short-cycle storage injection capability that is designed to consider the unpredictability of demand from short-cycle storage sites. The storage adjustment is capped at an additional 1mcm/day and therefore has the potential to revise the D-1 demand forecasting target to 9.35mcm.

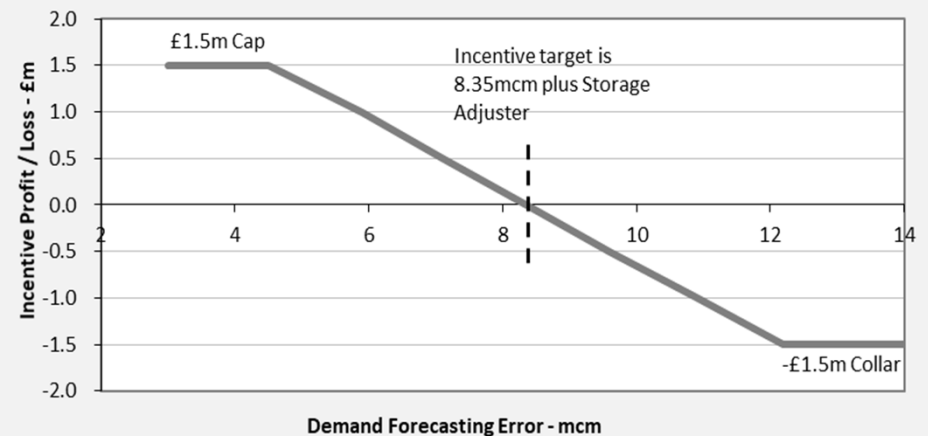
If the published demand forecast error is below the breakeven target, an incentive payment will be received, conversely, if the forecast error for any day exceeds the target an incentive penalty will be applied.

Scheme Parameters

The maximum reward that NGT can receive is £1.5m, which requires an end of year average error of less than 4.5mcm/day.

The maximum penalty under the scheme is £1.5m which requires an end of year average error of greater than 12.2mcm/day.

Demand Forecasting - Day Ahead Scheme Parameters



Maintenance (MA)

Purpose

The aim of the Maintenance incentive is to reduce the impact NGT maintenance activities have on our customers.

NGT plan maintenance activities to align with customer plans to minimise disruption to their operations. If the maintenance period has no impact on customer contractual rights, this is communicated as an “Advice Notice Day”. Where this is not possible, a “Maintenance Day” will be called. To incentivise the efficient planning and execution of network maintenance impacting customers at direct exit connections from the NTS.

The maintenance incentive is split into three scheme components:

- Use of Days - Maintenance days (Valve Operations)
- Use of Days - Maintenance days (excluding Valve Operations)

(The Maintenance Days Used incentive is designed to reduce the impact we have on our customers when we undertake our maintenance activities).

- Changes - minimisation of changes initiated by NGT to the agreed maintenance plan

(The incentive scope does not include changes which were initiated by customers, only those initiated by NGT).

Scheme Parameters

Changes - minimisation of changes initiated by NGT

Target 7.25% of the total maintenance plan days in the year.

Number of days changed is equal to or less than target, revenue is zero.

Number of days changed exceeds the target, then a penalty of £50,000 per change more than the target is accrued to a scheme collar (10 changes or more).

Downside only: Cap £0m, Collar -£0.5m.

Scheme Parameters

Use of Days - Maintenance days (VOs)

Target 11 days - Number of days used is equal to or less than target, revenue is zero.

Number of days used exceeds the target, penalty of £20,000 per day up to £0.5m (for 25 days or more above target). Downside only: Cap £0m. Collar £0.5m.

From the 12th day of change each day will result in an incentive charge of £20k up to day 36 at which point the maximum incentive loss will be realised.

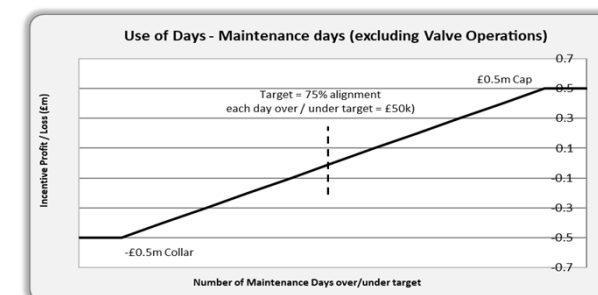
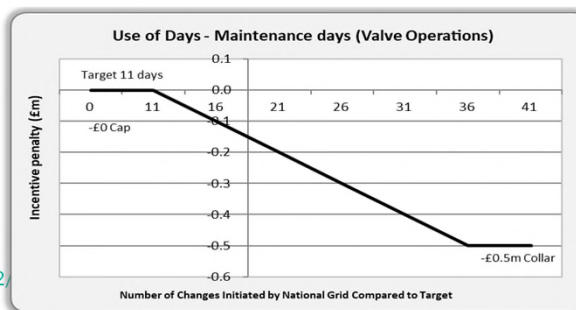
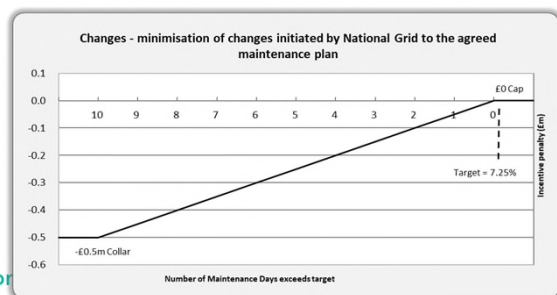
Scheme Parameters

Use of Days - Maintenance days (excluding VOs)

Align 75% of customer impacting work with customer outage on non-VO work.

75% x customer impacting days.
Upside/Downside: Cap £0.5m. Collar £0.5m.

This is a new element to the RII0-2 scheme includes customer impacting aligned works and excludes NGT VO and Maintenance Days.



Greenhouse Gas Emissions (GHG)

Purpose	<p>The aim of the Greenhouse Gas Emissions (GHG) incentive scheme is to reduce the effect of our operational activities on the environment. This is important both to us, our customers and stakeholders and society.</p> <p>The scheme incentivises NGT to make the trade-off between choosing to depressurise compressor units (venting the gas - primarily methane) or to keep units on standby, which incurs costs associated with ancillary electrical equipment (vent fans, oil pumps etc.) and a level of emissions through the shaft seal. The incentive applies to both gas and electrically driven compressors.</p>
Description	<p>Compressors are used to increase pressure in parts of the NTS and to move gas from the sources of supply to areas of demand. To undertake this activity to deliver customer requirements, we will select the Best Available Technology (BAT) in accordance with the Industrial Emissions Directive (IED).</p> <p>The need to operate an individual compressor on any given day depends on several factors, including the sources of supply and demand, the prevailing network conditions, and the need to accommodate essential maintenance, emissions testing and construction plans.</p> <p>Natural gas vented from NTS compressors results from a number of activities; Starting a compressor, Depressurising a compressor, Purging a compressor, and the leakage of gas through a seal around the shaft of a compressor.</p>

Scheme Parameters	<p>The emissions allowance under this incentive is set by Ofgem, our allowance for each year of the RIIO-2 period is 2,897 tonnes.</p> <p>For each tonne of natural gas vented over the allowance we are subject to a venting reference price payment, which is based on our NTS GT Licence formula using the latest non-traded carbon reference venting price.</p>
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