

Energy Systems Catapult: Consultation Response

Ofgem – RIIO-ED2 Sector Specific Methodology Consultation

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Energy Systems Catapult (ESC) was set up to accelerate the transformation of the UK's energy system and ensure UK businesses and consumers capture the opportunities of clean growth. The Catapult is an independent, not-for-profit centre of excellence that bridges the gap between industry, government, academia and research. We take a whole systems view of the energy sector, helping us to identify and address innovation priorities and market barriers, in order to decarbonise the energy system at the lowest cost.

ESC welcomes Ofgem's consultation on RIIO-ED2 Sector Specific Methodology and its increased focus on decarbonisation, innovation, digitalisation, DSO transition and the need for a whole system approach. We particularly welcome the recognition of the potential role that Local Area Energy Planning can play in informing network investment plans and the ongoing implementation of Modernising Energy Data programme, which we supported as a delivery partner for Ofgem's work on Data Best Practice guidance. In addition to responding to the specific issues that Ofgem are consulting on, we would like to offer some broader strategic observations.

As part of the Decarbonisation Action Plan, Ofgem has already communicated to companies the expectation that their business plans must demonstrate how they put the UK on the path towards net zero while stressing the importance of embedding coordination and flexibility into the design of the RIIO-2 price controls¹. RIIO-2 presents an opportunity to change the emphasis of "business as usual" towards the reality of new net zero targets and should be used to encourage companies to **take responsibility for understanding what the net zero targets mean for their individual businesses, including the impact of local, regional and national decisions on the speed, timing and nature of investment required from them.**

Broader observations

We strongly support the view that new technologies, better use of data and greater flexibility in how the system operates will be critical to ensuring Net Zero progress is achieved more efficiently. We welcome Ofgem's emphasis on incentivising progress in areas which we have long supported² as critical steps for innovation and the energy transition, including action to:

- Support development of distribution system operation functions, including proposed steps to retain optionality to allocate functions to other parties in future;
- Introduce new licensing obligations linked to digitalisation, data modernisation, and making information available in open and transparent manner;
- Emphasise the need for network companies to account for the impact of their actions across the whole energy system.

¹ https://www.ofgem.gov.uk/system/files/docs/2020/02/ofg1190_decarbonisation_action_plan_revised.pdf

² <https://es.catapult.org.uk/reports/energy-data-taskforce-report/>
<https://es.catapult.org.uk/brochures/systems-thinking-in-the-energy-system/>
<https://es.catapult.org.uk/case-studies/interoperability-in-the-energy-sector/>

- Jointly commissioning a review of electrical engineering standards, including proposed consideration of their impact on security and resilience, smart appliance and network interoperability, and how smart technologies and distributed energy sources can supplement the need for traditional network reinforcement.

We also welcome Ofgem's commitment to make the network price control regulatory regime more adaptive to facilitate the Net Zero transition in conditions of high uncertainty regarding future decarbonisation pathways, although additional clarity around the design of uncertainty mechanisms would be critical to support the transition. As highlighted below, **we see an essential role for strong, well-evidenced Local Area Energy Planning processes to future delivery of net zero and the emerging role of network companies**. LAEP can and should play a more central role in reforming and reframing the approach to infrastructure network regulation in a way that is consistent with delivery of net zero.

The SSMC document explicitly references the role of LAEP in relation to issues around strategic investment. We believe its relevance extends wider and potentially should play a key role in addressing the challenges referenced in, for example, chapters 6 (DSO transition), 7 (A whole system approach), Annex 1 (approach to setting outputs and incentives) and Annex 2 (the Business Plan Incentive) of the sector specific methodology document. It is important that Ofgem's framing of the sector specific methodology sends a clear signal to the industry about the importance of more robust local planning and evidence to the 'fundamental change in how we design network price controls' that it states is required.

Strategic investment and Net Zero

We welcome the initiative to develop Local Area Energy Planning (LAEP) methodology and create guidance targeted at DNOs³, along with its suggested use in relation to strategic investment. **We view Local Area Energy Planning as central to the future delivery of net zero and an important transformative building block of a new way of engaging with stakeholders and embedding a whole energy perspective more firmly into energy infrastructure planning and strategic choices at local and regional level**. RIIO-ED2 can begin a shift to a more decentralised planning approach involving local and regional authorities as key leaders of the LAEP process, but requiring network companies not only in the electricity, but also gas and heat network sectors, to participate actively in the process providing both open access to data and technical expertise.

