ofgem Promoting choice and value for all gas and electricity customers

RIIO-T1 reliability and safety outputs working group

1 November 2010

Overview

- Introductions (09:30 – 09:35)
- Safety – Electricity and Gas (9:35 - 10:30)
- Reliability – Electricity Primary Outputs (10:30 – 11:15)
- Reliability – Electricity Secondary Deliverables (11:15 – 12:00)
- Lunch (12:00 -12:30)
- Electricity constraints (12:30 - 13:30)
- Reliability gas primary outputs (13:30 – 14:45)
- Reliability gas secondary deliverables (14:45 – 15:45)
- Agreed actions and date of next meeting (15:45 - 16:00)

Safety - Electricity

- Intent of safety outputs under the RIIO framework
  - Comply with safety legal requirements including ESQCR (Regulation 31 reports) and other HSE obligations (for example RIDDOR).
  - No additional financial incentives applied by Ofgem.
  - Secondary deliverable relating to asset health, criticality and replacement/risk priorities.
  - TOs can propose additional safety measures they consider to be in public interest as part of well-justified business plans.
- Other legislative requirements that could be included as examples of compliance?

Safety - Gas

- Intent of safety outputs under the RIIO framework
  - Comply with safety legal requirements including gas safety case, Gas Safety (Management) Regulations, Control of Major Accident Hazard (COMAH) Regulations and Pipeline Safety Regulations.
  - No additional financial incentives applied by Ofgem.
  - Secondary deliverable relating to asset health, criticality and replacement/risk priorities.
  - TOs can propose additional safety measures they consider to be in public interest as part of well-justified business plans.
- Other legislative requirements that could be included as examples of compliance?

Electricity – Primary output – areas for discussion

- Number of directly connected customers for SHETL and SPTL.
- Calculating historical and forecast ENS for planned outages and incorporating into baseline levels of performance.
- List of events relating to third party damage and emergency de-energisation
- Events triggered on adjacent systems – framework for incentives between TOs.
- ENS incentive framework including value of lost load (VOLL), revenue neutral dead-bands, use of caps and collars.

Electricity – Secondary deliverables

- Group has noted that overall risk assessment is ideal outcome to be pursued in the long term.
- This may not be achievable during RIIO-T1 and trade-off is to develop framework for the TOs to describe how risk management processes are incorporated with NOMs (asset health, criticality and replacement/risk priorities) when making asset management decisions.
- Framework should build on that applied to DPCR5 and:
  - be established up front
  - incorporate a measure of criticality
  - be objective
  - include how TOs will articulate the case for spending a marginal pound across different asset categories
  - describe the qualitative and quantitative test to be used when assessing performance
  - address over and under-delivery against agreed outcomes.

Electricity – Secondary deliverables

- TO comments on development of framework.
- Defining asset condition
  - NOMs currently use 0-2, 2-5, 5-10, > 10 remaining useful life
  - Look to develop consistency with DPCR5 definitions for asset health (new or as new, good or serviceable condition, deterioration requires assessment and monitoring, material intervention/intervention requires consideration, end of serviceable life)
  - Combine with assessment of criticality to obtain replacement priorities (risk)
- Combine with assessment of criticality to obtain replacement priorities.
- Forecasting levels of faults and failures and average circuit unreliability (DPCR5 approach).

Risk/Criticality Matrix

Health Index	Description
HI1	New or as new
HI2	Good or serviceable condition
HI3	Deterioration requires assessment and monitoring
HI4	Material deterioration, intervention requires consideration
HI5	End of serviceable life, intervention required

Criticality Index	Description
CI1	Low
CI2	Medium
CI3	High
CI4	Very high

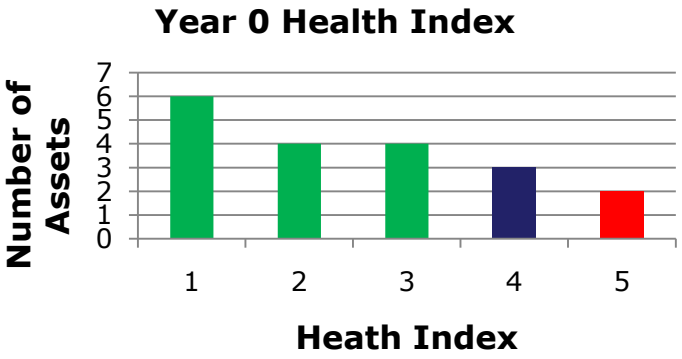
Risk Index	Description
RI1	Very low risk
RI2	Low risk
RI3	Medium risk
RI4	High risk
RI5	Very high risk

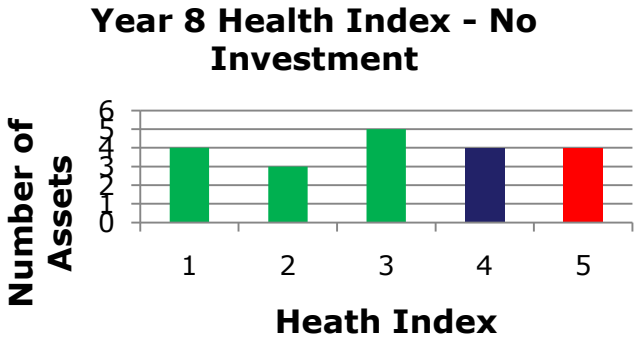
DPCR5

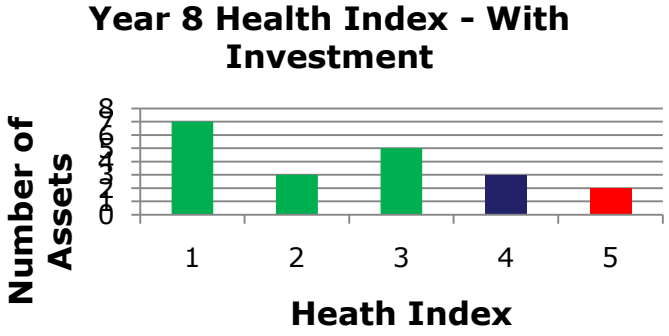
	CI4	CI3	CI2	CI1
HI5	RI5	RI4	RI3	RI3
HI4	RI4	RI3	RI2	RI2
HI3	RI2	RI2	RI2	RI1
HI2	RI1	RI1	RI1	RI1
HI1	RI1	RI1	RI1	RI1

