

Enertechnos response to Ofgem RIIO-ED2 Sector Specific Methodology Consultation

Overview

As a member of the Ofgem Decarbonisation and Environment Working Group, Enertechnos welcomes the opportunity to respond to the regulator's consultation on the detailed sector methodology for RIIO-ED2 price controls. Enertechnos believes that Ofgem has an excellent opportunity to ensure network operators are supported and adequately equipped to play their role in delivering enough power across their networks to support the UK's decarbonisation ambitions.

The UK has a chronic problem with energy losses which threatens to undermine these ambitions. Last year, energy losses in the UK totalled 26,412 GWh.¹ This is enough energy to power 7 million homes for an entire year or charge 6.8 million electric vehicles. It also makes up 1.5% of our carbon emissions and bears an annual cost of £1.5 billion.²

This is not simply a problem of inefficiency. These losses threaten to undermine the ability of networks to create the additional capacity needed to deliver sufficient power to decarbonise sectors such as transport and heat.

Peak demand is set to increase from 58.7 GW now to anywhere between 76 to 96 GW in 2050.³ Just to meet the lowest demand predicted by National Grid, we will need an additional 14.1 GW – the equivalent of 4.5 Hinkley Point Cs nuclear power stations. Delivering this power will push our grid way beyond the capacity it can presently deliver. Ahead of this crunch point, attention must turn to how we can make efficiencies within the system to cope with added pressures. Tackling losses alone will not solve the capacity problem but increases in the efficiency of the network enhance the benefit brought by each new generation project.

In order to deliver more power to facilitate our journey towards net zero, Ofgem and industry should fundamentally change their approach to losses. DNOs should be obliged to take concrete and measurable steps to reduce losses, including investing in low-loss technologies which deliver significant cost and carbon savings over their lifetime, that will boost capacity.

About Enertechnos

Enertechnos is a UK clean-tech company, developing innovative solutions to enable 'better electricity' and support the transition to net zero. Our innovative cable technology – the Capacitive Transfer System, 'CTS' – reduces energy losses throughout the power network, slashing carbon emissions from wasted energy.

We have received backing from several government programmes and are currently working with the Department for Business, Energy and Industrial Strategy to revolutionise electric vehicle charge times. We are also working with industry to help tackle the problem of losses. Our CTS technology will soon be deployed by distribution network operator Western Power Distribution (WPD) in a real-world trial.

¹ Department for Business, Energy and Industrial Strategy, Digest of UK Energy Statistics, 2020.

² Based on Ofgem's societal cost of losses updated to reflect today's prices.

³ National Grid, Future Energy Scenarios, July 2020

Questions and responses

OUTQ58 Do you consider that the proposed areas in scope of the Environmental Action Plan, and associated baseline standards, are appropriate? We particularly welcome views on any areas that should be omitted/included and if new areas should be included, what the baseline standard should be?

Enertechnos welcomes the inclusion of losses under the 'decarbonise the networks' objective in the Environmental Action Plan (EAP). We also welcome the baseline standards set out with regards to losses, including developing and committing to a losses strategy, reporting on implementation progress, and contributing to an evidence base.

To encourage ambitious strategies and action on losses, Ofgem should include loss-reduction in the criteria for Consumer Value Proposition (CVP) rewards. The CVP is designed to reward plans that deliver value for consumers and have the potential to raise the bar across industry, ambitious and effective losses strategies will deliver on both of these criteria.

Similarly, insufficient action on losses should incur a penalty through the Business Plan Incentive (BPI).

To strengthen this, Ofgem should update its 'societal cost of losses' figure to reflect today's prices (it is currently set at 2012/13 prices). This will ensure that the cost of losses is accurate when reported by distribution network operators.

DNOs should also be encouraged to take steps to improve their measurement of losses and develop a standardised methodology for measurement so that Ofgem can look towards incentivising and rewarding progress in tackling losses.

OUTQ59 Do you agree that the annual reporting through the Environmental Impact Report will increase transparency of the DNOs' activities and the resulting impacts on the environment?

The approach to losses set out is primarily reputational. While Enertechnos understands that reputational drivers can help to encourage positive activity from DNOs, it is vital that incentives are set to drive quality plans and ambition. This can be achieved through including losses in the CVP criteria and BPI.

OUTQ61 Do you agree with our proposed removal of the Losses Discretionary Reward?

Enertechnos agrees that the Losses Discretionary Reward (LDR) has not had the desired effect, as evidenced by the lack of rewards in tranche 2 based on DNOs providing insufficient evidence that their actions had led to improved management of losses.

As such, the approach to losses needs to be strengthened in RIIO-ED2. There are low-loss alternative technologies available that DNOs can deploy to improve their management of losses. DNOs must be incentivised to develop ambitious strategies and use available technologies. To ensure this happens in RIIO-ED2, Ofgem should consider two areas of action:

1. **Incentivising DNOs to explore and adapt cost-effective solutions to reducing losses** (see response to OUTQ58)
2. **Adjusting the cost benefit analysis to account for losses over the lifetime of assets** (see response to COQ32)

COQ32 Do you agree with our proposed application of CBA in the appraisal of investment options for RIIO-ED2?

Enertech nos welcomes Ofgem's use of cost benefit analysis (CBA) to underpin investment decisions and demonstrate the value to consumers of making the investment.

It is absolutely crucial that cabling being planned now, both in new build infrastructure and replacement programmes, is future proofed so that it is able to deliver extra capacity consumers will need. At a time when lowering consumer bills is a key priority for policy makers and there is a growing need to bring carbon emissions down, efficiency of this infrastructure is also key.

Ofgem should ensure DNOs are able to use strategic investment to invest in technologies which improve network efficiency and reduce carbon costs over the long term, such as low-loss cable technology.

We therefore believe Ofgem should introduce an obligation for DNOs to provide two models as part of cost benefit analysis – one looking at business-as-usual technology and another providing an alternative plan which uses innovative equipment, such as low-loss cable and/or low-loss transformers, to reduce losses and increase capacity. This will allow DNOs to show the regulator the carbon costs of each technology and its benefit, justifying any additional spend.

To ensure the full cost of losses is considered and accurate benefits are identified, the financial indicator Ofgem uses, the 'societal cost of losses', should also be updated. Currently, the figure is set at £48.42/MWh as per 2012/13 prices – this should be updated to reflect today's prices and updated on an annual basis.

This response was submitted alongside Enertech nos' policy paper – [The road to 2050: Is our energy infrastructure ready to deliver net zero emissions](#). For queries or any further information please contact CaitlinFordham@wacomms.co.uk.