We favour a combination of strategic investment models, which **place responsibilities on DNOs to develop business plans accounting for national and regional targets, as well as local plans**. Given the likely difference in pace of decarbonisation and the combination of energy vectors across localities, the case for incentivising the use of robust evidence based on local and regional information is strong. We view the proposed Price Control Deliverables with funding triggers linked to a regional plan as a key potential mechanism to enable responsiveness during the price control period.

Whole system Local Area Energy Planning can play a key role in helping companies build net-zero ready investment plans that are responsive to stakeholder input and recognise multi-vector

³ <https://es.catapult.org.uk/reports/local-area-energy-planning-the-method/>

dependencies potentially outside their control, including local and regional pathways for heat and transport decarbonisation.

While fully rolling out LAEP is likely to be unrealistic in the timelines available for business plan submission, Ofgem should send a clear signal to DNOs that they should progress the use of local planning techniques and analysis as much as possible at pre-submission stage, in line with methodology guidance developed by ESC and CSE for Ofgem. There is also scope for further trials and testing during the 2023-28 period to establish transparent industry-wide processes and analytical frameworks for the development of Local Area Energy Plans.

We welcome the proposal to develop licence conditions that require DFESs to be produced in consistent manner, be auditable, for data to be fully available and to demonstrate how such data is used as an input into the Network Development Plan for a five-to-ten year time window⁴. We believe that LAEP can play a key role in strengthening the development of DFES or equivalent demand forecasting by DNOs and **see a strong case for defining the delivery of LAEPs across DNOs entire area of appointment as a Price Control Deliverable during the price control period.**

Robust LAEP can help generate regional forecasts for investment planning which address some of the main concerns Ofgem raises in connection to potential deviation from central forecasting methods⁵, including:

- Transparency and confidence in the process DNOs have followed to establish regional plan
- Clarity of assumptions underpinning growth scenarios
- Appropriate stakeholder engagement process
- Increased level of transparency and open access to data that surrounds the process
- Evidence of structured and effective consultation with national and local stakeholders and supported by leadership from democratically accountable bodies.

As highlighted in Appendix 3 of the overview document⁶, after plans are developed, DNOs can use them to agree with local stakeholders the triggers to be attached to them to indicate when that investment might be required and identify scheme solutions. Additional revenue can be allocated to each scheme and revenue adjusted automatically. To ensure whole system integration, this process and requirement can be applied to other network licensees, including GDNs and TOs, many of which have already expressed support for LAEP approaches through their recently submitted business plans⁷. Aside from serving **as evidence to justify anticipatory and other strategic investment during the price control period and being defined as part of a Price Control Deliverable, Ofgem should indicate that robust LAEPs will be viewed as key sources of evidence required to support the use of reopeners, in particular the proposed Net Zero Reopener.**

The role of local and regional government in LAEP process is central, and we support parallel investment by central government in local authorities' capacity and capability to convene and shape LAEP development and implementation. It is important that DNOs do not assume a

⁴ Para 7.27, Annex 2

⁵ Paragraphs 7.23 – 7.26 (Annex 2)

⁶ https://www.ofgem.gov.uk/system/files/docs/2020/07/ed2_ssmc_overview.pdf p82

⁷ <https://www.ofgem.gov.uk/publications-and-updates/reports-ofgem-riio-2-independent-customer-engagement-groups-and-user-group-energy-network-company-business-plans-riio-2>

dominant position of influence over the process⁸, although it is essential that they are key partners in the development of the plans.

LAEP can form part of multi-level planning processes, including through regional structures like Combined Authorities, Local Enterprise Partnerships, Regional Economic Partnerships and proposed Statutory Joint Committees to mitigate the risks of regional or national mis-coordination. Coordination between Ofgem and national and regional governments and institutions would be key to support implementation. To ensure that DNOs' work is carried out in full partnership with local and regional stakeholders, including building genuine consent from citizens and consumers, requirements should be put in place for them to demonstrate effective engagement as part of Price Control Deliverable review process.

