National Grid RIIO2 Incentives

September 2019

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Key principles of incentives

We believe Incentives should:

- Provide additional consumer value in the short or long term
- Have a robust baseline
- Drive improved performance in areas above and beyond business as usual obligations
- Be measurable and quantifiable
- Ensure we positively contribute to incentive performance.
- Recognise the changing landscape in determining the scheme design and target performance.
- Promote investment and innovation to unlock additional consumer value, both now and into the future (financial or otherwise).
- Be supported by stakeholders and aligned to stakeholder priorities.

RIIO-1 Incentives

Constraint management

Residual balancing

NTS shrinkage

Information provision

Demand forecasting

Maintenance

Greenhouse gas (GHG) emissions

Unaccounted for Gas (UAG)

Transportation support services (TSS)

Incentive ceased from October 2018

Operating Margins (OM)

Reputational

Retain

Reputational

RIIO-2 Incentives

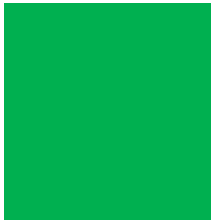
Constraint management

Residual balancing

NTS shrinkage

Demand forecasting

Maintenance



Environmental

Greenhouse gas (GHG) emissions

Information provision

Unaccounted for Gas (UAG)

RIIO2 Incentive summary

Scheme	T1 Cap and Collar	T2 Cap and Collar – current position	Our RIIO2 current position
Constraint Management	+£26.0m -£78.0m	TBC	Retain scheme, scheme design to be reviewed after completion of network capability review. Consider changes to scheme with regards to the high impact/low probability nature of scheme.
Shrinkage	+£7.0m -£7.0m	+£5.0m -£5.0m	Retain scheme with access to seasonal markets to drive further consumer savings. Subject to proposed changes to the electricity charging regime, remove the TNUoS element.
Demand Forecasting	+£20.0m -£2.5m	+£16.0m -£2.5m	Retain schemes. Make incentive tougher to achieve against by reducing the performance gradient, recognising that demand forecasting is becoming increasingly challenging. We have ruled out the possibility of using a volatility adjuster as we believe it is right for us to be incentivised on forecasting this volatility.
Maintenance	+£0.7m -£1.0m	+£1.2m -£1.5m	Retain and expand to cover the wider range of maintenance activities supported by stakeholder feedback. Recognising that the volume of planned maintenance likely to be higher.
GHG	+£0.0m -£unlimited	+£1.5m -£1.5m	Retain scheme which includes more penal rates with an upside to encourage further performance improvements. Potentially include within the broader environmental incentive package.
Residual balancing	+£2.0m -£3.5m	+£1.6m -£2.8m	Retain scheme. Make incentive tougher to achieve against by reducing the performance gradient, recognising a changing and more challenging energy landscape. Propose amending the linepack component of scheme to drive the right behaviour during seasonal transitions between winter and summer and vice versa.
Environmental	n/a	TBC	A requirement from Ofgem's May decision, across all sectors, was the delivery of an Environmental Action Plan and Annual Environmental Report. This is in the early stages of development and will be included in our consultation with stakeholders.

RIIO1 Incentive performance to date (£m)

	Incentive Year Performance (£m)					
Incentive	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Constraint management	12.6	12.6	12.6	13.3	14.2	13.8
Shrinkage	5.1	4.8	6.3	2.5	4.2	7.0
Demand forecasting	2.5	3.7	3.2	2.5	2.5	-0.7
Maintenance	1.1	0.9	0.4	0.7	0.7	0.7
Greenhouse gas	-0.5	0.0	-0.2	-1.0	-1.4	0.0
Residual balancing	1.0	1.1	1.2	1.1	0.6	1.0

RIIO2 Incentives – Round table summaries

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GHG

- Methane gas is vented as part of normal operation of compressor fleet from depressurization for maintenance and stand-down, or natural loss while the compressor is pressurised (running and standby)
- **RIIO1 incentive**: The GHG incentive means we are currently penalised for each tonne of methane emitted per annum over a target of 2,897t (CO_2 equivalent). The current scheme has an unlimited financial downside, and no financial upside for emitting less than target.
- **RIIO2 Initial position**: Retain scheme with more penal rates but include an upside and cap/collar to encourage investment and innovation to further reduce emissions. Potentially include within a broader environmental incentive package.

