

RIIO-ED2

Ofgem Sector Specific Methodology¹ : A green light for the energy transition

Ofgem's methodology for electricity distribution network company price controls is a significant step forwards for the climate. But there is still work to do, including on consumer engagement and research and the uncertainty mechanism for strategic investment. We are disappointed in the treatment of losses. And companies need to show ambition - including on vulnerability and support for Local Authorities in local area energy plans.

Introduction

Energy price controls give fundamental shape to how the monopoly network companies deliver for people and planet. With many tens of £billions of investment at stake, time spent upfront on the detailed design of these frameworks and incentives supports better outcomes, heading-off unwanted surprises. Ofgem's Electricity Distribution ED2 final methodology, published on 17 December 2020, is welcome recognition that the electricity distribution networks must indeed now play an active near-term role at the local, regional, devolved and whole-system level to help decarbonise our future energy supplies, including our transport and heat systems. This comes as a relief. It has taken time and effort to get traction with the regulator on the fundamental 'public good' role that the electricity distribution networks must play in our energy transition.

¹ <https://www.ofgem.gov.uk/publications-and-updates/riio-ed2-sector-specific-methodology-decision>

A welcome framework to support the transition

Sustainability First engaged very actively with Ofgem, the networks and others via a 15-month stakeholder process for development of the ED2 price control methodology. We saw getting this framework 'right' for the near-term as well as for the long-term as critical to achieving timely and practical pathways towards a net-zero future. We questioned Ofgem's caution on how devolved, regional and local government should help shape DNO future plans. We wanted to see clear commitments to embedding actions on vulnerability, inclusion, fairness and a just transition.

Ofgem's final ED2 methodology document represents a notable gear-change from the July draft. With a guidance letter in October from the energy minister to Ofgem's chief executive², Ofgem has now better aligned the ED2 price control objectives with the urgency of goals in HMG's Ten Point Plan, the Committee on Climate Change (CCC) advice on the 6th Carbon Budget, the Energy White Paper, plus those of the devolved governments.

The ED2 methodology now sets out far more clearly how the GB electricity distribution networks need to play a proactive role within ED2 timescales in support of government net-zero goals. This includes facilitating the ramp-up of increased electric vehicle ownership by 2030 and installation of 600,000 heat-pumps p.a. by 2028. Ofgem has also provided initial thinking as to how it will adapt its approach to regulation of the electricity distribution networks to support meeting the UK's 2050 net-zero target while maintaining an element of flexibility given the uncertainty around future pathways and the pace of change. This includes approaches to sanctioning funding for new network investment, to evolution of the distribution system operator role, and to leveraging the benefits of data and digital - all with the aim of supporting the transition 'at lowest cost to existing and future consumers'.

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/943755/letter-to-jonathan-brearley.pdf

Gaps that need filling

But there is still much to do to fill in the details on many elements of the methodology. Updated business plan guidance and core decisions on regulatory finance are to follow. The review of the enhanced engagement process for transmission and gas distribution will have implications for ED2. Aside from the role of the consumer engagement groups themselves (CEGs) there are also basic questions about what Ofgem expects in terms of consumer research to support business plans³. Around the CBA methodology, there are also important details to be resolved for considering the impact of losses and for evaluating carbon savings more generally. Ofgem also accepts the need for clear choreography between the price control process and its other major work-streams on full-chain flexibility and on network access charges. The decision to put the network access charging work on hold was right but Ofgem needs to ensure that the knock-on for business plan preparation is understood and to spell-out the practicalities of adjusting the settlement once the review is complete.

The central question of an uncertainty mechanism for funding ED2 strategic investment is still to be resolved. We would encourage Ofgem to explore the model we suggest of a simple volume driver that provides flexibility over a predefined range - with a more discretionary mechanism for bigger deviations from the plan. To us this would avoid the risk of introducing a new and untested complex mechanism which may have unintended consequences.

In our earlier Sustainability First responses (to the draft ED2 SSM, to the GD/T draft determinations) we highlighted a need for Ofgem to develop a clearer vision around how to make reputational regulation more effective, given the reliance placed on this as part of the RII02 methodologies. We see reputational regulation as a particular issue in relation to losses. We would encourage Ofgem to think how to ensure active focus is maintained on reputational regulation if there are no financial incentives.

³ This research was not referenced at all in Ofgem’s draft or final determinations for transmission and gas distribution

We would encourage Ofgem to clarify its timetable for resolving these outstanding issues so that the companies have the time to take proper account in development of, and thorough testing of, their plans with stakeholders.

Driving ambition

Inevitably, in some areas, Sustainability First would have liked Ofgem to go further faster. In particular we remain disappointed that Ofgem seems to have moved backwards from ED1 in terms of the focus given to losses. With pressure to run the networks harder, losses will increase without a clear counter-balancing incentive. This is a carbon issue in the short term and an important energy efficiency issue for the longer term. With higher losses more investment will be needed across the system to fill the gap in capacity. While we are disappointed at the lack of a financial incentive in this area, Ofgem have left the door ajar for networks to come forward with proposals as part of their Consumer Value Propositions (CVPs). We hope that companies will look hard at the opportunities to demonstrate ambition in this difficult area.