Investment in internal capabilities

The RIIO-ED2 price control period will require significant changes to the way companies operate and approach parts of their businesses and development of enhanced internal capabilities would be critical. In addition to improved forecasting, simulation and network modelling capabilities, highlighted in the context of Ofgem's basic expectation of DSO transition, the development of skills such as enhanced stakeholder engagement and digital and data skills would also be key.

Ofgem itself may want to consider strengthening internal capability to scrutinise company's LAEP analysis and forecasts in the context of whole energy system decarbonisation, multi-vector interactions and alternatives for local, regional and national energy systems (incl. role of hydrogen or heat networks in certain areas).

Comments on the specific consultation questions - Overview Document Interlinkages and CMA Appeals in RIIO-2

OVQ1 Do you have any views on our proposal to include a statement of policy in Final Determinations that in appropriate circumstances, we will carry out a post appeals review and potentially revisit wider aspects of RIIO-2 in the event of a successful appeal to the CMA that had material knock on consequences for the price control settlement?

No response

OVQ2. Do you have any views on the proposed pre-action correspondence, including on the proposed timing for sending such to Ofgem?

No response

Net Zero and Innovation

OVQ3 Do you agree with our proposed approach to a Net Zero re-opener?

We support the introduction of a Net Zero re-opener as a way to ensure the price control is adaptable and support network companies in addressing uncertainty as the Net Zero policy framework and technology environment develops. However, the Net Zero re-opener as currently put forward is only loosely defined in terms of trigger events and scope. Ofgem must consider the extent to which this could result in delays or inaction by DNOs and ensure that its practical implementation is considered in more detail given the previous experience of re-openers and net zero timescales. As highlighted

⁸ Para 7.23, Annex 2

above, LAEP process can play an important role in providing evidence to inform a Net Zero reopener, or alternatives put forward to address change in investment needs during the price control period.

Strategic Investment for Net Zero

OVQ4 In what circumstances, would a centralised approach to setting forecasted outputs be appropriate? What form should this take?

In our view, an approach in which Ofgem establishes forecasting parameters directly on behalf of DNOs is not appropriate, as forecasting business impact in changing circumstances should be reserved responsibility for company owners as the nature of their business transitions in response to net zero targets. It is also not immediately clear in what circumstances Ofgem might be in a better position to devise a central forecast scenario or specify forecast volume of LCTs that DNOs should plan to accommodate in their network areas, or different regions. Although technical constraints might limit the availability/suitability of certain energy solutions in certain areas (eg. Hydrogen), the uncertainty around precise timing, need or scope of investment would likely remain high, especially in early part of price control period.

We favour approaches in which requirements are placed on DNOs to demonstrate how their forecasts and investment plans are consistent with national policy, supplemented with additional assessment of regional and local considerations, informed by LAEPs in line with CSE/ESC methodology guidelines. To implement this in practice, Ofgem can require companies to demonstrate consistency with national policy in the first instance as part of business planning, combined with formal requirements, rewards and penalties linked to their engagement in understanding local implications of net zero through decentralised planning approaches, including via support for the development of Local Area Energy Plans during the price control period.

We welcome the proposal to develop licence conditions that require DFESs to be produced in consistent manner, be auditable, for data to be fully available and to demonstrate how such data is used as an input into the Network Development Plan for a five-to-ten year time window⁹. We believe that LAEP can play a key role in strengthening the development of DFES or equivalent demand forecasting by DNOs, and therefore see a strong case for defining the delivery of **LAEPs across DNOs entire area of appointment as a Price Control Deliverable during the price control period.**

In particular, a robust LAEP if appropriately conducted can help generating regional forecasts for investment planning which address some of the main concerns Ofgem raises in connection to potential deviation from central forecasting methods¹⁰, including:

- Transparency and confidence in the process DNOs have followed to establish regional plan
- Clarity of assumptions underpinning growth scenarios
- Appropriate stakeholder engagement process
- Increased level of transparency and open access to data that surrounds the process
- Evidence of structured and effective consultation with national and local stakeholders and supported by leadership from democratically accountable bodies

⁹ Para 7.27, Annex 2

¹⁰ Para 7.23 – 7.26 (Annex 2)

Importantly, by taking a **multi-vector perspective, the LAEP process supports the identification of whole energy system impacts**, including trade-offs which might be missed if focused is placed on single vectors like electricity or gas.