No Incentive (BAU)	Incentive (exceeding BAU)	Value for Consumers
➢ Venting levels driven primarily by operational requirement ➢ Environmental consideration becomes more focussed on compliance	➢ Continual review of GHG impacts of our maintenance planning and compressor strategies to focus on evolving and adapting to changing requirements ➢ Investing in innovation of processes and technology to reduce frequency of maintenance based depressurisation	➢ Reduced environmental impact

Discussion Point: Should we be financially incentivised on GHG? What is your opinion of our RIIO2 initial position?

Capacity Constraint Management

- We are currently obligated to release Entry and Exit capacity at around double peak demand (top down regime). Flows of gas at these levels cannot be physically accommodated concurrently meaning there is an inherent risk to be managed. We believe the incentive mechanism is integral to the capacity commercial and regulatory framework,. For example, the incentive encourages us to take on risk, minimise commercial actions and ensure investment decisions are balanced against risk.
- **RIIO1 incentive:** Target cost (Revenue – Costs) of £22m (in 09/10 prices) based on expected constraint costs. Cap and Collar on incentive reward +£20m/-£60m (in 2009/10 prices)
- **RIIO2 initial position:** Retain scheme, design to be reviewed after completion of network capability review. Review scheme with regards to the high impact/low probability nature of scheme. Potentially introduce a new element that removes revenue from the scheme where we scale back interruptible / off-peak capacity.

No Incentive (BAU)	Incentive (exceeding BAU)	Value for Consumers
➢ Less likely to release non-obligated capacity ➢ Tend towards more risk aversion in NGG decision making ➢ More likely that commercial decisions are made closer to real time and more frequent actions (more risk averse)	➢ More likely to take on risk in releasing capacity over and above obligations ➢ Realigning outages at cost to NGG to mitigate / manage potential constraints ➢ More likely to take on risk in key investment decisions ➢ Less risk averse in carrying out constraint management actions.	Facilitates customers being able to bring gas on and off the network when and where they want, meaning the cheapest gas can be sourced with minimal disruption: ➢ Improved quality of service ➢ Lower Consumer bills ➢ Improved safety and reliability

Discussion Point: Should we retain a CCM incentive? What is your opinion of our RIIO2 initial position

Residual Balancing

- We, as residual balancer, can enter the market and undertake trades to resolve any residual imbalance on the system. The net costs or revenues from our market balancing actions are ‘smeared’ back to Shippers via balancing neutrality. We consider the incentive to be integral to the residual balancing role and framework.
- **RIIO1 incentive:** The incentive comprises of a Linepack Performance Measure (LPM) and a Price Performance Measure (PPM). LPM drives us to balance closing to opening linepack (± 2.8 mcm/d). PPM drives us to minimise the price spread of our trades by measuring the price range of our trading actions compared to the System Average Price (SAP) (±1.5%). Cap and Collar +£2/-£3.5m
- **RIIO2 initial position:** Incentive tougher to achieve against by reducing the performance gradient, against a backdrop of a changing and more challenging energy landscape. Amend LPM for shoulder months to 5.6 mcm/d to drive the right behaviour during seasonal transitions between winter and summer and vice versa., 20% reduction in cap and collar.

No Incentive (BAU)	Incentive (exceeding BAU)	Value for Consumers
➢ Increased likelihood of trading more often to minimise risk (risk averse) with less focus of cost and effect on market of residual balancing actions. ➢ Trading strategies less likely to evolve and keep pace with a changing market.	➢ Trading activity is more strategic (less risk averse) and more likely to keep pace with a changing market. ➢ Invest and innovate in commercial insight, analysis and supporting tools. ➢ Less market intervention (we currently avoid entering the market roughly 250 days per year).	➢ we enter the market in a measured way to avoid incurring unnecessary costs for consumers ➢ More efficient, transparent and predictable management of linepack – more informed market.

Discussion Point: Should we be incentivised to balance linepack and minimise the price spread of our actions? What is your opinion of our RIIO2 initial position?

