

The background features a large, white, 3D-style arrow pointing from the left towards the right. The arrow is set against a blurred background of mechanical gears, with a blue gear on the left and a white gear on the right. The overall color palette is light and airy, with soft blues and whites.

# **TPCR5 – Safety and reliability outputs working group**

25 August 2010

## Agenda

- Introductions
- RIIO and the framework for setting outputs in TPCR5
- Purpose of this working group (including timetable)
- Progress made to date by Ofgem and TOs
- Electricity Safety and Reliability
- Gas Safety and Reliability
- Safety and Reliability Next steps
- Congestion – Long term management
- Congestion – Short term management
- Congestion next steps

## The outputs-led framework

### OBJECTIVES

**Objective 1:** Play a full role in the delivery of a sustainable energy sector

**Objective 2:** Deliver value for money over the long term for existing/future consumers

### OUTPUT CATEGORIES

Environmental  
impact

Conditions for  
connections

Customer  
satisfaction

Safety

Reliability and  
availability

Social  
obligations

### PRIMARY OUTPUTS

Indicators to determine performance in the output categories during the price control

- There are reliability conditions in the price controls e.g. the ENS incentive

### SECONDARY DELIVERABLES

Intended to facilitate delivery of primary outputs in future price control periods

- For example, the Health Index and Load Index developed as part of DPCR5

# Considerations in setting primary outputs

**Need to also consider the principles for setting primary outputs**

## Principles guiding the development of primary outputs

**Material**

**Controllable**

**Measurable**

**Comparable**

**Applicable**

**Compatible with the promotion of competition**

**Legally compliant**

**Safety and reliability  
impacts**

**Potential to use narrow or broad outputs**

## Purpose of reliability and safety working group

- Identify and stress-test a set of primary outputs for reliability and safety to provide clarity to TOs and other stakeholders on the way that performance will be assessed and used to incentivise delivery of outcomes.
- Consider the requirement for secondary delivery indicators to provide further information on TO performance in delivering against the primary outputs.
- A key principle of RPI-X@20 is enhanced engagement with stakeholders. Therefore, working groups have been opened up to wider parties.

## Indicative programme of work

### Output categories

Customer satisfaction

Reliability and availability

Safe network services

Connection terms

Environmental impact

Social obligations

- Objective 1: review current arrangements that relate to the output category and consider recent performance
- Objective 2: consider and recommend primary outputs for each category (might be single measure or metric, or combination of measures and/or metrics)
- Objective 3: consider and recommend appropriate primary output levels (sector wide and/or company specific as appropriate)
- Objective 4: assess relative importance of primary outputs compared with other objectives - where possible make recommendations on application and level of financial incentive
- Objective 5: consider need for secondary deliverables in this category against RIIO criteria

Date (expected)	Milestone	Objectives
25 August 2010	Outputs Workshop – Safety and reliability	<ul style="list-style-type: none"> <li>• Present and obtain feedback on current arrangements, options for primary outputs and secondary deliverables identified by Ofgem and TOs during initial workshops. (1,2)</li> </ul>
September 2010	Outputs Workshop(s) – Safety and reliability	<ul style="list-style-type: none"> <li>• Further develop primary outputs and secondary deliverables for discussion at PCRf (2,5)</li> <li>• Workshop options for expected levels of performance and principles for incentivising primary outputs (3,4)</li> </ul>
October 2010	1 <sup>st</sup> Meeting of the Price Control Review Forum (PCRf)	<ul style="list-style-type: none"> <li>• Seek input from stakeholder representatives on proposed primary outputs and secondary deliverables. (2,5)</li> </ul>
Early-Mid October 2010	Outputs Workshop(s) – Safety and reliability	<ul style="list-style-type: none"> <li>• Workshop options for expected levels of performance and principles for incentivising primary outputs (3,4)</li> </ul>
December 2010	Ofgem publication – Initial strategy consultation document (including draft business plan templates	<ul style="list-style-type: none"> <li>• Define primary output metrics and indicate expected levels of performance for primary outputs (2,3).</li> <li>• Outline principles for incentivising the delivery of primary outputs (4)</li> <li>• Present preliminary view on need for and anticipated secondary deliverables (5)</li> </ul>