Other areas where Ofgem did not propose specific incentives but where we hope that companies will show ambition include : a focus on inclusivity as part of their vulnerability strategies; supporting local authorities in local area energy planning; ensuring DSO strategies have a clear focus on decarbonisation and net-zero; making better use of smart meter data; and, exploring opportunities for a win-win around improved thermal efficiency in electrically heated homes where this could help avoid network reinforcement.

Conclusion

Overall there is much that we welcome about the final ED2 methodology. Hopefully, the electricity distribution networks now see a far clearer green-light from Ofgem : for ambition on delivery of decarbonisation and net-zero; for pursuit of

‘flexibility-first’; for innovation on whole system and for inclusive thinking on vulnerability. We are in principle strong advocates of the enhanced engagement arrangements that Ofgem has put in place. We would therefore reinforce the importance of systematic stakeholder and customer input into developing company business plans as the DNOs gear-up to become a key facilitator of the energy transition across their full geography.

The Annex to this Sustainability First Viewpoint provides more detail on Ofgem’s final ED2 sector methodology and our thinking on that decision. Our focus is on those areas close to Sustainability First’s main interests and which came to the fore during methodology development. In that sense, the Annex is not intended to be comprehensive.

ANNEX

Sustainability First : headline-thinking on the final ED2 sector specific methodology

Three areas where Sustainability First has taken a particular interest in the development of the ED2 price control methodology are on net-zero delivery, company plans for their own decarbonisation and losses (sections 6 & 7) and customer inclusion and vulnerability (section 8).

Areas covered in the Annex are:

Net-zero

1. Net Zero delivery
2. Base-line and load-related capital spend (incl. electricity efficiency)
3. Approach to strategic investment and uncertainty mechanisms (incl. ‘touch the network once’)

Smart System

4. Data strategies & network monitoring
5. Distribution system operator (incl. whole system coordination)

Company decarbonisation, environmental action plans (EAPs) and losses

6. EAP and the ODI-F incentive
7. Distribution losses
8. Environmental resilience

Vulnerability, consumers and stakeholders

8. Customers in vulnerable circumstances
9. Research on customer preference
10. Enhanced stakeholder engagement

Net-Zero

1. Net-zero delivery

We welcome Ofgem's clarification that *within the ED2 time-frame* :

- Net-zero facilitation is to sit at the heart of DNO / DSO business activity.
- DNO business plans are to be shaped by national goals in HMG 10-Point Plan (and Energy White Paper) on EVs and heat Pumps⁴.
- Trajectories implied by the 6th Carbon Budget for transport and heat - as well as for power – are to be factored into company business plans, which should also take account of updated Scottish Government Climate Change targets, where relevant.
- **Recognition that some form of centralised Ofgem view is needed by which to inform and benchmark both individual and collective DNO assumptions about future demand-growth forecasts. Ofgem has committed to produce common sets of assumptions on forecast demand – and this is very welcome⁵.**
- Ofgem expect that DNOs will apply these common assumptions on forecast demand in their investment planning – actively informed by their stakeholder engagement – including with devolved, regional and local government - so that :
 - 'Funding may be provided in baseline allowances to support intervention *where a DNO can show that these forecasts will lead to constraints on their network, during RIIO-ED2.*

- But that *where these forecasts are higher* than the demand a DNO realistically expects for their region – then Ofgem expects DNOs to adjust their business plan to reflect and respond to that.
- DNO-level scenarios and forecasts must be reconciled with those of Ofgem in an 'overall' sense-check (most likely by ENA).
- **Far clearer and more explicit recognition of the importance of DNO engagement in delivering the goals of devolved government, metro-mayors and local authorities.**
- Explicit acknowledgement that the Framework put forward by Scottish Government offers a good 'check and balance' for DNOs in drawing up plans (albeit Ofgem has not mandated its use). This framework is more pragmatic than the best practice guidelines developed by CSE and the Energy System Catapult. This may still represent the gold standard for local authorities to work towards but we support the view that local input should still be given some weight even if it does not meet that gold standard.
- Overall the methodology seems to us to acknowledge the importance of both the bottom up and top down view in developing robust forecasts and understanding the extent of uncertainty inherent in them. This is a welcome development from the draft methodology in July.

⁴ Ban on sales of new cars or vans with internal combustion engines from 2030 and installing 600,00 heat-pumps p.a. by 2028

⁵ Core Doc. Pp 36-37. To be included in the January 2021 Business Plan Guidance.

'We will include within these assumptions outcomes that are consistent and reasonable across a wide range of different Net Zero compliant scenarios, by the Committee on Climate Change (6th Carbon Budget) and by the Electricity System Operator

(Future Energy Scenarios), including electric vehicle and heat pump uptake rates. We will consider government commitments and targets, such as ending sales of new combustion engine cars and vans and for heat pump rollout included within the Government's 10 point plan for a Green Industrial Revolution. These scenarios include an assumption that there will be a rapid take up on electric vehicles in RIIO-ED2 and continued growth of solar photo-voltaics, with demand from heat expected to steadily increase during RIIO-ED2. (para4.34 pp 36-37)

2. Baseline and load-related capital-spend (including electricity efficiency)

We welcome that :

- Company **base-line capital plans will have price control deliverables (PCDs)** – with appropriate metrics or use-it-or-lose-it provisions (UOLI) to safeguard against companies who fail to invest but would otherwise retain the funding.
- Load-related capital spend must be underpinned by a ‘flexibility-first’ options-appraisal⁶, to justify either new one-off upgrades or incremental network investment (see also ‘touch-the-network once’ below).
- Ofgem has initiated the new **Full Chain Flexibility Strategic Change Programme** – and is clarifying the linkage to **Access Charges Reform**⁷. We strongly welcome the decision to take a fresh look at these issues given the central role that charging must play in delivering flexibility. But, more clarity is needed from Ofgem on their own timetable and on choreography with development by the companies of their business plans.