OVQ5 What would be the factors we should take into account that would give us high certainty in a centralised approach to setting outputs?

No response

OVQ6 Alternatively, in what circumstances would it be more appropriate to take a decentralised approach to determining forecasts?

No response

OVQ7 What would be the factors that we should take into account that would give us high certainty in forecasted outputs derived through a decentralised approach?

As highlighted in the LAEP Best Practice guidance, produced by the Centre for Sustainable Energy and the ESC, multiple factors need to be taken into account to ensure decentralised approaches result in highly robust plans and forecasted outputs. As indicated in the document four key elements of LAEP in combination can support positive outcomes, including:

- Robustness and consistency of technical analysis that underpins evidence, including consideration of general approach and quality assurance/validation
- A comprehensive assessment of non-technical aspects and understanding wider determinants of success
- Evidence of effective social process and engaged stakeholders
- Evidence that the plan is realistic and deliverable, including endorsement and commitment from key local stakeholders and monitoring and review processes

OVQ8 Do you consider that the LAEP Best Practice guidance produced by the Centre for Sustainable Energy and the Energy Systems Catapult provides adequate checks and balances to ensure that local or regional energy plans are robust, unbiased and have broad support?

We believe the four critical elements of LAEP and the quality criteria for each element should provide sound basis to develop well-informed, robust and comprehensive local plans. To enable roll-out of an LAEP process, further pilot programmes would be needed to establish common approaches, data sharing, and methodologies, and test quality assurance, verification and governance processes.

Our experience suggests that collaborative and open dialogue between local government, network operators, local citizens, and businesses is critical for the success and effectiveness of the planning process and converting its outputs into actionable plans. Local authority legitimacy and ownership is key to the LAEP process, and strategic partnership with infrastructure providers and local stakeholders is necessary to implement it. We stress that the role of local and regional government in LAEP process is central, and parallel investment in local governments' capacity and capability to support local net zero transition and LAEP implementation would be necessary, including as means to counteract a potential position of influence of DNOs or other network providers over the nature of resulting plans.

OVQ9 Which of the uncertainty mechanisms and incentives in Appendix 3 will be most effective in enabling efficient strategic investment?

Additional details on the proposed design of the uncertainty mechanisms would be helpful to assess their potential effectiveness. As highlighted above, we suggest that the delivery of LAEPs could be set as a **Price Control Deliverable**. We also think that Ofgem should signal that relevant uncertainty mechanisms/reopeners will need to be supported by evidence from LAEP processes/analysis before they can be triggered. This would place a strong incentive on DNOs to build up robust local analysis and understanding of how their investment plans at local level are impacted by the emerging transition to net zero.

The Net Zero reopener proposed for all network companies and Strategic Investment Load Related Expenditure reopener or volume driver proposed for DNOs may create potential overlap and if both are taken forward could lead to unnecessary complexity. The materiality thresholds in place for the reopeners may make the mechanism unsuitable to use in cases where anticipatory investments in specific projects of smaller scale is necessary (e.g. to support accelerated local or regional decarbonisation paths where appropriate).

OVQ10 Do you agree with our proposals to increase levels of BAU innovation?

We strongly support the view that companies should increase level of BAU innovation and welcome proposals to reform innovation funding with focus on key energy system transition challenges and opportunities; greater coordination of public sector innovation funding; and enabling increased engagement from third parties. This will allow greater competition in network-related innovation. Our extensive experience with innovators large and small underline the potential for new technologies and business models to create innovations that can deliver better outcomes for consumers, particularly related to digital and smart technologies. Linking this spending to Ofgem's Sandbox, will help further de-risk innovation in the sector. To ensure the benefit of this innovation is fully captured to benefit consumers and society, we stress the importance of knowledge sharing, so that successful innovations funded through past innovation stimulus spending are rolled out.

OVQ11 Do you agree with our proposed methodology in relation to the RIIO-2 Strategic Innovation Fund?

