

Consultation on approach to setting the next electricity distribution price control (RIIO-ED2)

Response on behalf of the Solar Trade Association

About us

Since 1978, the Solar Trade Association (STA) has worked to promote the benefits of solar energy and to make its adoption easy and profitable for domestic and commercial users.

A not-for-profit association, we are funded entirely by our membership, which includes installers, manufacturers, distributors, large scale developers, investors and law firms.

Our mission is to empower the UK solar and storage transformation. We are paving the way for solar to deliver the maximum possible share of UK energy by enabling a bigger and better solar industry.

Respondent details

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Would you like this response to remain confidential?	No

Introduction

Thank you for the opportunity to provide comment on the proposed approach to setting the next electricity distribution price control (RIIO-ED2). We are encouraged to see Ofgem's stated commitment to establishing a price control framework that "enables people to produce their own energy and sell it easily", and that "supports the target of net-zero carbon emissions for 2050 by enabling the rapid rollout of low carbon technologies."

Solar PV is a critically important low carbon technology, and has been identified by the Committee on Climate Change as the lowest cost option for power sector decarbonisation¹. The growth of the solar PV industry is a UK success story, with the industry growing from less than 100 MW installed capacity in 2010 to more than 13,400 MW in 2019. Over the past 12 months, solar PV has contributed 4% of Britain's total electricity generation (surpassing coal, at 3.5%), in the process preventing almost 2.7 million tonnes of CO₂-equivalent emissions from entering the atmosphere.

In the absence of any subsidy mechanisms or policy support, the continued deployment of new solar PV will depend on the design of the regulatory and incentive framework in which the network companies operate. Our member companies consistently report that the cost, complexity and delays associated with obtaining a network connection is the single greatest barrier to new development. Citing new research from Vivid Economics and Imperial College, the Committee on Climate Change state:

Significant new renewable generation capacity is needed to accommodate rapid uptake of electric vehicles and hybrid heat pumps. Over the period to 2035, up to **35 GW onshore wind, 45 GW offshore wind and 54 GW solar PV could be needed**. Further deployment is likely to be needed over the period to 2050. The UK's onshore wind, offshore wind and solar PV resource are likely to be more than adequate to deliver an expanded and decarbonised electricity system to 2050.²

It is incumbent on the network companies to establish an enabling environment for the electrification of heat, transport and industrial processes to take place, including by enabling this growth in variable renewable generation capacity.

¹ Net Zero Technical report - Committee on Climate Change - May 2019

² (Ibid)

1. Do you have any views on the proposed objective for RIIO-ED2?

It is encouraging to see the positive language and overall emphasis placed on prioritising decarbonisation. The different objectives identified appear appropriately balanced. We note the specific reference to the priority that “network companies must enable the transition to a smart, flexible, low cost, and low carbon energy system for all consumers and network users.”

2. To what extent should we take into account outcomes linked to decarbonisation targets, and what outcomes might this involve?

It is imperative that the objectives and incentives of the price control framework be completely aligned with the UK’s legally binding 2050 Net Zero commitments. Our members consistently report that a lack of grid capacity and the cost, delays and uncertainty associated with obtaining a connection are the largest barrier to new subsidy-free solar deployment. We have identified the following specific outcomes as potential criteria to be linked to network decarbonisation targets:

- Undertaking proactive network reinforcement in areas facing congestion constraints to enable a greater volume of low-carbon technologies to connect
 - Enabling standardisation of connection on relevant foreseeable infrastructure.
- Ensuring better coordination and provision of system data:
 - Providing renewable energy developers with up-to-date and readily accessible information (i.e. heat maps) indicating network congestion
 - Extending the asset registration work currently ongoing under the ENA Open Networks Product 8: System Wide Resource Register to smaller-scale generation, storage and flexible demand (e.g. 50 kW), so as to provide better visibility to system operators
- Prioritising connection applications for renewable generation and energy storage over thermal generation, and prioritising flexible demand/storage (e.g. to be demonstrated through a pre-existing DSR agreement or something) over inflexible demand
- Implementing a standardised Assessment & Design (A&D) Fee charging methodology across GB, and extending the Scope of Works mandated to be carried out in delivery of the A&D to assure the point of connection is fit for purpose and aligned with the needs of the generator
 - Too many times, the connection becomes inappropriate due to lack of basic works being performed. Additional costs and time delay are just assumed to be appropriate at a pace set by a DNO post-acceptance.
- Mandating STA best practice recommendations on avoidance and mitigation of RE curtailment
 - Avoiding outages during daytime and during summer for solar PV
 - Aligning TN and DN planned maintenance activities to minimise number and duration of outages
 - Providing at least 3 months advance notice of planned outages and proactively offering generators with mitigation options
 - DNOs must ensure that they have correct contact info for staff on the generator side and communicate with them using standardised terminology
- Mandating prioritisation of zero-carbon generation and storage across all applicable innovation funding competitions, in lieu of a technology-neutral approach, and cancelling any innovation funding that would

3. Are there activities that DNOs are best placed to carry out in order to achieve these outcomes? What are the alternatives? Why would it be appropriate for energy consumers to fund these activities?