## Terms of Reference

**1. Not a decision-making body – a forum for discussion**

**2. Group to take ownership of deliverables, including:**

Non attributable meeting minutes

Actions to progress

Final conclusions

**3. Discussions on reliability and safety primary outputs and secondary deliverables**

**4. Meeting materials will be posted on the Ofgem website**

**5. Ofgem to chair the meetings**

**6. Discussions should cover gas and electricity transmission**

**7. Four working group meetings (25 Aug; 9 Sept; 30 Sept; 21 Oct)**

**8. Potential to speak to experienced parties outside of the working group**



## **Safety and reliability outputs – status of work by Ofgem and TOs**

- Ofgem and TOs participated in three workshops in July-August to workshop options for primary outputs and secondary deliverables for discussion with wider stakeholders.
- We will present these options at today's workshop and provide all stakeholders with the opportunity to comment and further develop them prior to the PCRf
- This workshop will not include developing a primary output around constraints. We have decided to deal with constraints in a separate workshop recognising the broader group of stakeholders and TO/SO interactions.
- The remainder of the workshop will discuss the safety and reliability outputs for electricity and gas.

## Timetable for this afternoon

- Safety & Reliability: 1.00pm - 2.45pm
- Afternoon Tea: 2.45pm - 3.00pm
- Constraints: 3.00pm – 5.00pm

The background of the slide is a composite image. On the left, there are rows of solar panels under a bright sun. On the right, a hand is shown holding a white document. In the bottom left corner, a blue gas burner is visible. The overall theme is energy and customer service.

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The background features a large, white, 3D-style arrow pointing from the left towards the right. The arrow is set against a blurred background that includes a perspective view of a road or railway tracks on the left and a close-up of a white ceramic gas burner on the right. The overall color palette is soft, with blues, whites, and oranges.

# Safety and reliability outputs

25 August 2010

## **Electricity – Safety – Primary outputs and secondary deliverables**

- Ofgem's initial view (July open letter): Operate a safe network by maintaining compliance at all times with the legal safety requirements determined and enforced by the Health and Safety Executive including those under the Electrical Safety, Quality and Continuity Regulations 2002 (ESQCR).
- Compliance is enforceable by law and reporting is required by the HSE.
- TOs have commenced work developing consolidated measures capturing incident, frequency and severity for employees, contractors and the public.

## Electricity – Reliability – Primary outputs

- TOs and Ofgem have developed a primary output where network reliability is affected by the number of and consequences of unplanned events. The equivalent metrics for DNOs are customer interruptions (CI) and customer minutes lost (CML)
- The existing TO incentive regime uses energy not supplied (ENS) for NGET and the number of incidents for SPT and SHETL for interruptions involving 3 or more customers.
- Work to date has been on developing a metric for SPTL and SHETL that captures to interruption duration as well as frequency.
- Metric needs to incorporate the delineation of responsibility between the TO, SO and DNO for the duration of interruptions.

## **Electricity – Reliability – Other primary outputs and secondary deliverables**

- Ofgem and TOs have identified several further primary outputs and secondary deliverables for reliability which are primarily captured as part of the Network Output Measures Methodology
- A workshop was held earlier today with asset management representatives from the TOs to progress the development of measures such as:
  - System availability
  - Average circuit unavailability
  - Failures
  - Faults
  - Asset Health Indices (AHI) and criticality

## Gas – Safety – Primary outputs

- NGG gas has developed a proposal for a primary output around the HSE Safety Performance Indicators (SPIs) in GB Onshore Gas and Pipelines Industry – Annual Report
- This report provides details of:
  - Terminal Flow Advice (TFA) issues for gas quality reasons
  - Maximum Operating Pressure (MOP) events
  - Distribution Network entry pressure
- The report also includes other useful SPIs such as UKOPA infringement database
  - Records any activity that either causes damage to a pipeline of pipeline coating or may be a precursor to such damage
  - Provides a framework for recording third party infringements
  - Year-on-year data to identify trends



## Gas – Safety – Secondary deliverables

- NGG has proposed using Network Output Measures developed under standard condition 13 that relate to safety.
- Network risk category addresses:
  - Security of supply
  - Safety: public safety as a result of asset failure
  - Environment
  - Finance
- Work to develop a safety subset (potential linkage to secondary deliverables for reliability)