We welcome that SIF will focus on future-facing strategic challenges and favours cross-sector collaboration projects, which can support whole system solutions to some of the more complex decarbonisation challenges like heat, transport and industry. Some of the most important innovation challenges for the shift to a Net Zero economy are likely to be at the supplier/network interface, so it is important that exploring how behind-the-meter innovations and consumer behaviour interacts with future network design. SIF will rightly support relatively large projects, in this case further clarity is required around percentage funding that will be borne by customers. Due to the significant budget difference between a typical NIA project and proposed SIF projects, it will be important to consider potential options to fund ideas falling within the budget gap, but not taken forward as BAU innovation.

OVQ12 Do you agree we should adopt a consistent NIA framework for DNOs, and other network companies and the ESO?

No response

OVQ13 What are your thoughts on our proposals to strengthen the RIIO-ED2 NIA framework?

No response

OVQ14 Do you have any additional suggestions for quality assurance measures that we could introduce to ensure the robustness of RIIO-2 NIA projects?

One important factor is that robust baselining and evaluation are pre-requisites for NIA projects. In addition, it is important that findings are made public where possible, so that the benefits and learnings of innovation can be clearly captured, including where innovations have not succeeded.

OVQ15 Do you agree with our proposed approach for setting individual levels of NIA funding?

No response

Modernising Energy Data

OVQ16. Do you agree with our approach to regulating digitalisation and better use of data through the introduction of cross-sector licence obligations?

Yes, we support the introduction of cross-sector licence obligations requiring regular publication of updates to a Digitalisation Strategy & Action Plan, and requiring use of data to meet the expectations of Data Best Practice guidance including delivering the EDTF recommendation for treating data as “presumed open” and carrying out a data triage process to identify and manage sensitivities associated with the data as included in its current draft form. We also stress the importance of making network planning information available in digitalised and open manner, and the need for DNOs to have an effective process for sharing such information, not only with network licensees, but wider network users, as highlighted in Paragraph 7.36 of Annex 2. This will be important to support identification of alternatives to traditional network solutions and encouraging innovation. Formal requirements should be considered as part of the proposed cross-sector licence obligations if this aspect is not incorporated already.

DSO transition

OVQ17. Do you agree with the proposals we have set out to support optionality for wider institutional change should we later decide to separate DSO functions from DNOs? How else could the methodology support optionality?

We support the proposals to introduce new ways of cost reporting, develop a DSO-focused incentive framework and use price control mechanism and other regulatory measures to drive interoperability and use of common data standards as technical enablers of to support optionality for wider institutional change and potential separation of DSO functions.

OVQ18. Do you agree with our proposal to use the Business Plan Incentive to encourage companies to reveal standards of performance higher than our baseline expectations in their DSO strategies? Do you agree we should require, where appropriate, all DNOs adopt these revealed standards?

Yes, we support the proposal to utilise Business Plan Incentive (BPI) and Consumer Value Proposition (CVP) mechanisms to penalise or reward companies whose DSO strategies do not meet or exceed baseline expectations for DSO strategy development.

OVQ19. Do you agree with our proposal to invite companies to provide metrics and performance benchmarks in their DSO strategies?

Yes, although we believe it would be beneficial to seek direct feedback from network customers to understand what they consider important in terms of DSO service offerings and quality and utilise the information to set benchmark expectations and evaluate ex-post performance. This should

include seeking input from existing **third-party innovation projects** developing smart and flexible solutions at distribution network level which have already engaged indirectly with DSO functions or are developing solutions that rely on them (e.g. UKRI's Prospering from the energy revolution programme¹¹, BEIS' FleX (Flexibility exchange demonstration competition)¹², Cornwall LEM¹³).

OVQ20. Do you agree with our proposal to introduce a DSO ODI in which we would, via an ex post incentive, penalise or reward companies based on their delivery against baseline expectations and performance benchmarks? If so, what criteria and other considerations should take into account in determining whether we should apply a reward or penalty?

Yes, we generally support the introduction of DSO ODI including its utilisation at mid-point and end of the price control period as a way of monitoring progress on DSO function implementation. As highlighted in OVQ19, we believe wider feedback should be sought beyond network companies to inform expectations.

OVQ21. Do you agree with our proposal to undertake that ex post incentive performance assessment in the middle and at the end of the price control? Do you think the assessment should be more or less regular?