Electricity efficiency and electricity demand reduction

Directly linked to avoiding unnecessary load-related capex, Sustainability First very much welcomes the explicit recognition of the under-sung but important role for **electricity efficiency / electricity demand reduction**⁸ in DNO initiatives for delivering net-zero at lowest cost to consumers. Ofgem is asking for further inputs and some clarification might yet be needed around how DNOs are to ‘make-the-case’. Notably :

- Ofgem expects DNOs to **play a more proactive role in managing future system**

growth and curbing peak demand, linking to the DSO baseline activity for whole system planning⁹. This expectation also links to a **new licence obligation** from end-2020 to promote the uptake of energy efficiency measures where this ‘cost-effectively alleviates the need to upgrade or replace electricity capacity’¹⁰.

- The SSM reflects an expectation **that DNOs can encourage ‘off-peak’ operation of EVs via smart charging**¹¹. In practice however DNO remit here isn’t clear. Unless there are network capacity-charges (or similar) for households and small customers – and / or appropriate approaches to access charges – it is unclear to us how DNOs are expected to do this. How far DNOs can reasonably factor-in assumptions on off-peak EV charging into their investment plans will be for debate¹².
- On **electricity efficiency**, it’s also not altogether clear how far value can be demonstrated via a simple CBA at low-voltage hot-spots - or, whether a different approach to cost-assessment for valuing electricity efficiency might be needed. For example, perhaps DNOs should look to target and prioritise areas off-gas grid where electric heat is expected to grow in the future, taking a more forward-looking view. Alternatively they could promote creation of ‘social constrained’ zones where affordability is a particular issue and which perhaps already have high levels of electric heat. Or, perhaps there is a need to develop some form of common metric (such as social return on investment). This is an important area where the door is open for companies to develop ambitious and innovative approaches in their business plans. Helpfully,

⁶ Overview. Para 4.50. Long-term one-off upgrades vs smaller incremental to 2050

⁷ Ofgem. Draft Forward Work-Plan. 2021-22 <https://www.ofgem.gov.uk/publications-and-updates/forward-work-programme-202122-consultation>

⁸ 5.59-5.64

⁹ DSO 1.1. A1.16 p 81 third bullet

¹⁰ 5.59

¹¹ 4.49

¹² OLEV : private charge-points will be required to be ‘smart’. Unresolved for *public* charge points (e.g. m-ways, shopping centres, airports, city-centres etc).

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DNOs are specifically expected to work with third parties (suppliers, aggregators, local authorities, others) to **identify priority areas to upgrade the energy efficiency of buildings to curb demand growth**. These external stakeholders have an important role to play here. This focus on energy efficiency seemingly links to the Energy White Paper interest in buildings and heat – and on steps to revive interest in approaches to incentivizing electricity demand reduction (e.g. via capacity market, EWP p.111). For ED2 at least, it seems likely that DNOs will need to demonstrate how *electricity* demand-reduction would be supported by general improvements to thermal efficiency of buildings. This makes it likely that DNO actions will directly link to electric heat – either existing storage heaters and / or new (or potential future) heat-pump installations off the gas grid.

- Last and importantly (section 7) a major dimension of DNO electricity efficiency must surely be concerted steps **to address electricity losses**. Electricity distribution losses are a major efficiency issue for the DNOs and still little acknowledged as such. These currently amount to 6-7% p.a. of electricity transported over the distribution networks. Connecting more low-carbon technologies and building new network assets to meet electrification goals, plus sweating assets harder via flexibility, will all contribute to higher levels of electricity distribution losses than today. Approaches to cost-assessment of DNO plans – be that for new load-related investment or for avoided investment - must also evaluate the expected impact on losses.

3. Approach to strategic investment and uncertainty mechanisms (UMs)

In thinking about the nature of uncertainty mechanisms that are needed around strategic investment, Ofgem's recognition that the nature of distribution network investment differs fundamentally from transmission, with very many small investments of £<5m, is very welcome. We also wholeheartedly agree with Ofgem's conclusion that success for ED2 warrants a different approach to adaptive regulation from RIIO-T2.

