'Innovation Stimulus' type approach to reducing distribution network losses

1. Introduction

1.1. This strawman considers incentivising reduced distribution network losses through an approach similar to that of the current network innovation stimulus. The incentive could include any or all of the different components – an allowance, a fund for additional projects, and/or a revenue adjustment mechanism.

1.2. This approach would have the benefit of different components which could apply depending on the level of control or influence any stakeholder has over the level of losses. It would also align with the current approach for innovation, which also has a strong focus on carbon reduction. The practical implementation of this approach could benefit from the experience gained through administering the network innovation stimulus.

1.3. We should carefully consider the different components and what we would hope to achieve through each.

2. Details of proposed approach

Approach

2.1. This approach would consist of different components to address the different levels of control or influence that any stakeholder has over reducing network losses.

2.2. The first component to consider would be a losses reduction allowance, which would be a set allowance received by each of the licensees as part of their price control settlement to fund a pre-determined level of losses reduction action e.g. low loss equipment. [This is similar to the approach taken in RIIO-T1 for the TOs, and potentially shares characteristics with other approaches under discussion].

2.3. A second component could be a fund set aside for funding larger specific projects which would demonstrate reduction of network losses. In theory it would provide a vehicle for other stakeholders (suppliers / DNOs) to participate in losses reduction incentives, where the project demonstrated verifiable and sustainable reduction of distribution network losses. There are however a number of concerns around this component which would require very careful consideration. A number of associated complexities, such as legal restrictions affecting allocating funds to non-licensees, and cumbersome administrative processes, could affect implementation of this proposal. The risks and benefits would need to be carefully unpacked.

2.4. An alternative to the second component could be to participate in the innovation stimulus or the low carbon network fund processes, where loss reduction initiatives could meet those criteria.

2.5. A third component consisting of a losses revenue adjustment mechanism would enable licensees to apply for additional funding within the price control for the rollout of initiatives with demonstrable losses reduction benefits. This mechanism would allow for flexibility in losses reduction activities which might arise throughout the period.

2.6. This approach (consisting of one or more of the components) could be set in place for the entirety of the period or used until accurate data is available to revert to a losses mechanism based on actual losses data.

Outputs

2.7. For the allowance component, licensees would be expected to take into account lifetime costs, including distribution losses, when deciding on equipment or projects. Business plan submissions would need to consider whether it is in the long-term interest of customers to invest in higher cost / lower loss equipment. The NPV of the additional cost of the 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 price of electricity lost), would result in an output based on the modelled lifetime net benefit to customers. This value could be limited e.g. X% of allowed revenue or capex. In addition, licensees could provide details of any other losses reduction actions to be undertaken, provided that these actions could clearly demonstrate improvements in the losses position. [An alternate valuation method would be to link to the price of carbon, or to limit the NPV calculation to the period of the price control].

2.8. The fund component would have clearly defined criteria and processes set out (similar to the approach taken for the Innovation Competition or Low Carbon Network Fund). The total funding available would need to be proportionate to the benefits which could be achieved.

2.9. The revenue adjustment mechanism component would be built into the price control, with clearly defined qualification criteria.

Targets

2.10. For the allowance component DNOs would need to motivate the optimal level of losses reduction over the price control period in their business plans.

2.11. For the funding component, the details of the criteria under which applications could be made to any fund would need to be clearly defined up front. These could set out the minimum level of improvements which would need to be achieved. These would then define the target.

2.12. For the adjustment mechanism, the qualifying criteria and associated limits would need to be clearly defined up front. A target level of losses reduction could be set in order to qualify for the adjustment.

Measurement

2.13. Licensees would be expected to provide information up front in their business plans, setting out the proposed expenditure on loss reduction equipment or projects, as well as the potential losses reduction to be achieved. Once approved this would form their baseline. A review (periodic, or at the end of the price control period) would highlight variations from the baseline. Any allowance could be clawed back if not effectively utilised.

2.14. The details of any fund would also set out any measurement criteria, depending on the type of projects which would be considered. Alternately, if linking to the existing initiatives, projects would need to comply with the existing assessment criteria.

2.15. The adjustment mechanism would require clear demonstration of losses reduction benefits achieved through any projects put forward for additional funding. This could include consideration of technical specs, or post investment assessment.

Rewards / Penalties

2.16. The allowance component would provide an incentive to undertake loss reduction actions. Any allowance not efficiently utilised could be clawed back. There would be an additional reputational incentive in ensuring that business plans are well motivated and that the baseline is set at a justifiable level.

2.17. There could be both reputational and financial incentives associated with awarding funding for well-motivated projects. Total funding available would need to be proportionate to the benefits to be obtained from losses reduction.

3. Risks / Benefits

3.1. The key benefit of the allowance component would be a limited revenue impact and certainty of the revenue associated with losses reduction included in the price control. This would provide suppliers with more certainty in setting charges. One risk would be that licensees could not implement the initiatives included in their business plans, leading to claw back, but this risk would be mitigated by the current regulatory processes. There are additional risks associated with measurement and monitoring/auditing.

3.2. There are a number of risks associated with any additional fund (the second component). These range from legal to administrative. While a key benefit would be that parties other than licensees would also be able to participate in losses reduction activities and projects, through their collaboration with DNOs, the legislative and procedural restrictions might make this approach overly complicated and an administrative burden.

3.3. A key benefit of the adjustment component would be that additional funding could be motivated for projects which are not limited to low loss equipment but could consist of other actions taken to reduce losses. This could include collaborative action between stakeholders, including action to resolve some of the issues around accurate measurement of losses.

4. Some evaluation criteria

4.1. Consider how this approach might be evaluated according to each of the principles set out below.

- Proportionality

  The allowance included in the price control could be directly related to justified investment expenditure on loss reduction equipment. There would be no windfall benefits or penalties through actions not controlled by the licensees.

  Any additional funding allowed would need to be proportionate to the benefits achieved.

- Transparency

  Allowances approved through the price control would be transparent, as would any additional funding approved through the adjustment mechanism. It would be simple to understand what funding was being attributed to the reduction of losses and to understand what that was delivering. By requiring DNOs to provide clear information in advance or projects, suppliers would have a clear idea of any charges associated with losses activities.

- Consistency

Allowances approved through the price control would be consistently assessed across all licensees.

- Credibility

  All allowances would be based on well justified investment decisions. Any additional funding would be based on well justified information and subject to public scrutiny. Licensees would not receive funding based on actions outside of their control.

- Clarity and Controllability

  The allowance would be approved at the beginning of the price control, giving improved pricing certainty.

  Any additional funding (though a fund or the adjustment mechanism) would be part of the normal regulatory process and subject to scrutiny. Stakeholders would have access to all relevant information. Licensees would not be rewarded or penalised for actions outside of their control.

- Adaptability and Commitment

  Licensees would commit to a certain level of loss reduction action throughout the price control period. The adjustment mechanism would allow for adaptability within defined parameters.

5. Any additional information

5.1. Additional information can be found on Ofgem's website on the Innovation Stimulus http://www.ofgem.gov.uk/Networks/nic/Pages/nic.aspx and the Low Carbon Network Fund http://www.ofgem.gov.uk/Networks/ElecDist/lcnf/Pages/lcnf.aspx