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RIIO-T1 Gas Transmission Workshop
5th September

Agenda

Time	Description
09:30 - 10:00	**Registration and refreshments**
10:15 – 10:30	**Introduction to the day**

10:30 – 12:00*
*includes tea/coffee break
	National Grid RIIO-T1 Business Plan & Ofgem Initial Proposals
	• Overview of key areas with specific focus on:
	  • Market Facilitation (GB & Europe)
	  • Connections & Capacity

12:00 – 13:00	**Lunch**

13:00 – 15:30*
*includes tea/coffee break
	National Grid SO Incentive Plan & Ofgem Initial Proposals
	• Overview of key areas with specific focus on:
	  • Constraint Management
	  • Maintenance

15:30	**Summary & Close**

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Stakeholder Engagement: Round 4

- This workshop provides a brief reminder on our business plan proposals that were submitted to Ofgem in March 2012 and compares Ofgem's initial proposals against our plans
- It provides an opportunity for you to **ask** questions, **share** thoughts and **develop** your opinions to enable you to respond to Ofgem's consultation, which closes on 21st September
- It also enables us to **listen** to your views, **discuss** them with you and **act** on them in delivering what you want from our network over the next decade
- The morning session will concentrate on our RIIO-T1 plan covering the Transmission Owner and Internal System Operator activities
- The afternoon session will focus on our external System Operator activities

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National Grid RIIO-T1 Business Plan & Ofgem Initial Proposals

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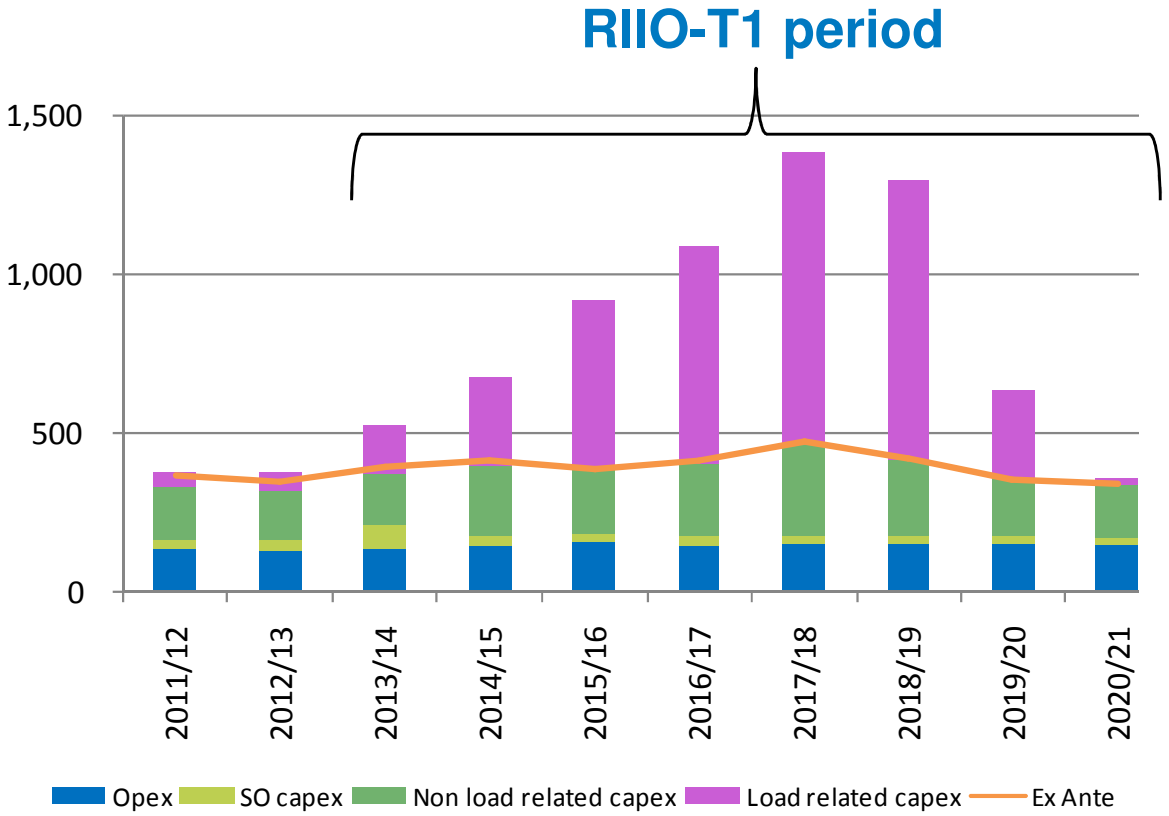
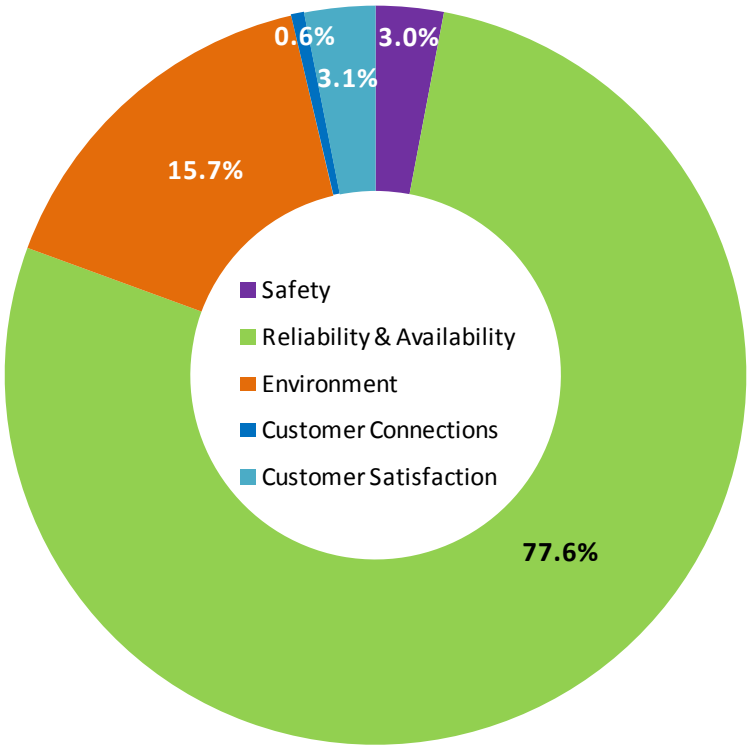
Overview of our RIIO-T1 plan

Baseline plan expenditure





Capex		Opex		'Totex' over RIIO-T1 period
£5.7 bn	+	£1.2 bn	=	£6.9 bn

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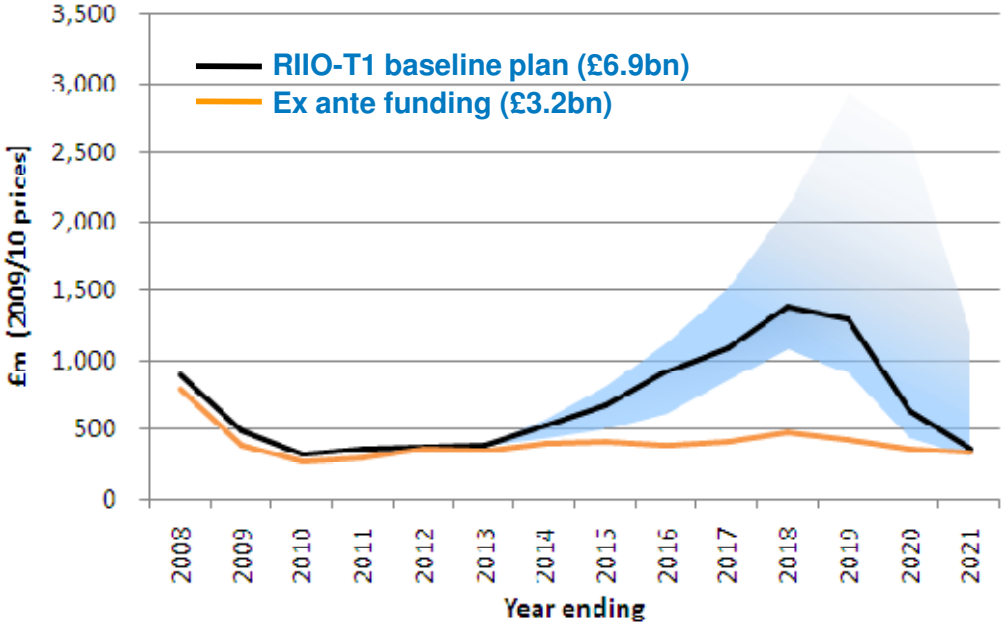
What this will deliver

What is in our plan	Planned cost	Investment Driver
39 new compressor trains (Now 37 – revised St Fergus categorisation)	- IPPC & IED: £814m - NF related compression: £197m - Incremental capacity related compression (not backed by user commitment): £406m **~£1.4bn**	15 IED 5 IPPC 6 Network Flexibility 11 Incremental Capacity
~ 800km of HP pipeline	**~£3.1bn**	~10% of pipeline investments are currently backed by user commitment
Asset Health investment	**~£0.6bn**	Maintain asset health, integrity and compliance of the transmission network. Avoiding costly replacement of primary assets by maintaining the reliability, performance and condition of secondary assets.