- **Automatic uncertainty mechanisms** – we welcome Ofgem's intention to design robust *automatic* mechanisms. Clearly, a balance is needed (1) to reduce possible obstacles to speedy LCT connections for small customers and (2) to assure Ofgem that customers are not funding unjustified load-related capex. In particular, this means that approaches to deciding both unit-costs and the basis of indexation will need to be robust.
- **Automatic capacity volume driver with a utilisation metric** - Ofgem's proposal is aimed at providing an automatic mechanism to deal with the uncertainty around load growth while wanting to avoid creating an incentive for companies to undertake unnecessary investment. We understand their thinking but we would not underestimate the challenge of how best to design and deliver such a complex incentive which if wrongly calibrated risks unintended consequences and creating its own opportunities for gaming. At this late point of the price control process, there are also questions as to what a workable and flexible fall-back may look like. It would be helpful for Ofgem to clarify how it proposes to take forward approaches to measurement of network utilization at very low-voltage and its timetable.

- **For development of successful utilisation metrics, some commonality at least in company approaches to network monitoring and to data gathering will be key but difficult to achieve** (see section 4 below on network monitoring).
- An automatic UM coupled with a utilisation metric could also **risk unintended outcomes** where **assets are sweated harder** : e.g. leading to higher losses or less resilience. So, Ofgem may also wish to also consider potential down-side.
- **One workable option on an automatic capacity volume driver** - that Sustainability First believes should be considered – would be adoption of a simple capacity volume driver but with a capacity ceiling based on business plan projections (eg +/- 5-10%). This offers the potential for a ‘simple metric’ to accommodate small variations. But, above that given threshold, release of additional load-related funding would be subject to more in-depth scrutiny of utilisation, including to safeguard against company gaming. Such an approach could help in facilitating speedy investment at specific locations – but at the same time offer a clear ‘check & balance’.
- **Net-Zero Reopener** – as with the other RII02 price controls, Ofgem has included both a net-zero reopener and the whole system coordination adjustment mechanism (CAM). Assuming the ED2 approach - both to allowing baseline spend and to uncertainty mechanisms is broadly ‘right’ - then ideally the net-zero reopener need not be called upon. That said it provides a valuable safety net in the face of significant uncertainty.

Touch the Network Once – we welcome Ofgem’s recognition that net-zero means thinking long-term, and in particular beyond an individual price control

period¹³ : ‘DNOs may identify circumstances where adding surplus capacity in the short-term in order to meet anticipated growth in demand over a much longer-term planning horizon is appropriate. For instance, in areas of the country that are not currently ‘on’ the gas grid, the most likely decarbonised heat solution will require an increased demand for electricity at some point before 2050. We expect these circumstances to be supported with *persuasive evidence that this is the most efficient means of addressing future needs*. We will also expect there to be controls in place, such as Price Control Deliverables, to ensure that any funding provided to support the provision of additional capacity is only used for the purpose intended’.

- This approach inevitably throws up a number of questions. These include whether we will know ‘persuasive evidence’ when we see it. For example, for firm or funded plans for a green-field development (private or public) then this seems straightforward. However once one is talking about a much longer-term planning horizon it will inevitably be more difficult - even more so where future ‘whole-system’ considerations are to be factored into the mix.¹⁴
- Rather than just focusing on the *nature of the demand* Ofgem would do well to reflect on the *nature of the costs* involved in future upgrades. Given the costs and disruption of digging up roads there would seem to be a good case for future-proofing in terms of the trench and cable that is laid. By contrast, with electronics that have a shorter life there would seem to be less of a case. The use of real options theory can help in thinking through the value of a ‘touch the network once’ approach.
- Such complex considerations may also have knock-on implications for satisfactory development of an uncertainty mechanism.

¹³ Para 1.13 & para 4.51

¹⁴ and the coordinated adjustment mechanism 4.52

Smart System¹⁵

4. Data Strategies & Network Monitoring : we welcome Ofgem’s flexible approach to regulation and evolution of data strategies. Improved low-voltage network monitoring should become core to informing operations and new investment needs - not just for ED2 but well-beyond - but this will come at a cost. Ofgem has made clear the challenge of defining the ‘needs case’ on the benefits of monitoring and how this links to baseline standards¹⁶, indicating that this is not solely about efficiency but also about innovation. We welcome the introduction of new base-line standards for the DSO on network monitoring and data – and encouragement of ‘ambition’ via the Consumer Value Proposition. From a Sustainability First stand-point we see a need for Ofgem and the DNOs to :

- **Develop far more *in-the-round thinking* on linkages across : utilization metrics and net-zero; approaches to flexibility and electricity demand reduction; and approaches to loss-management.**
- **Plan more actively to harness smart meter data in ED2 :** DNOs must (1) **make far better operational use of smart meter data** (e.g. to identify potential capacity constraints, prior to investing in more expensive monitoring) and (2) **enable far greater visibility of customer electricity usage data** at low voltage (aggregated, anonymized) to inform stakeholders (local authorities, heat policy etc)¹⁷.

¹⁵ Ch 5

¹⁶ Ch 5 – p 52. See esp 5.27 on challenge of defining ‘needs case’ & benefits of monitoring – and then paras 5.34-37 on baseline standards for data & monitoring – incl developing use-cases.

¹⁷ Sustainability First and CSE. PIAG project on Access to Smart-Meter Data for a Public Interest Purpose.