See OVQ20. More regular assessments can be beneficial to incentivise continuous progress.

OVQ22. Do you have views on how we might set appropriate values for rewards and penalties associated with the DSO ODI?

No response.

OVQ23. Do you agree with the DSO roles, principles and associated baseline expectations in Appendix 5? Does it provide sufficient clarity about the role of DNOs in RIIO-ED2? Do you think amendments or additional baseline expectations are required?

Yes, we agree with the roles, principles and baseline expectations. We in particular highlight the need to encourage the development of well-functioning short-term markets and adequate price signals about location value of flexibility and encourage DNOs to actively facilitate third party market interactions, including when they are independent of individual DSO service procurement

A whole system approach

OVQ24. Are there any electricity distribution specific barriers to whole system solutions, and if so, are there any sector specific price control mechanisms to address these?

We are not aware of specific barriers to whole system solutions for electricity distribution businesses and welcome the initiative to request demonstrable evidence of cross-sector engagement, optioneering, and planning with licensees in sectors or vectors other than their own as part of Business Planning guidance¹⁴. We also support the view that licensees should develop processes systematically embedding whole system thinking in corporate policy and not rely on ad hoc engagement¹⁵. We highlight that LAEP process can serve as useful tool for these purposes.

¹¹ <https://www.ukri.org/innovation/industrial-strategy-challenge-fund/prospering-from-the-energy-revolution/>

¹² <https://www.gov.uk/government/publications/flexibility-exchange-demonstration-projects-flex-competition>

¹³ <https://www.centrica.com/innovation/cornwall-local-energy-market>

¹⁴ Para 4.25. Business plan guidance

¹⁵ Para 7.10, SSCM

OVQ25. Are there any electricity distribution specific issues you think should be accounted for in the Business Plan Incentive?

No response

OVQ26. Do you agree that whole system solutions are relevant to the innovation stimulus?

Yes, we support the intention to stimulate new approaches to whole system solutions and encourage whole system thinking in innovation strategies.

OVQ27. Do you agree with our key proposals for the CAM?

No response

OVQ28. Do you consider that two application windows, or annual application windows, are more appropriate, and should these be in January or May?

No response

OVQ29. Do you consider that the current electricity distribution licences should be amended to include the CAM, or wait until in 2023 at the start of their next price control?

We believe the current licence should be amended to encourage earlier interaction with whole system thinking and stimulate development of tools and processes.

Access Significant Code Review and impact on RIIO-ED2

OVQ30. Do you agree with the impacts of our potential Access SCR proposals that are identified in this Chapter? Are there additional impacts that are not identified?

As highlighted in our response to the Open Letter consultation on shortlisted policy option for the proposed Access SCR¹⁶, we think some of the more sophisticated market and policy arrangements can benefit the creation of more accurate price signals to reveal the value of flexibility and impact other aspects of the energy system including demand side response. It will be helpful to clarify Ofgem's thinking and direction of travel regarding the longer term and what this means for the strategic development and coordination of reforms to network tariffs and other relevant mechanisms. We also highlight the need to better understand consumer and 'behind-the-meter' responses to different signals and market arrangements, which can indirectly impact network businesses during the price control period.

OVQ31. Do you agree with the proposed Access SCR baselines for the RIIOED2 business plan submissions (ie that Draft RIIO-ED2 Business Plan submissions should use Access SCR Minded to Consultation as a baseline, and that Final Business Plan submissions should use Access SCR Final Decision as a baseline?)

No response

OVQ32. How do DNOs propose to demonstrate the impact of our Access SCR reforms on RIIO-ED2 Business Plans?

No response

¹⁶ <https://www.ofgem.gov.uk/publications-and-updates/electricity-network-access-and-forward-looking-charging-review-open-letter-our-shortlisted-policy-options>

OVQ33. What further guidance might be required from us to allow DNOs to identify the parts of their draft Business Plan submissions that could be impacted by our Final Decision of the Access SCR?

No response

Impact of COVID-19 on the price controls

OVQ34 Do you think we need specific mechanisms in RIIO-ED2 to manage the potential longer-term impacts of COVID-19? If yes, what might these mechanisms be?

No response