Uncertainty Mechanisms

Our baseline RIIO-T1 plan is only one view of the future…



Mechanisms we proposed:

- allow the regulatory control to adapt in a transparent way to an uncertain future
- ensure the RIIO-T1 package remains appropriate across a wide range of potential outcomes
- allow us to deliver desired outputs in future scenarios outside what is currently considered credible through the use of specific and targeted ‘re-openers’

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Managing risk & uncertainty

Uncertainty	Proposed mechanism
Buybacks / Constraint Management	Caps and collars on buyback exposure – as explained further in our May 2012 SO external incentives submission
Incremental Entry and Exit	Specific re-opener to set forward-looking cost targets based on incremental capacity signals
Network Flexibility	Specific re-opener to adjust allowances as requirements become clearer
Asset Health	Specific re-opener with materiality threshold for unforeseeable high-impact events
Industrial Emissions Directive	Volume-driver based on variance of scope of environmental legislation impact compared to our baseline plan
Critical National Infrastructure	Specific re-opener windows with materiality threshold
GB and EU market facilitation	Specific re-opener windows with materiality threshold
Real price effects (steel price)	Steel price tracker with dead-band and time-lag

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Comparison between our RIIO-T1 plan and Ofgem's Initial Proposals

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Comparing our plan to Initial Proposals

- Ofgem's Initial Proposals were published on 27th July
- In some areas the Initial Proposals directly reflect our RIIO-T1 business plan
- In other areas Ofgem have put forward alternative proposals
- The following slides provide an overview of the key points of comparison
- We will then focus on two areas that stakeholders have told us are of particular interest to them:
  - Market facilitation
  - Connections and capacity

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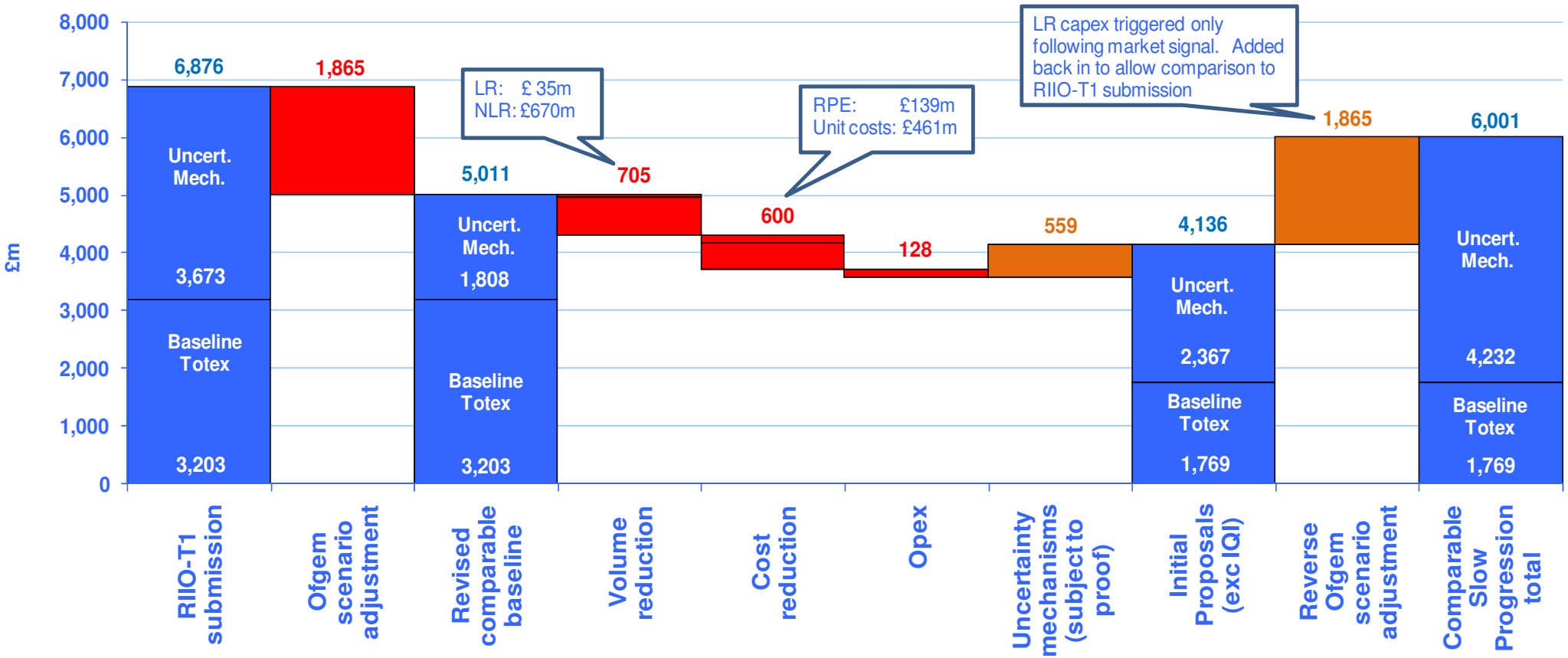
Provisional trace of allowances



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Comparison of proposals by output

	We proposed….	Initial Proposals….
Safety	Ensure compliance with relevant legislation	Ensure compliance with relevant legislation
Reliability	Maintain a sustainable level of network risk through the use of Network Output Measures, (NOMs) our asset health indices Ex ante allowance of £0.6bn for asset health expenditure, including one-off cost of £0.1bn for Feeder 9	Maintain a sustainable level of network risk through the use of NOMs £0.4bn asset health expenditure retained as ex ante allowance – Feeder 9 moved to uncertainty mechanism
Environment	Identification of 21 compressor units for removal as a result of the Industrial Emissions Directive, with up to a further 24 units potentially affected. Further investment required to meet IPPC legislation.	Funding for low utilisation compressors removed from baseline due to challenge of legislative need case, to be reassessed at mid period review. Initial IPPC investment allowed, with need case for remainder to be reviewed during period.

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Comparison of proposals by output (2)

	We proposed….	Initial Proposals….
Customer Satisfaction	Our customer satisfaction will be measured and incentivised according to the results of a customer survey	The Transmission Operators should continue to work together to develop a customer survey to measure satisfaction
Connections	Additional information (outside Mod 373 requirements) to be published in relation to the connections process Continue to develop the connections and capacity proposals to align them and mitigate against the implications of the Planning Act (2008)	Extra information should be published. It may be appropriate to have a licence obligation relating to connections. No proposals on connection and capacity processes at this time to avoid pre-judging the ongoing commercial discussions (see later slides)

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Comparison of proposals – other topics

	We proposed….	Initial Proposals….
Unit costs	Unit costs based on assessment of historical expenditure	Material reduction on both compressor and pipeline unit costs
Real Price Effects	An uncertainty mechanism to track the price of steel above or below the real price effects worked into baseline plan	No uncertainty mechanism and reduction in real price effects factored into baseline plan
Market facilitation	Funding market facilitation activities on ex ante basis and socialising cost	Fund Licence obligated activities only, with any additional services funded on commercial basis
SO capability enhance-ments	Enhancements to SO capabilities to facilitate efficient operation of the NTS as flow patterns change in a decarbonised energy sector	Majority of funding removed from baseline for such capability enhancements, with no proposal for an uncertainty mechanism.
Finance package	Cost of equity 7.5% Gearing 55% Baseline capitalisation rate 57% Incremental capitalisation rate 90%	Cost of equity 6.8% Gearing 62.5% Baseline capitalisation rate 53% Incremental capitalisation rate 90%

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Any questions?

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Market Facilitation

Objectives of this session

- To highlight:
  - Market facilitation elements within our submission
  - Impact of Ofgem's initial proposals in this area
- To provide sufficient context to:
  - Understand your views in these areas

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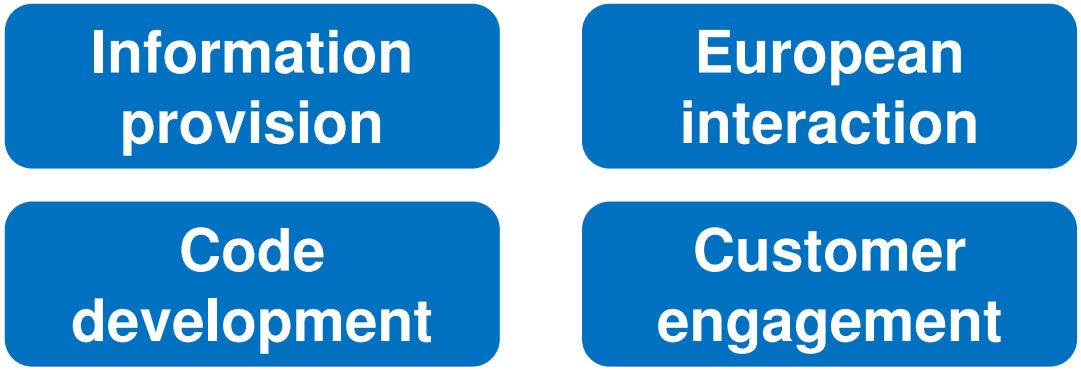
Market facilitation context

- Market facilitation encapsulates:



- Drivers for increasing activity in the RIIO-T1 period include:
  - European harmonisation and code developments
  - Information provision requirements requested by our stakeholders
  - Responding to changes in the energy industry
- As a result we included higher workloads in our submission – mainly due to European code development
- Due to uncertainty in code implementation we also proposed a mechanism flex funding to actual costs incurred (opex and capex)

Initial proposals and impacts

INITIAL PROPOSALS

Reduction of expenditure to levels spent in 2010/11

Mid period (2017) review of outputs, no other uncertainty mechanism

Directly bill customers for activities above license requirements

Want us to play full part in European developments

OUR VIEW

Proposals could be seen to incentivise:
1) Deferral of any changes for as long as possible
2) Minimisation of activity to less than current offering

Direct billing could be discriminator, disadvantaging those less able to pay

How do we fund European interaction?