<https://www.smartenergydatapiag.org.uk/>

¹⁸ 5.53 – 5.58

5. Distribution System Operator : the Distribution System Operator role is fundamental to delivering decarbonisation and net-zero at lowest cost to consumers, including via full-chain flexibility and enabling a whole-system view. We agree with Ofgem that :

- The DSO role is an ‘evolution’
- On DSO separation, more work is needed by Ofgem on the implications and complexity involved¹⁸
- Better coordination between the ESO and DSOs is necessary to enable a whole-system view and associated actions.

Sustainability First also takes the view that :

- While driving third-party activity and innovation into DSO approaches and operations (e.g local trading platforms, aggregators, storage development etc), **DSOs also need to retain an overview across their DNO geography** (net-zero, least-cost to consumers, full-chain flexibility, whole-system) in ways which can ensure that well-coordinated **activity can deliver cost-efficient and best outcomes for consumers.**
- **DSO Strategy Delivery Incentive** – there is still some lack of clarity as to the respective roles of the DSO principles and base-line standards and the DSO strategy – and how best to measure /evaluate all these things¹⁹
- On **DSO baseline standards**²⁰ we welcome :
 - **New / additional cross-reference to vulnerability strategies** (A1.7)
 - Further exploration of **what data is needed for enhanced network monitoring** (A1.8)

¹⁹ 5.33 & 5.38 - DSO Strategy Delivery Incentive – ‘not now deciding how this ODI will operate or the financial exposure’. Will consult on the mechanism & incentive value at draft determination in 2022.

²⁰ Annex 1 – pp 77- 88

- Encouragement for DNOs to ‘explore all reasonable options to use data from third parties, including harnessing smart meter data subject to data sharing agreements, to improve their simulated forecasting (A1.16)
- We see it as a matter for regret however that there is **no explicit cross-reference in DSO baseline standards to Environmental Action Plan delivery and company approaches to decarbonisation and net-zero**. We hope that companies will nonetheless make these linkages where appropriate.

Company decarbonisation, environmental action plans (EAPs) and distribution losses ²¹

6. Environmental Action Plan and the ODI-F incentive

Incentive approaches for decarbonisation and net zero : from the outset in designing the RII02 price control framework Sustainability First saw decarbonisation as critical and we urged Ofgem to place decarbonisation strongly centre-stage. We demonstrated how it would be feasible to design a stretching incentive **combining a ‘right-mix’ of financial and reputational regulation for**

²¹ Ofgem. Environment – Deliver an Environmentally Sustainable Network
<https://www.ofgem.gov.uk/publications-and-updates/riio-ed2-sector-specific-methodology-decision>

https://www.ofgem.gov.uk/system/files/docs/2020/12/riio_ed2_ssm_d_annex_1_delivering_value_for_money_services_for_customers.pdf

²²
[https://www.sustainabilityfirst.org.uk/images/publications/consultations/Sustainability First - ED2 SSM Submission - 250920 - final.pdf](https://www.sustainabilityfirst.org.uk/images/publications/consultations/Sustainability%20First%20-%20ED2%20SSM%20Submission%20-%20250920%20-%20final.pdf)

[https://www.sustainabilityfirst.org.uk/images/publications/other/Sustainability First - Viewpoint Paper - A Decarbonisation Framework for ED2 - final 220720.pdf](https://www.sustainabilityfirst.org.uk/images/publications/other/Sustainability%20First%20-%20Viewpoint%20Paper%20-%20A%20Decarbonisation%20Framework%20for%20ED2%20-%20final%20220720.pdf)

decarbonisation and net-zero, taking account of both quantitative and qualitative measures. We are therefore disappointed that Ofgem was not bolder and chose not to introduce a strategy delivery incentive - equivalent to those being introduced for other key areas²². Incentivising an over-arching strategy in this area would have given a strong signal to the companies of the importance of this aspect of their role – and surely must be addressed for ED3.

This aside, we broadly welcome plans for ED2 Environmental Action Plans (EAPs) as follows :

- A single environmental framework - via the EAP - on **company-own decarbonisation**²³ – alongside other key environmental outputs²⁴.
- A **financial output delivery incentive (ODI-F)** based on a balanced score-card approach²⁵ – a preliminary step to financially incentivise environmental outputs which are ‘controllable and measurable’ via an ODI-F. This will provide a stronger incentive-balance overall, given that other ED2 areas are subject to financial output incentives. The actual environmental outputs to be ‘measured’ for the score-card – and their relative ‘weights’ – are yet to be decided. And some activities may not be ‘switched-on’ for every DNO. These decisions are important and be central to future network environmental performance.

[https://www.sustainabilityfirst.org.uk/images/publications/other/Sustainability First - ED2 - Thinking abt a Decarbonisation Framework - v 140720 .pdf](https://www.sustainabilityfirst.org.uk/images/publications/other/Sustainability%20First%20-%20ED2%20-%20Thinking%20abt%20a%20Decarbonisation%20Framework%20-%20v%20140720.pdf)

[https://www.sustainabilityfirst.org.uk/images/publications/other/Sustainability First Low Carbon Incentive in RII02 Discussion Paper FINAL web.pdf](https://www.sustainabilityfirst.org.uk/images/publications/other/Sustainability%20First%20Low%20Carbon%20Incentive%20in%20RIIO2%20Discussion%20Paper%20FINAL%20web.pdf)

²³ Annex 1 Table 40. P. 133. **Decarbonise the networks** : business carbon footprint, electricity distribution losses, SF6 (sulphur hexafluoride) and embodied carbon.

