

Similar approach to that taken within RIIO-T1 to reducing network losses

1. Introduction

- 1.1. It is important to consider the recent decisions on RIIO-T1 with regard to transmission losses to ensure that the approaches in RIIO-T1 and RIIO-ED1 are aligned and proportionate, and any difference in approach can be justified. The RIIO-T1 approach to system losses is summarised. This paper should be considered alongside the other RIIO-ED1 proposed approaches (papers).

2. RIIO-T1 approach

Approach

- 2.1. The recent RIIO-T1 strategy consultation considered options for a losses output on Transmission Operators (TOs). They recognised that there could be interactions between the TO and the System Operator (SO) and a need to align any incentives.
- 2.2. TOs influence transmission system losses through investment choices. The biggest determining factor for volume of losses is the system loading, which is the SO's role.
- 2.3. The decision on strategy for RIIO-T1¹ concluded that there were no significant alignment issues in placing an output on the TO and a separate incentive on the SO, since the actions of one would not significantly influence the losses position of the other.
- 2.4. A primary output on actual volume of losses was not considered appropriate for TOs because of complexities in measuring actual losses (low loss investment gets lost in other factors), and losses are affected by factors outside of the company's control (demand and generation type/location). The costs associated with modelling actual losses represent a disproportionate risk to companies and customers.
- 2.5. A reputational incentive is considered more appropriate to this modelled output. Companies will provide information at the start and end of the price control. Companies could face financial consequences for non-delivery if variations to the baseline are not explained.
- 2.6. A financial incentive is set on the SO covering electricity transmission losses, based on the forecast losses and the average wholesale price of electricity (determined ex post).

Outputs

- 2.7. The TOs are expected to take into account lifetime costs, including transmission losses, when deciding on equipment. Business plan submissions need to consider whether it is in the long-term interest of customers to invest in higher cost / lower loss equipment. The TOs investment appraisal is to consider the NPV of the additional cost of a low loss option against the benefit of reduced losses over the lifetime of the asset, valued at what consumers pay for losses on the system (the wholesale price of electricity lost) ie an output based on the modelled lifetime net benefit to customers.

¹ <http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/T1decisionoutput.pdf>

- 2.8. The measure is considered appropriate because a) it is relatively simple to model and b) it indicates the net benefit in terms of avoided losses. TOs are expected to provide information as part of their business plan on the modelled avoided losses, with an explanation of their investment appraisal process and working assumptions eg value of losses, loading of the network.

Targets

- 2.9. A baseline is set for each TO based on efficient equipment investment decisions set out in the business plans.

Measurement

- 2.10. TOs are required to report annually on their contribution to reduced losses.
- 2.11. The SO incentive is based on forecast losses against actual losses measured ex-post. The current proposal is to set the measurement / true-up on a four + four year basis (i.e. mid-term review).

Rewards / Penalties

- 2.12. A reputational incentive is applied to the TOs, with the possibility of a financial penalty for non-delivery if variations to the baseline are not adequately explained.
- 2.13. The SO approach could require a mid-term adjustment to take account of improvements in the modelling of losses. There would also be an ex-post true-up based on the average wholesale price of electricity over the whole period.

3. Risks / Benefits

- 3.1. Some risks are:

- TOs could be insufficiently incentivised to undertake loss reduction actions
- TOs could invest in expensive equipment which is not well justified in terms of losses reduction
- It could be difficult to audit claims of losses reduction equipment (equipment specs) against actual losses reduction achieved
- A level of uncertainty is associated with the SO incentive: the modelling of losses is still being developed and could be re-opened after four years; and the average wholesale price applied to losses will be determined ex post.

- 3.2. Some benefits are:

- The approach taken for TOs is proportionate and provides certainty upfront.
- The mid-term review of the losses modelling associated with the SO incentive will limit any adverse impact associated with modelling errors.

4. Some evaluation criteria

- 4.1. Some brief comments on key principles considered under RIIO-T1 are:

- Proportionality

Proportionate effort and expenditure were considered. Disproportionate benefit obtained from complex modelling, monitoring and reporting were considered a deciding factor.

- Transparency

A modelled approach is transparent at the beginning of the price control.

- Consistency

A modelled approach to investment decisions is consistent across all TOs. Consistency with incentives applied to the SO is not considered necessary, since the SO has more control over factors influencing levels of system losses.

- Credibility

Information on investment decisions and expenditure on low loss equipment can be verified.

- Clarity and Controllability

The impact of the investment decisions is clearly detailed at the start of the price control period. Only factors which the TO has control over (investment in low loss equipment decisions) are included in the output.

- Adaptability and Commitment

Each TO will commit to low loss equipment decisions as included in their business plans. Any deviations will need to be explained.

5. Any additional information

5.1. Include any additional pertinent information which is not already covered.