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Questions for attendees

- What are your observations on Ofgem's initial proposals?
- What are your views on future workload in this area?
- How do you think the proposals in this area could impact you?
- Do you value the market facilitation services we currently offer?
- What are your thoughts on proposed direct billing of any activity above license requirements versus socialisation?
- Would you support an uncertainty mechanism in this area?

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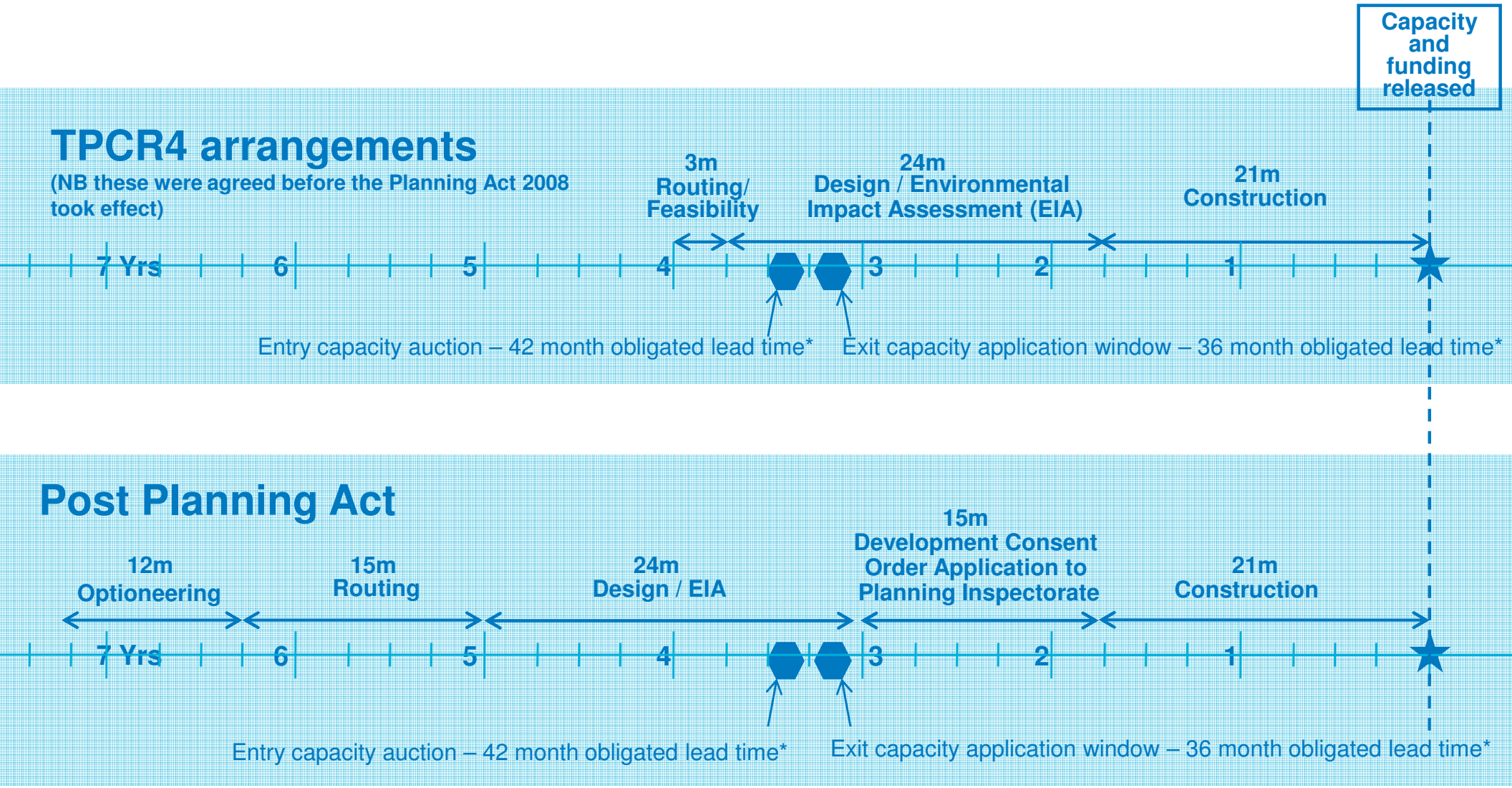
Connections and Capacity

Talking Networks

The issue - Capacity delivery timescales where major reinforcement required



*Entry obligated lead time applies from auction and exit obligated lead time applies from October following capacity allocation

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Proposed Regulatory changes

- Existing revenue drivers are removed from the licence:
  - New funding arrangements will be set on an “as and when required” basis
    - calculated using agreed Methodology & Unit Cost Library;
- Obligated lead-times to release incremental capacity (for both entry and exit) are reduced to Y+2 (24 months from October capacity allocation):
  - This will allow default of 2 build seasons to deliver capacity from formal signal;
  - With appropriate incentive around earlier/later release, which will provide flexibility to meet user requests.
- Introduction of a reasonable endeavours obligation to drive efficiency in the pre-planning stages.

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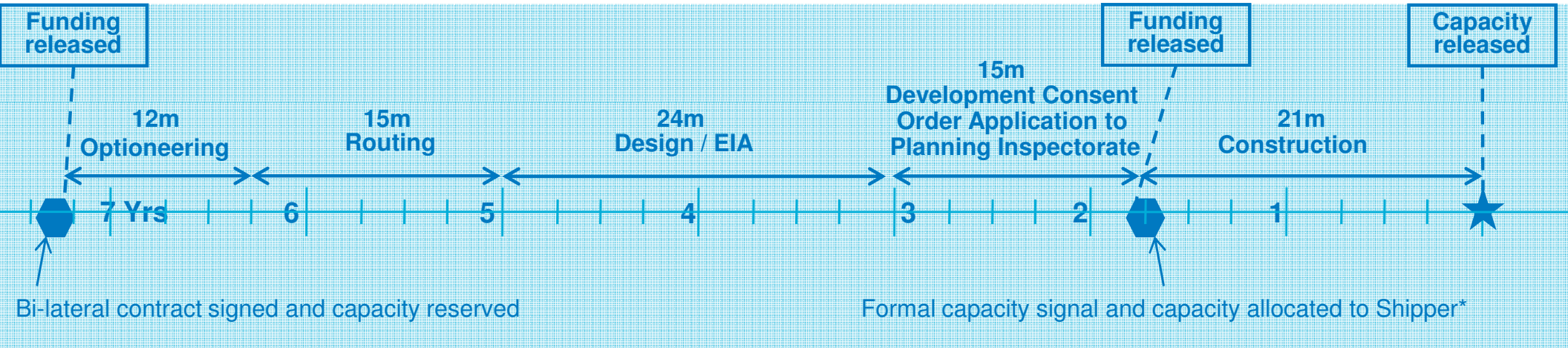
Proposed Commercial changes

- Entry and Exit application processes for baseline (including substitution and non-obligated) will remain unchanged
- Entry and Exit incremental application process will be based on the existing ad-hoc QSEC and ad-hoc exit enduring processes
- All customers requiring incremental capacity will need to enter into a bilateral contract to underpin the specific project timelines and the user commitment points;
- Aligns with the Mod 0373 connections process such that the same trigger is used where possible.

Our response – proposed new timeline to be delivered by regulatory and commercial changes



*Obligated lead time is 24 months from formal capacity signal to capacity delivery

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Ofgem proposals….

- Roll over existing arrangements until commercial changes can be agreed
  - Maintenance of 36* (exit) & 42 (entry) month lead times
  - Provision of Permits allowance for year one
  - Setting of unit cost allowances ahead of incremental signal
- No proposal on future regulatory regime to avoid pre-judging commercial discussions

* 36 months from October following incremental exit capacity signal

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Any questions?