²⁴ Annex 1 Table 40. P. 133. **Reduce the wider environmental impact of network activity** : supply chain management, resource use and waste, biodiversity and natural capital, fluid-filled cables, noise-pollution, NOx & air-quality. Plus, plus undergrounding in Areas of Outstanding Natural Beauty

²⁵ Annex 1. p 140 paras 9.35-9.45

- The decision to introduce **common base-line standards in the EAP**²⁶ – with a penalty via the business plan incentive, should company business plans fall short of those standards.
- A strong expectation on **ambition** on **Environmental Action Plan** – with a possible business plan reward via the consumer value proposition incentive. Cost justifications have to be provided for baseline funding. **Environmental targets in the plan are to be informed by stakeholder engagement and supported by CBAs**²⁷
- **An important new requirement for long-run science-based targets for green-house gas reduction aligned with Paris and net-zero** ²⁸ – and for these to be independently verified by the Science-Based Target initiative²⁹ - with a **linkage to the EAP metrics for business carbon foot-print reduction.**
- **Annual environment reporting** – and very important – to be on a common basis across the companies³⁰
- **An SF6 strategy** – a new requirement for a distribution-level SF6 strategy³¹, which we supported. This new framing is important. Via the ENA, this needs ‘joining-up’ with the transmission SF6 strategies and communicating more widely, including with the supply-chain. SF6 leakage by DNOs is minor compared to transmission leakage but we argued that DNOs should be penalized for increases in leakage, albeit Ofgem rejected this. Hopefully however, as a scope 1 controllable fugitive emission, SF6 leakage by DNOs should become subject to the balanced score-card evaluation of the Business Carbon Footprint element of the ODI-F.

We still have some outstanding concerns on ED2 approaches to environmental regulation which we hope will be resolved as further detail is worked through prior to business plan submission :

- **Outputs and relative weighting for EAP balanced score-card** : the focus on ‘measurable outputs’ for the balanced score-card potentially raises the risk of an increased focus on these areas at the possible expense of those environmental areas which are important but hard to measure - and so have to be qualitatively assessed. Inter al, we see this is a risk for company approaches to distribution losses (section 7).
- **Business Carbon Footprint** : companies are expected to undertake ‘efficient and economic actions to address *controllable* BCF in RII0-ED2’ and achieve SBTi-verified science-based targets and net-zero obligations in the long-term. Detailed definitions for BCF still need final agreement in terms of scopes 1,2 and 3 reporting – including for losses and for embodied carbon. The focus on ‘controllable emissions’ prompts concerns around the treatment of losses (section 7).
- **Baseline standards for EAP** : Ofgem has said it will clarify reporting and metrics in ED2 BP Guidance in January. Consistency is needed with the RII02 ET/GT/GD BP environmental reporting guidance published on 7 January.

7. Electricity distribution losses

- Distribution losses still represent by far the lion’s share of today’s DNO business carbon footprint. And, with ~6-7% of all power transported over distribution networks being lost, losses are a very major efficiency issue, as noted. Ofgem’s approach to treatment of distribution losses remains our main disappointment for the ED2 de-carbonisation and environmental agenda. The methodology has taken a backward step on losses and risks complacency, with an unrealistic

²⁶ Annex 1. Appendix 4. Pp 165-170

²⁷ More detail to follow on Ofgem expectation on EAP in final ED2 Business Plan Guidance. Annex 1 para 9.27

²⁸ Annex 1 – p.165 footnote 69

²⁹ A4.2

³⁰ Annex 1. Appendix 4. Pp 165-170

³¹ Annex 1. Appendix 1. Para A4.3

reliance on reputational regulation alone. Both from a carbon and an efficiency standpoint this seems very short-sighted.

- Dependence on reputational regulation for losses management provides the companies with a weak signal. This is a particular concern should other ED2 incentives give companies a different and stronger signal (e.g. flexibility first; UMs with a utilisation metric – could lead to higher losses). The losses discretionary reward, a modest ED1 financial incentive, has ended and will not be replaced. A financial incentive to support the monitoring, management and reduction of controllable losses identified in the company losses strategies is, in our view, still necessary.
- As noted, companies will be incentivised reputationally on losses via the EAP to ‘implement their strategy’ & ‘contribute to the evidence-base on proportion of losses that network companies can influence / control³². They will also be required ‘to report on the progress of implementing the losses strategy and associated performance measures’. Importantly, if ED2 treatment on losses is the same as for NGET in RII02, the losses metric will **not** be incorporated into the proposed balanced score-card - meaning there would be no explicit financial incentive for loss reduction. **At the very least therefore, for the BCF target which will be one element of the EAP balanced score card ODI-F, losses reported under scope 2 should be included.**
- One other important element is Ofgem’s proposed **treatment of losses in CBAs**³³, but this still needs further clarification. Given the issues around the appropriate value to be used for the

cost of carbon and the value to be placed on the marginal additional capacity that would otherwise be required, the approach Ofgem expects to be taken to CBA needs to be transparent and subject to debate with a full set of stakeholders.