## Gas – Potential Reliability Outputs/Deliverables

- Network Output Measures developed under standard condition 13 are relevant to network reliability:
  - Network asset condition and risk
    - Risk of failure – security of supply/safety/environment
  - Network performance
    - Performance and direct impact on reliability and cost of services delivered.
- Network capability

## Gas – Potential Reliability Outputs/Deliverables

- Exit capacity buyback
  - Exit buy-back arrangements part of enduring exit arrangements due to be implemented from 2012
  - Currently administered compensation payable to interruptible users if they are interrupted for more than 15 days in a year.
- Entry capacity buyback
  - Note: Any incentive would need to recognise that it may be economic and efficient to buy-back capacity rather than install additional transmission capacity.
- Relevant locational actions (buy or sell)

## Next steps

- Next meeting date
- Other agreed actions
- Feedback to [brett.everett@ofgem.gov.uk](mailto:brett.everett@ofgem.gov.uk)

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# Congestion outputs

25 August 2010

# Congestion

## Optimising Congestion Trade-Offs

**Two separate aspects to consider**

Long Term (build)

Short Term (manage)

## Inter-relationships

Long/Short Term

SO Incentives

SQSS Review

Connect & Manage

Reliability

## Agenda

**Long Term then Short Term**

## Purpose (from earlier)

- Identify and stress-test a set of primary outputs to provide clarity to TOs and other stakeholders on the way that performance will be assessed and used to incentivise delivery of outcomes.
- Consider the requirement for secondary delivery indicators to provide further information on TO performance in delivering against the primary outputs.



# Considerations in setting primary outputs

**Need to also consider the principles for setting primary outputs**

## Principles guiding the development of primary outputs

**Material**

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**Congestion impacts**

**Potential to use narrow or broad outputs**

## Identified Primary Output

- Congestion Costs have been suggested by Frontier as the sole primary output
- *"the key focus of the output and incentive package should be on encouraging efficient constraint management to promote value for money"* (Frontier, p.68)
- *"To achieve an efficient level of constraints, the network operator must be incentivised, broadly speaking, to alleviate constraints where the expenditure required to do so is lower than the NPV of the expected reduction in congestion costs..."* (ibid)
- Are there any other appropriate primary outputs?
- Can the primary output be incentivised, or do we need to develop secondary delivery indicators?

## Long Term Investment

- *"Alleviate constraints where the expenditure required to do so is lower than the NPV of the expected reduction in congestion costs"*
- Frontier suggest achieving this through a hybrid approach. For the Transmission Owner:
  - "Ofgem sets a long-term (say 10-year) aspiration for the target and profile for congestion costs that is consistent with the views of stakeholders*
  - ...the operator and Ofgem agree a (say, 5 year) TO price control that is expected to be sufficient to cover the cost required to fund transmission build, generation connections, etc. to meet the congestion target profile up to that point. The settlement would also include agreements on the appropriate sharing factors to apply for financial over-or-under performance, and material under-performance on delivery of the plan.*
  - ...At the appropriate break-points and/or at the next price control review, the regulator would be able to take a view on...whether the operators have made their best efforts to meet the congestion cost profile and to penalise them if they have not done so."*

## Incentivising Optimal Long Term Investment

- Stakeholder feedback on Frontier's proposal.
- Issues to consider may include:
  - Forecasting capability;
  - Proportionality of incentive compared to customer benefit of good forecasting planning and execution;
  - Proportionality of penalty compared to customer benefit of poor forecasting, planning or execution;
  - Potential to phase implementation of the recommendations

## Short Term Management

- TOs impact congestion through both:
  - Circuit availability; and
  - Circuit rating.
- SO incentive applies to Grid, but not Scots
  - Is there potential to incentivise all TOs to minimise constraint costs caused by circuit un-availability or conservative ratings?
  - How should this interact with build programs that may require circuits to be unavailable during up-rating works?

## Next steps

- Next meeting date
- Other agreed actions
- Feedback to [john.mackay@ofgem.gov.uk](mailto:john.mackay@ofgem.gov.uk)

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