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External System Operator Business Plan Proposals

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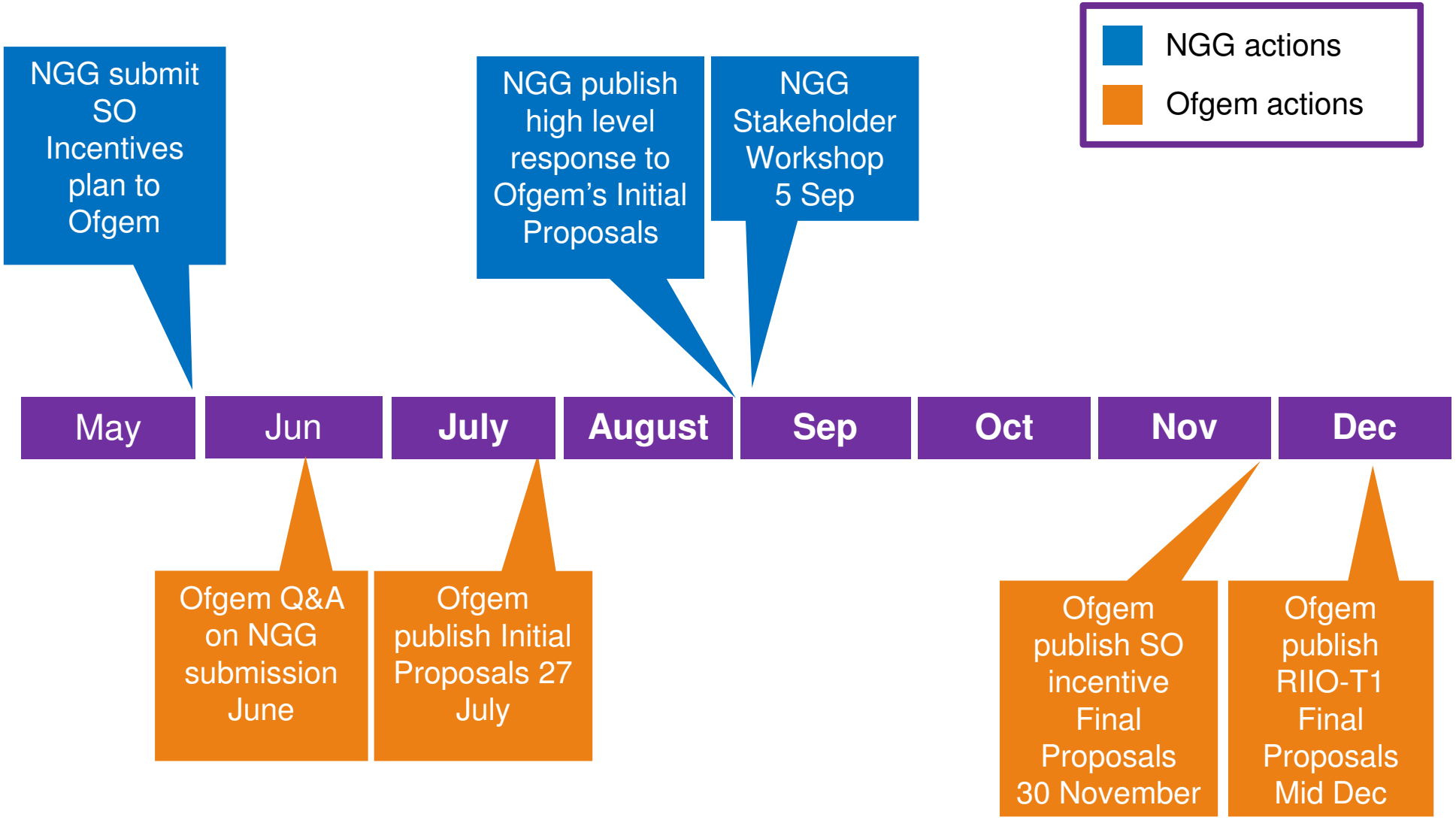
Gas System Operator (SO) incentives

Introduction & Background



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Objectives of this Session

- To highlight
  - The key points of the proposals in National Grid's SO External Incentive Plan
  - Where our proposals differ to Ofgem's Initial Proposals
  - Our initial views
- To provide sufficient context to inform industry responses to Ofgem's Initial Proposals consultation
- To understand your views

Proposed SO external incentive areas

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Cost Incentives (measure: costs incurred)	Financial Incentives (measured on non-cost outputs)	Reputational Incentives (requirement to report on performance)
NTS Shrinkage	Residual Balancing	Information Provision (including website data publication)
	Demand Forecasting	
	Greenhouse Gas Emissions (Venting)	Unaccounted for Gas
Constraint Management (Entry & Exit)	Maintenance scheduling & Use of maintenance days	Operating Margins promoting competition (market facilitation & reporting obligations)

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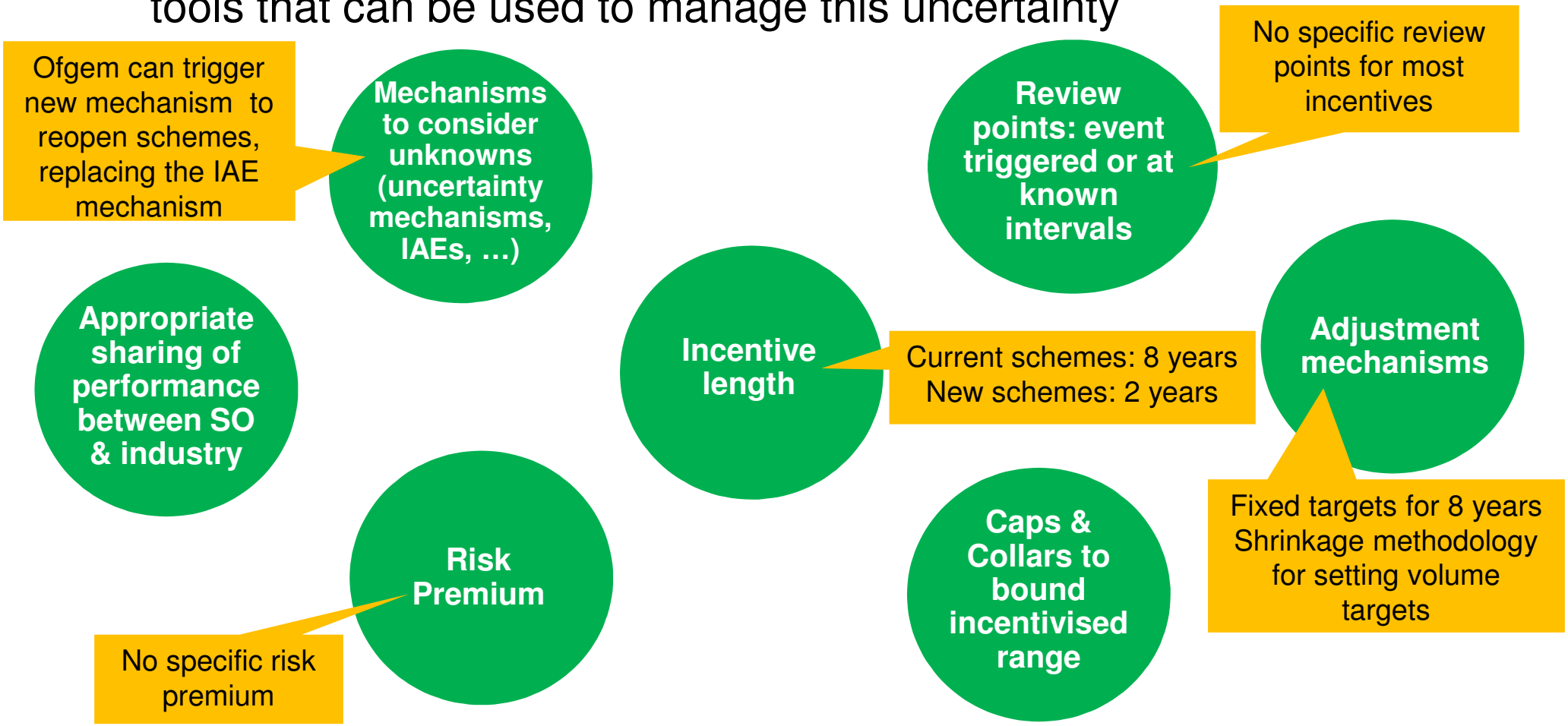
Managing Risk & Uncertainty

- Market dynamics and framework are subject to significant change and uncertainty over the period
- To ensure that incentives remain appropriate there are a range of tools that can be used to manage this uncertainty



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Constraint Management

Talking Networks

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Overview

- Within the March 2012 RIIO-T1 submission (Managing Risk and Uncertainty Annex) we outlined our proposed approach regarding constraint management
- We updated this in Annex A (Buybacks/Constraint Management) to May 2012 SO External Incentives submission
- At a high level, we proposed:
  - Single scheme to apply across Entry and Exit;
  - Retention of cap/collar within incentive scheme;
  - Consideration of RIIO-T1 plan when setting relevant target for scheme.

Current arrangements regarding constraint management

- For entry capacity, we have two schemes:
  - Entry capacity operational buyback ($EnCBBOIR_t$)
  - Entry capacity incremental buyback ($EnCBBIIR_t$)
- For exit capacity, we have five schemes:
  - Constrained storage target ($ExCIT_t$)
  - Long-run contracting incentive ($ExLRCIR_t$)
  - Incentive revenue from NTS non-obligated exit capacity ($ExNOCIR_t$)
  - Cap on incremental buy-back exposure ($ExXSIBBC_t$)
  - NTS exit flat capacity buy-backs ($ExBBCNLR_t$)

Our proposed approach

- We proposed simplifying the existing arrangements such that we would include two schemes within the licence:
  - A single constraint management scheme covering entry and exit capacity
  - A separate transmission support services scheme
- Due to the dynamic nature of the system, constraints can be managed by a combination of actions at entry and exit
- Therefore combining the two schemes ensures that NGGT has the appropriate incentive framework to ensure this is achieved in the most cost effective manner.