- We also note that Ofgem has left the door ajar for companies to bring forward innovative actions around losses as part of their **Consumer Value Propositions**. We hope that companies will take this opportunity given the importance of the issue.
- We are then left with a fundamental question : **what does reputational regulation mean in terms of managing a complex area like losses ?** Even where in the long-run losses become more about *efficiency* – and less about carbon-reduction – there remain basic questions on how best to reputationally regulate on the value of loss-reduction. In our response to draft RII02 determinations³⁴ we set out the need for Ofgem to reflect more generally on how to make reputational regulation more effective and stressed that a simple reporting requirement on its own is not enough. Some steps to make reputational regulation on losses work in ED2 could be for :
 - **An annual commentary to be produced looking across the companies** - this could be supported by an annual stakeholder event on losses with senior Ofgem participation
 - **For losses to be positioned firmly centre-stage in terms of future thinking on electricity efficiency by Ofgem, BEIS and the DNOs** – (see section 2) including

³² It also seems to be a nonsense that Ofgem, perhaps for historic reasons, still combine together reporting of technical and non-technical losses. One is operational and the other relates to non-metered supplies and to theft - quite different causes and solutions.

³³ A4.4 – p.170 - Societal cost of losses to be updated (from 2013) – *and consider allowing loss-capitalisation calculations - in deciding spend on new low-loss equipment.*

³⁴ <https://www.sustainabilityfirst.org.uk/consultation-submissions/89-ofgem-riio2-draft-determinations-for-gas-and-electricity-transmission-t2-gas-distribution-gd2-and-electricity-system-operator-eso-riio2-price-controls>

follow-on from the independent review of electrical engineering standards.

8. Environmental Resilience³⁵

We support Ofgem proposals on environmental resilience in the face of climate change, including Ofgem encouragement for the DNOs to take steps for mitigation and adaptation. We welcome Ofgem’s proposal for distribution networks to produce a new **climate resilience strategy**, to be assessed as a part of the ED2 business plan incentive. We also welcome the proposal to establish a new DNO working group to focus on climate resilience in order to consider the strategies and actions by DNOs across all resilience activities over the lifetime of their assets. We also support Ofgem’s wish for this group to draw on wider climate change adaptation expertise. Last, we also support Ofgem’s wish to consider whether it is appropriate and feasible for this working group to be extended to, or replicated by, the transmission and gas distribution networks³⁶.

Vulnerability, Consumers and Stakeholders

9. Customers in Vulnerable Circumstances

The pandemic and prospects of a long path to national economic recovery mean that affordability sits extremely high on the agenda of many people – be they individuals or business. Ofgem will need to remain flexible, as it did for GD2, in determining the appropriate level of support to be provided as the fallout from the pandemic becomes clearer.

Sustainability First feels that Ofgem could have helpfully gone further on **embedding inclusivity** in the ED2 methodology - both for company baseline plans and for vulnerability strategies. By adopting an inclusive approach networks can ensure that their

services better meet the needs of all customers not just those identified as vulnerable. Consumer engagement groups and the challenge group will wish to see strong commitment to inclusion embedded in company business plans. Sustainability First has a longstanding and active interest in support for customers in vulnerable circumstances. This includes promoting energy company ambition, embedding inclusivity and supporting innovative actions³⁷. We therefore welcome Ofgem’s decision to ‘bake-in’ the performance improvements achieved during the past 8-year ED1 period into new baseline standards. We also welcome the planned new Strategy Delivery Incentive on vulnerability for ED2, designed to ensure companies deliver their strategies and strive to go further, given they face a potential penalty or reward. Our more detailed points are as follows.

- **New vulnerability principles-based licence obligation³⁸** : DNOs to treat customers fairly, especially those in vulnerable situations. ‘Treat customers fairly’ is a standard formulation used in supply licences and GD2 but may need clarification.
- **ED1 improvements - baselined into ED2 standards** – welcome potential for a penalty under the Business Plan Incentive if the business plan falls short of these standards.
- Welcome clearer Ofgem recognition in the baseline standards that **(i) vulnerability can be transient and may evolve in the transition³⁹** and **(ii) that DNOs should have an extensive network of partnerships with a range of organization types, from multiple sectors including other utilities⁴⁰**
- **Strategy** – we welcome the requirement for companies to produce a strategy that focuses on: vulnerability to loss of supply; being in, or at risk of fuel poverty; risk of being left-behind in transition and that an ambitious strategy can

³⁵ Annex 1 – VFM for Customers p 116-123 & Table 32 on Climate Resilience

³⁶ para 8.97

³⁷ Sustainability First. Project Inspire -

<https://www.sustainabilityfirst.org.uk/inspire>

³⁸ 6.4 including a detailed vulnerability definition from Ofgem Vulnerability Strategy 2025 – Annex 1. P 55 footnote 16

³⁹ A3.4 p 163

⁴⁰ A3.5 p 163.

attract a potential Consumer Value Proposition (CVP) reward⁴¹.