Electricity Transmission NOMs (TPCR5)

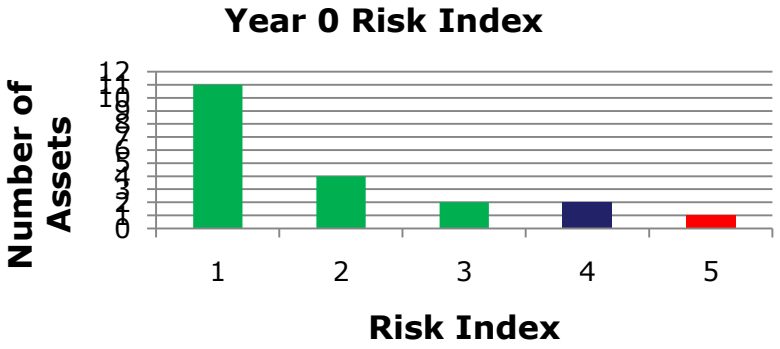
DPCR5



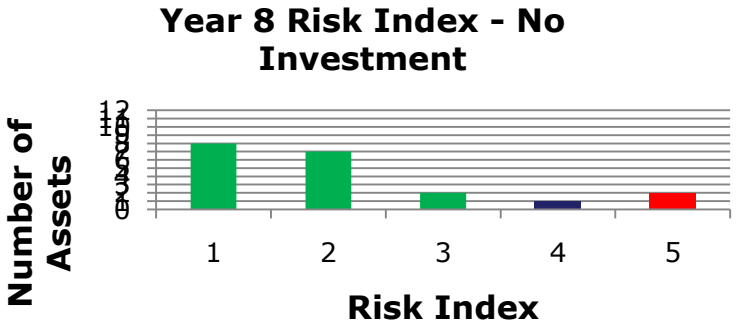




TPCR5 objective



Current



Forecast degradation

Forecast price control package

Electricity – Constraints

- Recap - wider works
  - Constraints target not 'fit for purpose' for investment planning at this stage;
    - Benefits of investment to SO are largely future
    - Forecasting difficult
  - Exploring practical ways forward;
  - Ex-ante components for Connect & Manage catch-up?;
  - Unit Cost Allowances (UCAs) set ex ante for enabling works?
  - Choice of specific re-opener or wider boundary UCAs set ex ante for wider / anticipatory works ?

- TO Feedback?

Electricity – Constraints

- Recap – Planned Circuit Outages

  - Aligning the financial incentives on the SO and TOs.
    - TO impact on SO constraint costs
    - SO impact on TO works

  - In the case of National Grid:
    - better alignment of SO and TO incentives (rates);
    - improved transparency around the internal SO / TO trade-offs

- TO Feedback?

Gas – primary outputs and secondary deliverables

- Main objective of the national transmission system (NTS) is to transport the required volume of gas in a reliable manner as affect by:
  - Network capacity: whether the network is able to deliver capacity as required by users.
  - Asset condition: whether the as built network assets perform their desired function
  - Network flexibility (?)
- Each area impacted by short-term (day-to-day) management of the as-built network and the long-term planning of required investment.
- Potential overlap between the three areas
- We need assess where primary outputs and secondary deliverables are required across these areas.

Gas – network capacity and asset condition

- Optimal delivery of capacity is user-driven and similarly to electricity theoretical concept that is difficult to observe directly.
- Asset condition relates to volumes of gas that cannot be injected or withdrawn due to asset unavailability. Over the long-term we would expect high levels of reliability to result in an average performance of zero.
- Potential to measure the delivery of gas to meet these functions based on when NGG is required to take corrective actions (or gas not supplied (GNS)). Corrective actions include:
  - TFAs (Terminal Flow Advice)
  - Volume of entry capacity buy-backs (or a subset of these as buyback also allows NGG too make economic trade-offs to meet capacity)
  - Volume of exit capacity buy-back
  - Force majeure
  - Other actions?

Gas – network flexibility

- Network flexibility: ability of the network to cope with the degree of flex required by users
- Points for discussion:
  - What indicators can be used to signal the need for future investment?
  - How can we deal with uncertainty associated with the timing and level of flexibility that will be required in the future?
  - How to ensure that an appropriate trade-off is made between transmission, distribution and storage in addressing flexibility?

Gas – secondary deliverables (asset condition, criticality and replacement priorities)

- TO model (consistent with network outputs developed during DPCR5 and as part of electricity transmission for TPCR5 – see 4.2 above) which takes into account asset health, asset criticality and risk.
- Deriving levels of criticality for asset types.
- Framework for delivery consistent with electricity transmission.
- Defining asset condition
  - NOMs currently use 0-2, 2-5, 5-10, > 10 remaining useful life
  - Look to develop consistency with DPCR5 definitions (new or as new, good or serviceable condition, deterioration requires assessment and monitoring, material intervention/intervention requires consideration, end of serviceable life)

Agreed actions and next steps

- Final actions to be provided to Ofgem.
- Combined working group meeting prior to release of December paper to be held on 22 November 2010 (TBC)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