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Approach for constraint management

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Target determination

- Our proposal to determine the appropriate annual constraint management target is to consider two different, but complimentary approaches;
- The target will be a combination of what can be set ex-ante and what will be considered as part of application of specific uncertainty mechanisms, so will be calculated as follows:

Constraint management target	=	Ex-ante operational constraints	+	Ex-ante investment constraints	+	Incremental operational constraints	+	Incremental investment constraints
		(1)		(2)		(3)		(4)

- Note that the target does not include the impact of, as yet, un-triggered uncertainty mechanisms which may have an impact through commissioning or other operational actions

Target determination (2)

- Target is made up of:

	Funded ex-ante in RIIO-T1 settlement	Driven by uncertainty mechanism
Operational constraints Driven by the inherent level of risk on the network which results from: • changing flow conditions from existing supply and demand capabilities • unplanned maintenance • residual risk relating to the application of the uncertainty mechanisms	***1*** Ex-ante operational constraint management	***3*** Incremental operational constraint management
Investment constraints Driven by investments proposed in our TO investment plan relating to: • construction activities (such as pipeline tie-ins) • commissioning activities (such as in-line inspections & compressor commissioning)	***2*** Ex-ante investment constraint management	***4*** Incremental investment constraint management

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Target determination (3)

- What does the table on the previous slide mean in practice?
  - The “Operational constraints” row is the ongoing risk on the system
  - The “Investment constraints” row is a level of additional risk for a predefined period of time
  - The “Funded ex-ante” column relates to investments which we’re asking to be included within the agreed baseline revenue allowance for the RIIO-T1 period, so can be considered now
  - The “Driven by uncertainty mechanism” column relates to changes in constraint costs which result from one or more of the uncertainty mechanisms being triggered.

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Target - Effect of investment

- In relation to provision of Incremental capacity, we are proposing that the agreed methodology statement for calculation of revenue driver allowances would include the relevant allowance to cover constraint risk during construction and commissioning:
  - This would be for a defined period of time (Box 4 in the table).
- Additionally, where build alone was not the efficient solution, the methodology would propose:
  - The application of a factor of 80% (as per TPCR4 precedent) for a contractual solution;
  - Or could propose that a step change is made to the constraint management target (if additional/reduced on-going risk is felt to be economic answer) (Box 3 in the table).

Target – Effect of other UMs

- Additionally, consideration of an appropriate adjustment to the constraint management target should be made when other uncertainty mechanisms are triggered, such as:
  - Network Flexibility
  - Asset Health
  - Industrial Emissions Directive (IED)
  - Critical National Infrastructure (CNI)
  - GB & EU market facilitation

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Proposed performance measure

- We proposed that the performance measure would be based on the existing operational entry capacity scheme, i.e. the net of costs less revenues:

Constraint Management Performance Measure = **Relevant Costs** - **Relevant Revenues**

- Where costs include (changes to current arrangements shown in blue italics):
  - Costs relating to the buying back of entry *or exit capacity* (including the costs of forwards or options)
  - *Costs relating to accepted offtake reduction offers*
  - Costs relating to locational buy actions
  - Costs relating to any turn-up or turn-down contracts

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Proposed performance measure (2)

- And revenues include (changes to current arrangements shown in blue italics):
  - Sale of on-the-day firm entry capacity
  - Sale of interruptible entry capacity
  - *Sale of NTS off peak exit capacity*
  - Sale of non-obligated incremental firm entry capacity
  - *Sale of NTS non-obligated exit capacity*
  - Overrun charges (both entry *and exit*)
  - Locational sells
  - Physical Renomination Incentive (PRI) charges
  - *From specific Users overrunning and causing a cost at another exit point (as per the ExBBNLR$_t$ term currently within the licence)*

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Analysis of constraint risk

Background

- A detailed risk model has been developed to automatically determine if the NTS has sufficient capability to cope with a wide range of supply and demand patterns
- Network capability figures have been derived using the Simone network analysis software
- The model has been set up to resolve constraints at entry as this allows us to use established methods to calculate volumes and costs

Background (2)

- The model uses Monte Carlo simulation techniques (@Risk) to calculate the likely levels of constraint volume and the number of constraint days in each month of the year
- Modelling for the March submission was done assuming an intact network (i.e. no unplanned outages)
  - Based on analysis of the 2012/13 and 2020/21 years
  - Additionally, we considered the impact of the IED programme identified in the TO plan on expected constraints

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Costing assumptions in model

- The model can be set up to choose how the constraints are resolved and priced:
  - Case 1: an assumption that 100% of the constraints identified are resolved by buyback actions and that the price of these is 1p/kWh
  - Case 2: an assumption that 25% of the constraints identified are resolved by locational sell actions and 75% buyback actions (again using the price of 1p/kWh)
  - Case 3: an assumption that 50% of the constraints identified are resolved by locational sell actions (but again that only 50% of these actions also require a corresponding locational buy) and 50% buyback actions (again using the price of 1p/kWh). Note, locational actions have been priced relative to an assumption for SAP
- Modelling results presented in the March submission were based on Case 3

Updates from March 2012 submission

- The model has been enhanced and now includes three different elements:
  - Intact network – This model assumes an intact NTS and uses the methodology described in the March submission
  - Compressor outage model – This model builds on the model described in the March submission which included the impact of IED/IPPC compressor outages. The model now also includes the impact of unplanned compressor outages
  - Pipeline (inline inspection) model – This new model forecasts the impact of feature inspections resulting from ILIs (inline inspections) on the entry/ exit capabilities of the NTS

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Updates from March 2012 submission (2)

- Capability modelling has been updated to include the effects of the Avonmouth replacement pipelines
- Three further years within the RIIO-T1 period have been considered and added into the model:
  - 2014/15, 2016/17, 2018/19
- For exit constraints, the costs have been separately calculated for CCGTs and Industrials
  - Assume that DN sites will not be able to offer back capacity, hence pricing for DNs has not been assumed.

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Our proposal

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Scheme design - principles

- Sharing factor needs to be aligned with TO control
  - In the modelling, we have assumed 50% (investigated a 40% sensitivity)
- Target is set to be based on the modelling expected value
  - Different target in each year
- No incremental risk modelled
  - As there is no incremental entry/exit capacity to be delivered in the first 3 years

Scheme design – risk premium

- The scheme parameters were initially set to provide a neutral outcome
- However, through the debate regarding the SO external incentives, there has been discussion of the “premium” which the SO would need to take on the risk
  - this has been modelled using Sharpe ratio analysis (to capture the additional risk from the scheme compared with the RIIO-T1 TO control) resulting in
  - an appropriate adjustment being made to the target value each year to deliver the required outcome

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Scheme design – other factors (2)

- We also need to consider the interaction with other capacity obligations:
  - Given current risk for rollover year, we could suggest setting ex-ante parameters for 3 years
  - However, we could agree to set for longer – if we address the risks from the March 2013 QSEC auction
- Our proposal is based on an assumption that the relevant uncertainty mechanisms we've proposed will adjust the target automatically:
  - But if this is not the case, then we would need to revisit the parameters for the scheme.

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Proposed scheme parameters

- We propose that the ex-ante target level, sharing factors and caps/collars for the constraint management scheme in each year of RIIO-T1 period are as follows:

	Annual constraint management scheme parameters (09/10 prices)							
	2013/14	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
Collar (£m)	-20	-20	-20	-20	-20	-20	-20	-20
Cap (£m)	20	20	20	20	20	20	20	20
Target (£m)	**17.9**	**24.5**	**21.1**	**27.1**	**21.6**	**18.5**	**56.7**	**24.3**
Sharing factors	RIIO-T1 efficiency rate 40%-50%							

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Approach for transmission support services

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TSS scheme

- We proposed a separate scheme to cover Transmission Support Services (TSS)
  - Within the Safety Case, these are defined as a substitute to pipeline capacity at high demands to support a 1 in 20 peak day
- We currently have two forms of remuneration
  - Long Run Contracting Incentive
  - Constrained LNG (CLNG)
- We proposed that the scheme should continue until the pipeline solution has been delivered to replace the Avonmouth LNG storage facility

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TSS scheme (2)

- We proposed the following annual target:

Incentive scheme	£m (09/10 prices)	Sharing factor
CLNG	3.33 (2012/13 annual target)	100%
Long Run Contracting Incentive	3.90 (annual target starting Oct 2012)	50%
Proposed TSS annual target	**7.23** **(RIIO-T1 period annual target)**	**RIIO-T1 efficiency rate** **40%-50%**

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Any questions?

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Shallow SO Incentives

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Shrinkage Overview

- NTS Shrinkage covers the energy consumed in operating the NTS
  - Compressor Fuel (gas and electricity)
  - UnAccounted for Gas
  - Calorific Value Shrinkage
- Incentive is an overall cost minimisation incentive
  - Target volume x benchmark energy prices = target cost
  - Actual costs incurred compared against target to determine performance (below target = profit, above target = loss)
- Up and downside incentive scheme with caps and collars
- Our proposal tailored to trading risk appetite and expected price volatility

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Shrinkage

We proposed	Our interpretation of Ofgem Proposal
Separate **procurement**, **volume** and **environmental** efficiency	Separate procurement and volume efficiency. No environmental efficiency.
Forwards procurement of forecast volume at **9 month forward price benchmark**	Forwards procurement of forecast volume at 9 month forward price benchmark
Volume variance from forecast at **month ahead price benchmark** with allowance for within-day swing	Volume variance at week ahead negating need for swing allowance
Shrinkage Methodology to derive volume targets and swing allowance	Shrinkage Methodology to derive volume targets only. Requirement to consult prior to Final Proposals
50% **sharing factor**, +/- £10m annual **cap/collar**	45% sharing factors, cap/collar to be determined

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Residual Balancing Overview

- Residual Balancing is the gas trading actions taken by the SO to maintain the physical balance of the NTS at the end of the gas day
- The incentive scheme seeks to ensure that:
  - Linepack change is minimised in order to ensure appropriate allocation of costs between Users; and
  - SO residual balancing trades have a minimal impact on the market price
- Two measures
  - Linepack change target (opening vs. closing linepack change)
  - Price spread target for trades (highest vs. lowest priced trade)
- Up and downside incentive scheme with daily caps and collars
- Overall annual cap and collar