- **Vulnerability strategy delivery incentive⁴²** - we welcome that delivery of the vulnerability strategy will be subject to a financial incentive – and agree that the individual activities proposed under the strategy do *not* therefore need to be considered as bespoke outputs. We also welcome that companies will have to produce an annual report on progress against the strategy, including against key metrics
- **Network Innovation Allowance (NIA) and vulnerable customers** – we very much welcome that of the two areas singled out for funding in the ED2 NIA, one area is on vulnerable customers⁴³. We very much hope that companies and others will look actively at how to make the most of this important opportunity.
- Welcome that DNOs have to consider - **as they develop their DSO strategies** - how to engage vulnerable customers in flexibility markets or otherwise promote their interests – and **to highlight how their DSO strategy is coherent with their vulnerability strategy⁴⁴** .
- We welcome retention of licence obligations on the Priority Services Register and provision of support in a supply interruption.

10. Research on Customer Preferences

There are two important areas of customer research - used to inform the price control settlement – on which there is a need for a broader debate on the approach to be taken going forward. This includes the merits of DNOs doing their own research versus Ofgem taking a central view. This debate should involve the CEGs (consumer engagement groups) given their

particular remit and expertise around consumer research and engagement..

- **Willingness to pay research** ; there are strong arguments for Ofgem to set out its own expectation on how this market research to explore customer preference on company priorities and on customer thinking on trade-offs, including on energy bill price increases - sits within the ED2 price determination process. In particular, there is need for more clarity on how Ofgem sees research outcomes feeding through into business plan development. And also in coming to their own final views, what lessons Ofgem itself might draw from research commissioned by the companies, either individually or collectively. This seems important given that Ofgem does not plan to commission explicit customer research itself to feed into their price determination thinking. There are concerns that in the GD2 process Ofgem placed little or no weight on the consumer research that companies carried out. Given the significant cost of this research it is important that Ofgem sets out its expectations more clearly including how it will take such research into account.
- **Value of Lost Load research** : VoLL is a fundamental metric of customer ‘willingness to accept’ a loss of supply. Historic research on this topic underpins cost assessments for distribution network design, planning and investment as well as the incentive rate for the IIS on interruptions. For ED2 Ofgem simply proposes to update the ED1 figure by inflation (to £21,000/MWh). The ED1 figure in turn was based on the T1 figure which drew on a range of historic studies. Ofgem has not opted to take on board recent and comprehensive DNO research that identified

⁴¹ Draft BP Guidance sets out strategy guidance (6.8). Funded via baseline allowances. Activities proposed in strategy will *not* be bespoke outputs (Annex 1. 6.32 - footnote 19)

⁴² ODI-F - +/-0.5% base-funding. Evaluation periods – to be decided. Para 6.45

⁴³ NIA to be focused on the energy system transition *and vulnerable consumers* (Overview. 4.66 – p 44)

⁴⁴ DSO baseline - A1.7 p 78. Vuln customers – 6.39 p 64.

the likely importance of a differentiated VoLL for different customer segments in an increasingly power-dependent world⁴⁵. A similar conclusion on the need for a differentiated VoLL was also recently reached by the Independent Electrical Engineering Standards Review for BEIS and Ofgem. We see this as an important issue on which a proper review is well overdue, including the merit or otherwise of differentiation by customer archetype. We hope that Ofgem will do so during ED2. Ofgem could also usefully make clear how it sees VoLL analysis sitting alongside wider WTP work carried out by the companies which will also touch on attitudes to improved reliability for example.

11. Enhanced Stakeholder Engagement

Enhanced stakeholder engagement was placed at the centre of the initial RIIO2 strategy by Ofgem, with active encouragement of wide-ranging stakeholder inputs into company business plan development, supported by new customer engagement and user groups to challenge the companies on their business plan development (but not financing). An Ofgem challenge group⁴⁶ was also set up to look across all the business plans (including on financing and cost issues). For the RIIO2 determinations (electricity and gas transmission, gas distribution) we have already seen some uncertainty and concern as to how stakeholder views were factored into the different stages of Ofgem decision-making, in particular at draft determinations. Also importantly, there is still some ambivalence as to how far Ofgem is committed to the current engagement groups enduring in their current form⁴⁷. This despite a very experienced and able cohort that now exists country-wide, extremely well-placed to hold the companies' feet to the fire on delivery of their business plan promises.

⁴⁵ e.g ENWL NIC project. £17k/MWh avg h/hld; £47k/MWh avg SME

⁴⁶ Sustainability First is a member of the Ofgem challenge group

Rightly, Ofgem is presently evaluating the RIIO2 enhanced stakeholder engagement process. Regrettably for ED2, this creates a further element of uncertainty as to how inputs from the enhanced engagement process are to be weighed by Ofgem. This needs speedy clarification by Ofgem so that the ED2 customer engagement groups and also the companies, have a full understanding of what enhanced engagement means in practice in terms of shaping the draft and final ED2 determinations. As noted, Ofgem does not have its own arrangements for direct stakeholder input during the price control process. Absent this, Ofgem needs all the support it can get from the enhanced stakeholder process: first to help test and develop robust business plans which are able to deliver at least-cost both for consumers and for decarbonisation; and second, for some on-the-ground insight that plans are being delivered as promised.

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⁴⁷ In practice, all RIIO2 companies (electricity & gas transmission, gas distribution) committed in their business plans that their user and engagement groups would continue for the coming 5-year period of the RIIO2 price control.