RIIO is the primary mechanism for delivering decarbonisation of electricity networks under the current system. We view the DNOs as uniquely capable of carrying out a wide range of functions pertinent to decarbonisation, including:

- Standardising connections with proactive engineering works.
- Reviewing of each DNO protection and control policies to assure safety and resilience is maintained
- Reviewing P2/6 security with a view to augment an accelerated path to decarbonisation for renewables integration recognising the full spectrum of impacts

It is entirely appropriate for energy consumers to fund these activities.

5. How should we incentivise DNO performance when the achievement of outcomes could be dependent on the actions of others?

In terms of concern around potential construction of new DN-level assets to allow for low-carbon technologies without guarantees of uptake, we would again point to the work of Vivid Economics and Imperial College on behalf of the Committee on Climate Change (2019):

- Significant network reinforcements could be needed to accommodate rapid uptake of electric vehicles and hybrid heat pumps. Overall, rapid uptake of electric vehicles and hybrid heat pumps could increase the costs of maintaining and reinforcing distribution networks by up to 40% by 2035. However, distribution costs would still account for less than 10% of electricity system costs.
- Network reinforcements are costly and disruptive. Further, the costs of over-sizing network infrastructure are very low, as cable capacity accounts for just 8-10% of upgrade costs. As a result, future-proofing investments by over-sizing network infrastructure is a very low-regrets option, and could avoid up to £34 billion of network expenditure.
- Uncertainty over electric vehicle and heat pump uptake is a major challenge to accurately projecting network investment needs. The RIIO price control framework should be flexible enough to allow distribution network operators to respond to emerging evidence on future uptake, even during a single price control period.
- Batteries and demand response can reduce the need for distribution network reinforcement. The RIIO price control framework should continue to incentivise distribution network operators to reduce total expenditure (TOTEX) and make use of these solutions where possible.³

³ (Ibid)

7. What, if any, changes to the framework are required to support strategic investment?

The framework makes mention that a DNO shall support the enabling of decarbonisation but does not provide sufficient detail on what specific means are provisioned by the regulator for this. We require greater clarity on this point.

8. How should we hold the companies to account for the delivery of strategic investment, and the outcomes that they are expected to deliver?

DNOs are already subject to the Incentive for Connection Engagement (ICE) in coordination with their respective Connections Strategy. A full review of the ICE framework should be undertaken, with a view to ensuring alignment with decarbonisation targets.

9. Is there a need to separate out the revenues and outputs for ‘traditional’ DNO functions from DSO functions? How could this be achieved?

The move toward increasing the level and extent of Active Network Management carried out by DNOs has the potential to give rise to conflicts of interest between owners of network infrastructure and other stakeholders in terms of prioritising what gets connected and how it is operated. This is already evident with regard to the controversy over the extent to which DNOs ought to be able to own and/or operate energy storage assets. Going forward, it may be advisable to separate the two functions as was done at TN level?

11. Where a DNO is undertaking a DSO function, what type of outputs or outcomes are necessary to measure how efficiently they are performing this function? Over what time period could these be measured?

12. In what ways could the existing arrangements drive more innovation and competition?

The highest priority of the network companies in terms of competition should be to maximise decarbonisation and minimise cost to both current and future consumers, with outcomes including maximising the MWh volume of new low carbon technologies connected, minimising MWh of variable RE lost to curtailment, and more. Cognisant if the unique regional circumstances of each DNO, each could be assigned certain individualised benchmarks against which their performance in driving competition in these criteria could be measured.

13. To what extent should we set (and incentivise performance against) baseline totex allowances for activities where flexible solutions could be provided?

14. Should we instead set allowances based on the costs revealed through the flexibility tendering process? How might this work?

As a principle, the STA strongly supports the use of flexibility solutions in lieu of costly infrastructure reinforcement. However, we recognise that there may be circumstances in which a flexibility solution could deliver short-term savings both in terms of the cost and environmental impact of the network infrastructure itself, whilst at the same time preventing the realisation of much more significant long-term savings that would have been enabled by reinforcing infrastructure to allow a larger volume of low-carbon technologies to connect. We would recommend that the network companies be required to consider the whole-system impacts of flexibility vs. reinforcement decisions in terms of maximising decarbonisation and minimising costs to both current and future consumers.

18. We welcome views on our proposed position of a five-year price control for RIIOED2.

19. Are there any elements of RIIO-ED2 price control that we should consider setting over a longer or shorter period? Please give reasons.

Our members place a high value on regulatory certainty and stability. However, given the rapid pace of technological innovation in the energy system, it may be advisable for DNOs to be allowed greater flexibility within the prevailing price control period and framework to allow them to respond more quickly to unanticipated increases in demand for (e.g.) new renewable generation or EV charging infrastructure.

20. We welcome views on whether these enhanced engagement arrangements are appropriate for RIIO-ED2.

Whilst we applaud the intention of “Giving consumers a stronger voice” we believe the priorities of consumers are sufficiently reflected in the existing framework, and would question the extent to which the majority of consumers would be willing or able to take part in the proposed Customer Engagement Groups.