Residual Balancing

NGG Proposal

- Maintain existing structure: price and linepack measures
- Targets indexed to market volatility (p/th) & imbalance
- Mid point review
- Linepack exceptional event mechanism
- Value calculated from market benchmark

Ofgem's Initial Proposals

- Price and linepack measures but may consider cost incentives in future
- Price measure as a % of SAP
- Fixed parameters (as now) for 8 years
- Fixed valuation (as now)

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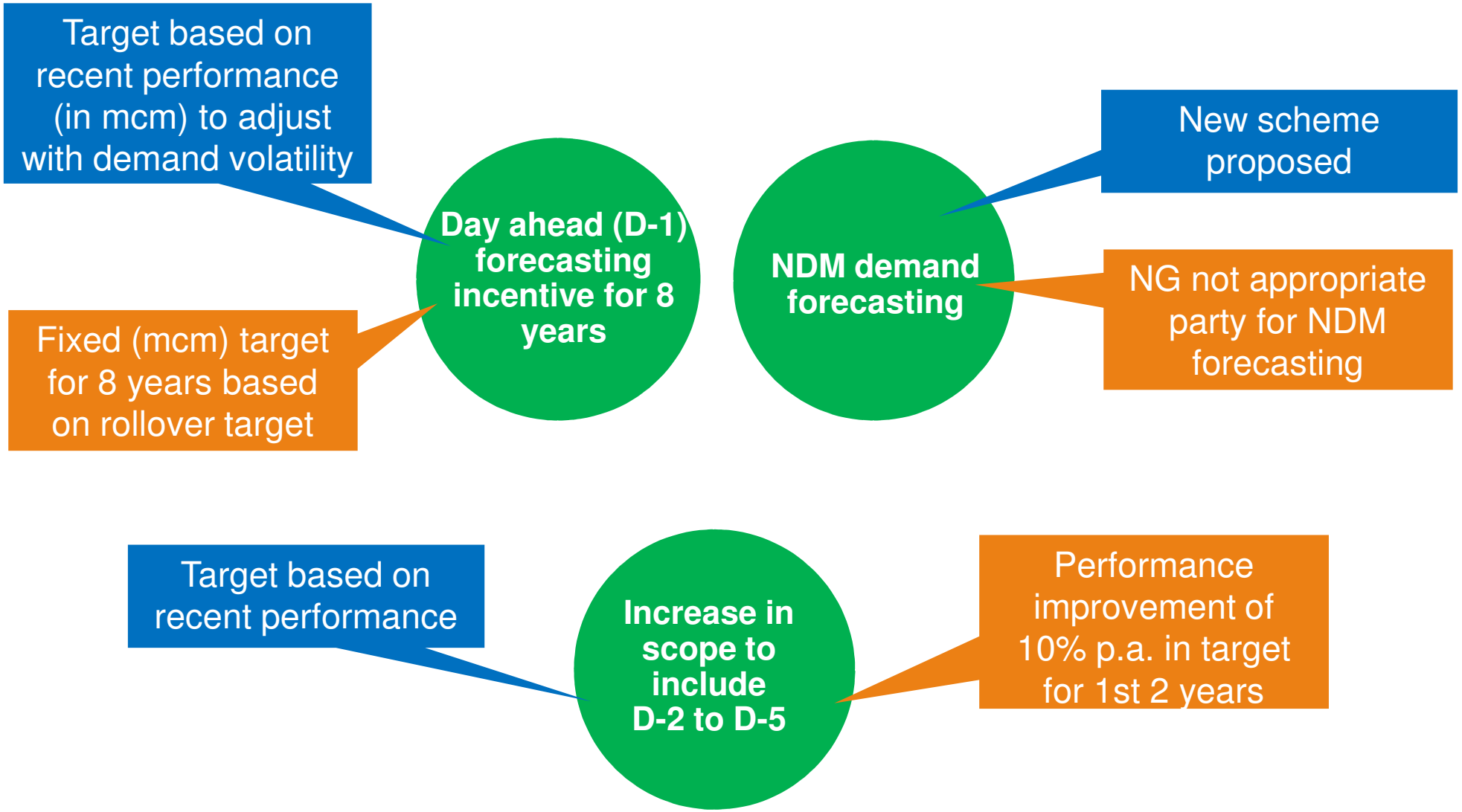
Demand Forecasting Overview

- Information provision function – NTS demand forecast provided at various points prior to the gas day
- Incentive operates in respect of the forecast provided on the previous day at 13:00
- Accuracy of forecast (compared to actual demand) determines incentive revenue
- Up and downside incentive scheme with cap and collar

Demand Forecasting



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Greenhouse Gas Emissions Overview

- Quantities of natural gas are vented during the normal operation of the NTS
- Methane (the major component of natural gas) is a potent Greenhouse Gas
  - Majority (~75%) of current venting occurs in the operation of compressors
  - Work ongoing to identify measurement from other sources of venting and abatement techniques
- Incentive scheme applies in respect of venting from compressors
- Comparison of outturn venting to a target determines incentive revenue
- Up and downside incentive scheme with cap (at zero emissions) and no collar

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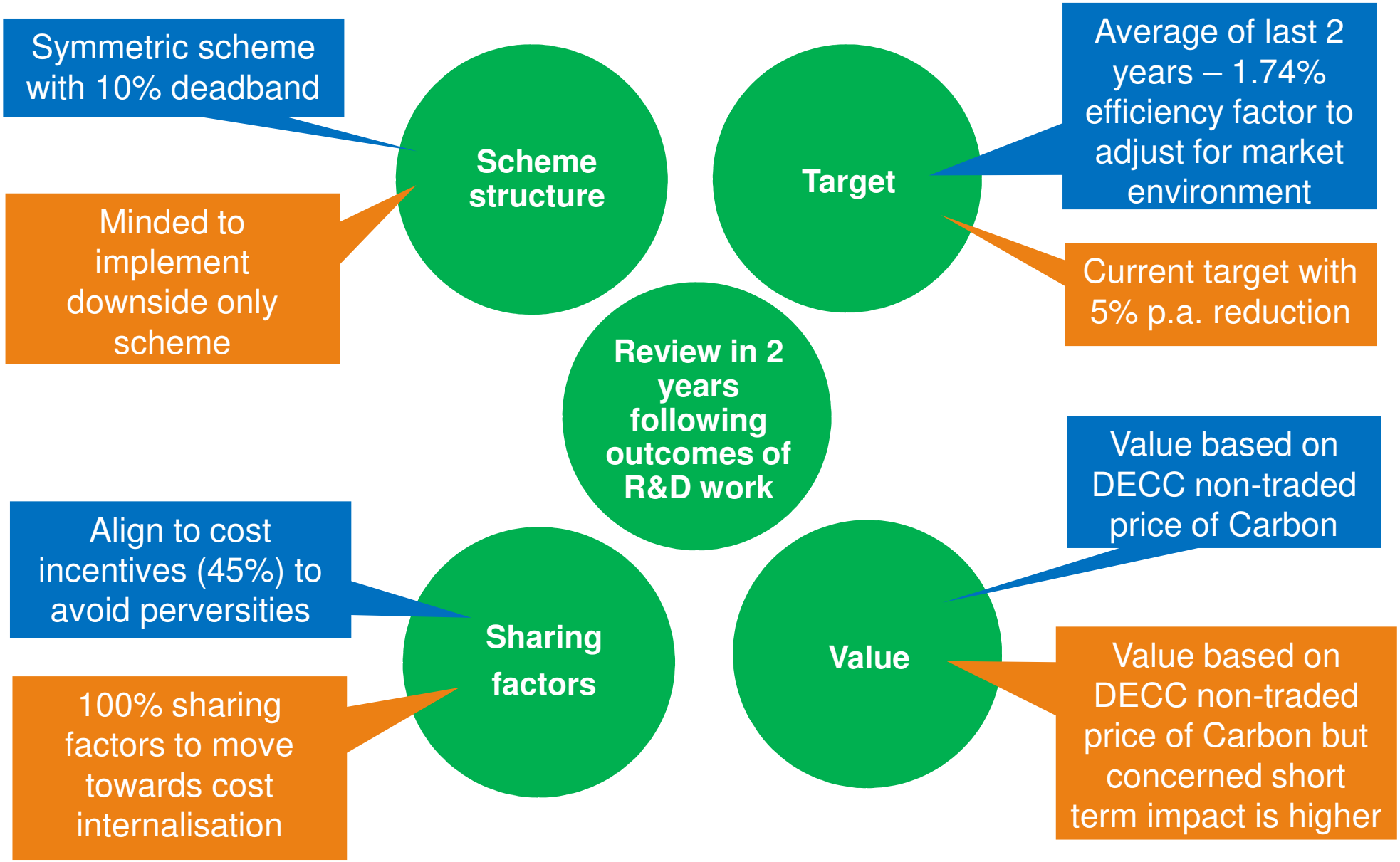
Greenhouse Gas Emissions