Demand Forecast

- We provide NTS demand forecasts over a range of timescales to help the industry make informed physical and commercial decisions.
- **RIIO1 incentive:** D-1 incentive has an annual average absolute error forecasting accuracy target of 8.5 mcm/d in 2018/19 and for D-2 to D-5 the target is 13.7 mcm/d. Cap & collar D-1 +£10/-£1.5m D-2 to D-5 +£10/-£1m
- **RIIO2 initial position:** Retain scheme. Make incentive tougher to achieve against by reducing the performance gradient, recognising that demand forecasting is becoming increasingly challenging. Caps for each scheme reduced to £8m, collars as-is.

No Incentive (BAU)	Incentive (exceeding BAU)	Value for Consumers
➢ Less likely to evolve and invest in our demand forecasting tools and processes. ➢ Increasing demand volatility more likely to impact forecast accuracy.	➢ Invest in our demand forecasting models, processes, intelligence, tools and procured services. ➢ Increased focus on forecasting demand volatility	➢ Industry can make informed decisions enabling savings to be passed on to consumers. ➢ Reduces barrier to entry for smaller industry participants. ➢ Increased forecast accuracy likely to benefit whole sale market prices.

Discussion point: Does your organisation use our demand forecasts? What level of demand forecasting accuracy do you value? Should we be incentivised to improve our demand forecasts? What is your opinion of our RIIO2 initial position?

Shrinkage

- As NTS Shrinkage Provider, NGG is responsible for managing the end-to-end service of forecasting, accounting for, procuring, and supplying energy to satisfy the daily NTS shrinkage components. The associated costs are collected from shippers via the commodity charge
- **RIIO1 incentive:** We are incentivised to deliver shrinkage energy at a cost lower than an agreed annual Target Shrinkage Cost. There is a financial reward for delivering below target cost and penalty for exceeding. There is a cap and collar of +/-£7m p.a. with a 45% and 55% sharing factor.
- **RIIO2 initial position:** Retain the scheme framework. Add Seasonal products to trading options to reduce trading costs (increased liquidity), review Shrinkage Methodology, reduce cap and collar to +/-£5m

No Incentive (BAU)	Incentive (exceeding BAU)	Value for Consumers
➢ Greater focus on delivery of UNC obligations and less focus on delivery of Shrinkage below target cost.	➢ Procure shrinkage energy at prices better than the target price through innovative trading strategies. ➢ Manage price risk by buying energy using forward contracts ➢ Minimise TNUoS charges by developing compressor running strategies, whilst still meeting customer needs. ➢ Invest in market analysis to inform trading strategies.	➢ Reduced cost of shrinkage passed through to customers and ultimately end consumers.

Discussion point: Should we be incentivised on Shrinkage energy procurement? What is your opinion of our RIIO2 initial position?

Maintenance

- We must periodically carry out maintenance on the NTS and publish a planned maintenance schedule. Where the work requires customers to cease or reduce offtake flows, we may 'call' one or more 'maintenance days'.
- **RIIO1 incentive: Changes scheme** – target maximum number of planned maintenance changes we initiate each year. Earnt reward £50,000 per change below target number. Penalty £50k per change over target. Cap and collar +/-£0.5m p.a. **Use of days scheme -** target of 11 maintenance days called for RVOs (Remote valve Operations). If maintenance days used is less than target, tiered reward to NGG between £15k and £25k per day, capped £0.215m. If maintenance days used exceeds the target, NGG penalty of £20k per day, collar of £0.5m
- **RIIO2 incentive:** Retain existing scheme and add target no. of "maintenance days" (10% of plan) for asset replacement and reinforcement works, +/-£20k per day variance against target, capped & collar £0.5m.

No Incentive (BAU)	Incentive (exceeding BAU)	Value for Consumers
➢ More likely to focus on UNC obligations (e.g. use our entitled maintenance days) ➢ More likely to reschedule planned maintenance activities as we focus on operational requirements	➢ Volume of maintenance in RIIO2 likely to increase from RIIO1 levels. requiring increased focus on customer impacts and alignment of plans. ➢ We continue to perform beyond our regulatory obligations.	➢ Less customers outages benefits operational costs and markets (e.g. CCGTs able to generate)

Discussion point: Should we be incentivised to align maintenance with customers and keep to published maintenance plan? What is your opinion of our RIIO2 initial position?

Stakeholder Priorities

Area	Your Ranking (1 = most important)
GHG	
Capacity Constraint	
Residual Balancer	
Demand Forecast	
Shrinkage	
Maintenance	

Discussion point: Is there anything you would add?