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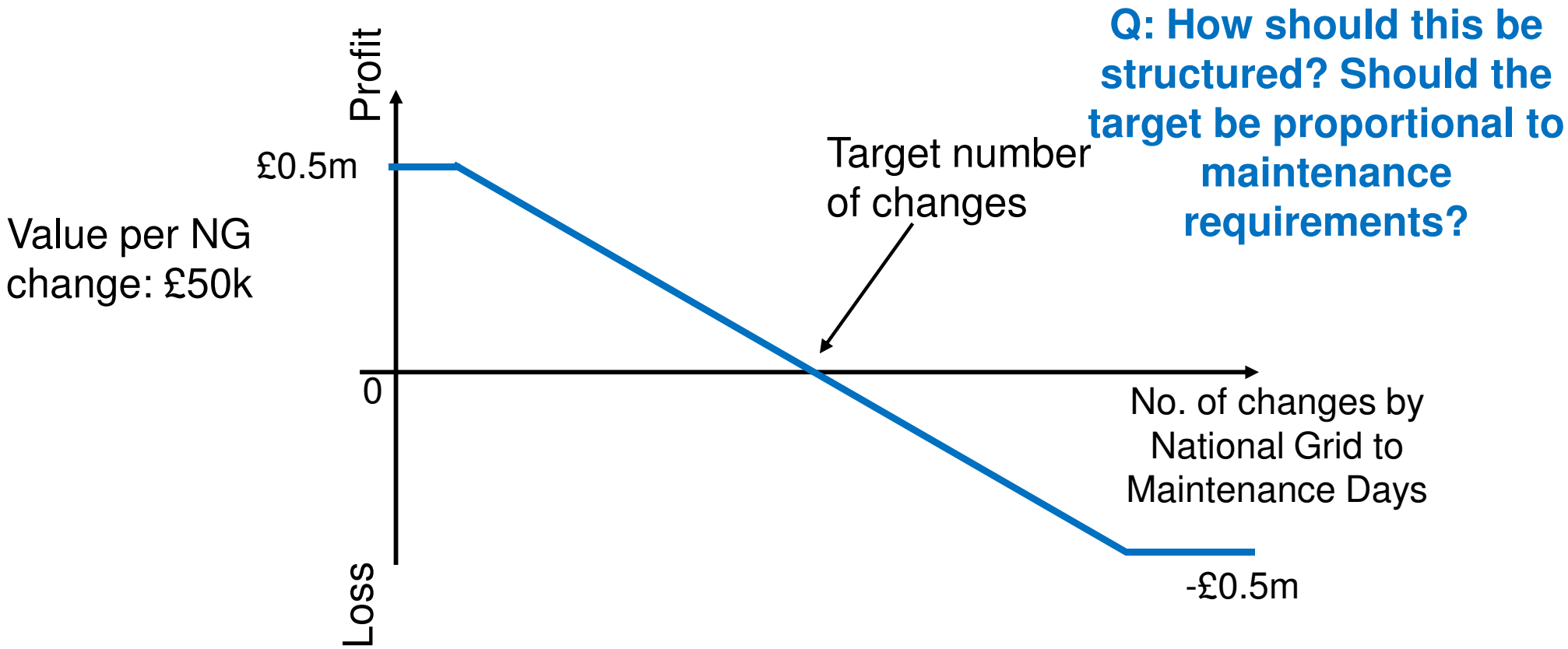
Maintenance and Outage Planning Overview

- Maintenance is an essential function to keep the network safe, fit for purpose and operating in an efficient and economic manner
- Stakeholder feedback revealed a desire for greater levels of flexibility in planning and undertaking this activity
- New incentives & processes proposed to promote flexibility and encourage efficient planning:
  - Earlier and better communication of our outage needs to affected parties to enable better alignment of outages;
  - Financial incentive to incentivise good performance to minimise the number of our changes made to the Maintenance Day programme;
  - Financial incentive to use an efficient level of Maintenance Days; and
  - We also offer services to affected parties allowing them to pay the incremental costs of working flexibly outside normal working practices where this can be accommodated

NG Changes to Maintenance Days



Q: How should this be structured? Should the target be proportional to maintenance requirements?

Q: Would this incentive drive valued behaviours?

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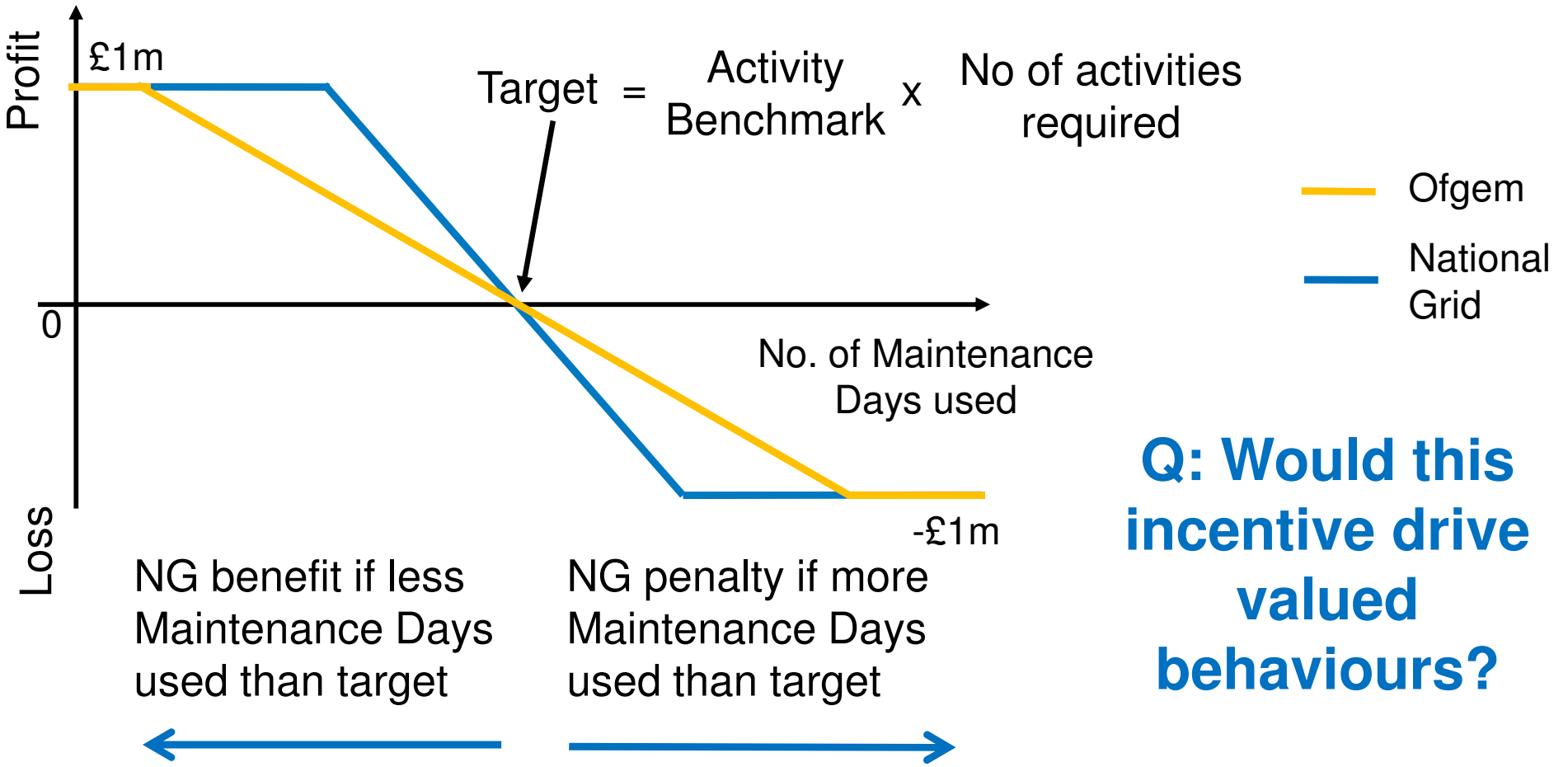
Maintenance Days Use



Q: Would this incentive drive valued behaviours?

Value per NG change: £20k

Q: What are your views on the relative value of changing & using maintenance days?

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UnAccounted for Gas Overview

- UAG is the energy remaining unallocated after accounting for
  - All NTS measured inputs and outputs
  - Own Use Gas
  - CV Shrinkage
  - Change in NTS linepack
- Principally caused by measurement discrepancy at entry or exit points: meter tolerance or meter error
- Whilst National Grid has a role to play, it has a low level of control as it does not own or operate the majority of the metering installations
- Previous financial incentive removed in April 2012 due to
  - Low level of National Grid control over drivers
  - Difficulties in identifying an appropriate performance benchmark

UnAccounted for Gas (UAG)

NGG Proposal

- Reputational incentive similar to existing licence obligations
  - Data centred investigations
  - Witnessing of meter validations

Ofgem's Initial Proposals

- Reputational incentive similar to existing licence obligations
  - Data centred investigations
  - Witnessing of meter validations
- New obligation to enable stakeholders to investigate UAG causes
- Lead industry working group

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Operating Margins Overview

- Safety Case requirement to reduce the likelihood of an emergency
- Gas ‘availability’ and ‘utilisation’ service procured to maintain pressure in the NTS
  - In the period following operational stresses prior to market response (e.g: supply failure); or
  - For the purposes of orderly rundown of the NTS in a Network Gas Supply Emergency
- Procured via storage, LNG importation, supply increase and offtake reduction services
- Current financial scheme compares procurement costs to a target to determine incentive revenue
- Symmetric scheme with cap and collar

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Operating Margins (OM)

We proposed	Our interpretation of Ofgem Proposal
Pass through of OM costs pending completion of internal OM review	No financial incentive pending conclusion of National Grid's OM Review
Potential for future financial scheme following OM review	
Replace existing licence condition with reputational incentive to report on facilitation of competitive market for OM provision	Update existing licence condition to require promotion of competition in the procurement of OM services

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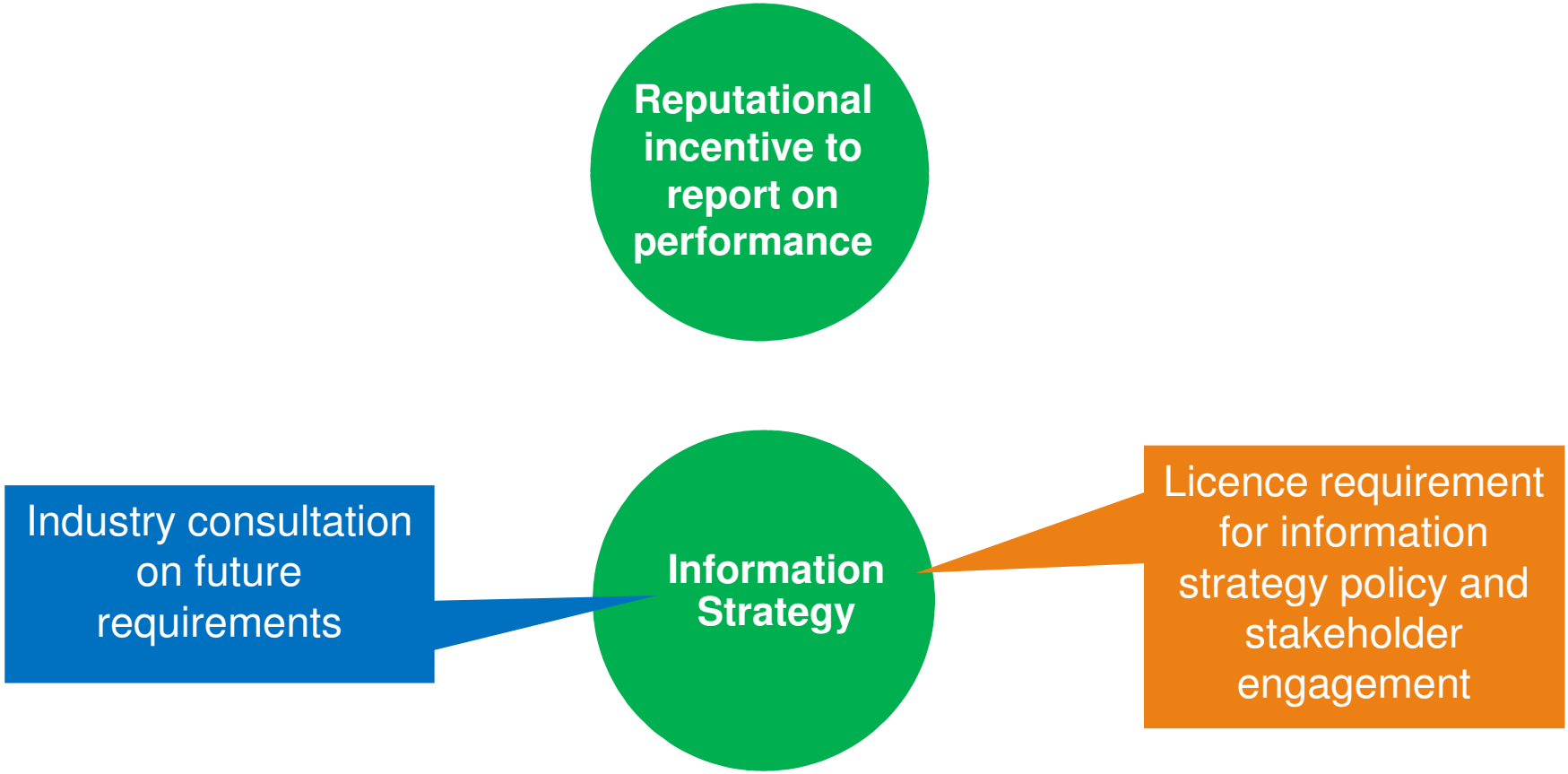
Information Provision Overview

- In the context of the SO role, this currently covers the Operational data provided to the market via the National Grid website
- Current financial incentive measures the availability and update timeliness of key information published on the website compared to benchmarks in order to determine incentive performance
- Up and downside incentive scheme with cap (at 100% timeliness and availability) and collar

Information Provision



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Summary

- We consider that appropriate incentives can deliver benefits to industry by aligning our financial performance with delivering value
- We stand by our proposals which deliver:
  - A fair balance of risk & reward
  - Symmetrical incentive schemes to reward good performance and penalise under-performance
  - Appropriate adjustment mechanisms and review points
    - To ensure that incentives focus on those areas we can forecast and control
    - To minimise windfall gains and losses
  - Specific re-openers to account for specific uncertainties e.g. major framework changes driven by EU

Useful Information

- Our SO External Incentive Plan is available at:

  http://www.nationalgrid.com/uk/Gas/soincentives/docs/

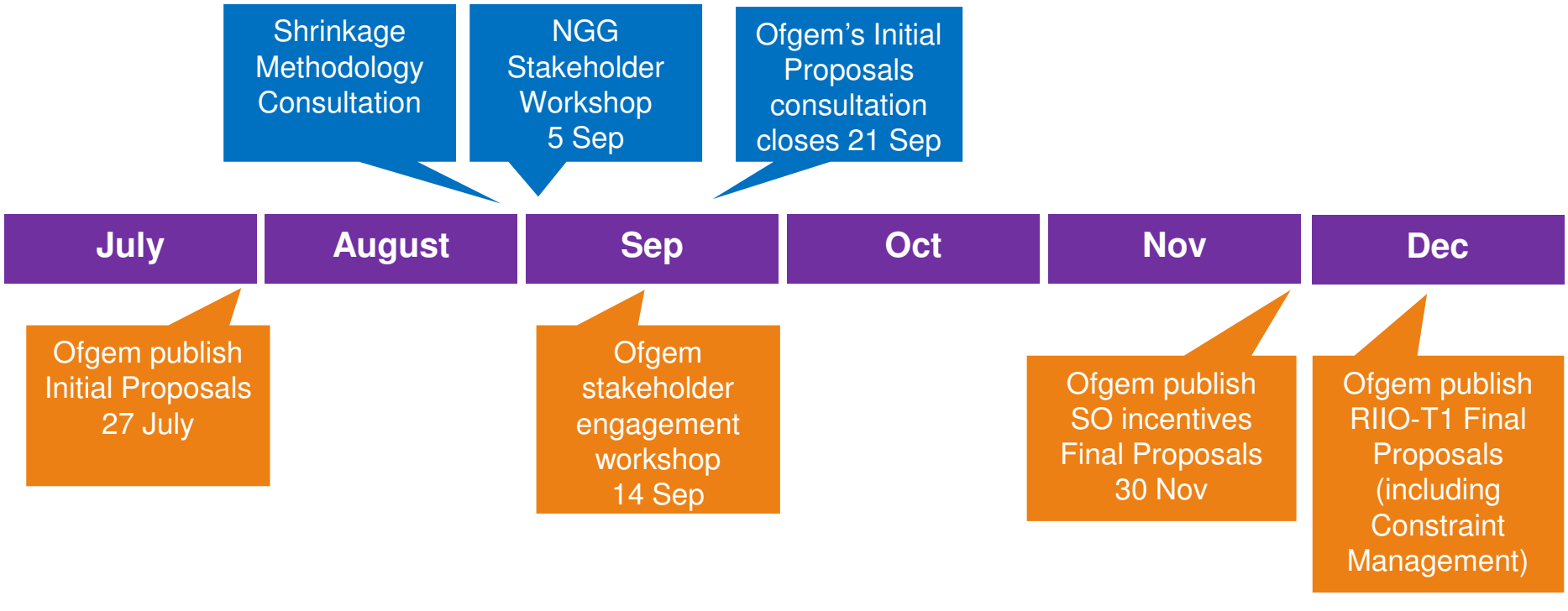
- Ofgem's Initial Proposals & appendices are available at:

http://www.ofgem.gov.uk/Markets/WhlMkts/EffSystemOps/SystOpIncent/Pages/SystOptIncent.aspx

	National Grid SO External Incentive Plan	Ofgem's Initial Proposals
Shrinkage	Paragraph 183	SO Incentives Appendix paragraph 5.3
Residual Balancing	Paragraph 297	SO Incentives Appendix paragraph 4.51
Demand Forecasting	Paragraph 375	SO Incentives Appendix paragraph 4.98
Greenhouse Gas Emissions	Paragraph 490	SO Incentives Appendix paragraph 4.17
Maintenance	Paragraph 531	SO Incentives Appendix paragraph 4.111
UnAccounted For Gas	Paragraph 267	SO Incentives Appendix paragraph 4.75
Operating Margins	Paragraph 445	SO Incentives Appendix paragraph 5.24
Information Provision	Paragraph 611	SO Incentives Appendix paragraph 4.86
Constraint Management	Annex A – Buybacks / Constraint Management	RIIO-T1 Initial Proposals – Outputs, Incentives & Innovation Supporting Document Chapter 3

Next Steps

- Our response to Ofgem's Initial Proposals will be published on our website (www.nationalgrid.com/uk/Gas/soincentives)
- Please respond to these consultations to ensure your views are taken into account
- We would welcome further discussion: juliana.urdal@nationalgrid.com or soincentives@nationalgrid.com



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CLOSE

Talking Networks