Ofgem RIIO2 Consultation

Response from the Solar Trade Association

4 May 2018

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 transformation. We are paving the way for solar to deliver the maximum possible share of UK energy by 2030 by enabling a bigger and better solar industry. We represent solar PV, solar thermal and energy storage.

Respondent details

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Would you like this response to remain confidential?	No

Introduction and background

We welcome the opportunity to comment on essential changes to the RIIO framework. It is important to point out that the current difficulties in the solar industry, and the nascent state of the battery storage industry, mean there is regrettably little capacity across these industries to respond in detail to this important consultation (amongst others). Both technologies are key enablers of smart systems and many of our members are on the frontline of developing associated flexibility & smart energy management services at all scales. We therefore urge Ofgem to be as proactive as possible in seeking out the views of innovators and new entrants to inform its thinking at this critical stage for the future direction of the power system.

Achieving a smart energy pathway will require major regulatory reforms and major corporate and institutional change, and at a rapid rate. The fundamental realignment of business drivers across the energy sector toward achieving a smart, efficient, clean energy system will require bold, decisive and collaborative action on the part of Ofgem and BEIS. Time is of the essence, given, not only the low-carbon imperative, but the rapid rate of electrification of vehicles (and the potential electrification of heat) and the need for low-cost flexibility across the system to allow cost-effective integration of variable renewables, as

the most cost-effective forms of clean power generation. As recent analysis by Imperial College London has shown[1], the costs of not managing this essential transition effectively and in good time are very high: a needlessly costly and wasteful system with poor asset utilisation. Conversely, if bold action is taken *now*, the potential wins for society and the UK economy are tremendous.

Many of our members have smart technologies available today that could help to deliver a more efficient and lower cost system, but policy frameworks, including regulation, are not unlocking markets for these services fast enough. It is therefore essential, if Ofgem is to realise the benefits of technology change for consumers, that they take a bold approach to regulatory reform that fundamentally realigns the business drivers of DNOs with the objective of a lower-cost, more efficient, low-carbon and secure power system, where the benefits of technology change can benefit all, including vulnerable consumers.

Fundamentally, that means DNOs earning revenues based on achieving operational objectives, rather than a Regulated Asset Base, in particular on customer service, low-carbon and network utilisation factors. There should be strong emphasis on DNOs developing dynamic local markets in order to achieve their objectives. Trials and pilots have been helpful, but there is frustration across the industry at a 'trials culture', when the procurement of smart services needs to mainstreamed.

Finally we urge Ofgem and BEIS to ensure wider energy policy supports a 'whole system' approach – that is currently not the case, with some policies discriminating against smart investment. We also urge Ofgem to take a whole system approach to its own economic analyses, which have yet to quantify the wider system value of smart homes and offices and where recent decisions have damaged investor confidence.

We offer the following preliminary responses to the key themes of the consultation document, and look forward to continued engagement with this consultation process over the coming months. Again, given the heavy resourcing demands of multiple consultations in this area, we strongly urge Ofgem to proactively engage new entrant technologies and services.

Answers to Consultation questions

Chapter 3: Giving consumers a stronger voice

Q1. How can we enhance these models and strengthen the role of stakeholders in providing input and challenge to company plans?	If it is to succeed, the revised RIIO framework must recognize and be built around the rapidly changing profile of the UK energy customer. Our analysis indicates that there are currently over 900,000 solar rooftops across the UK, including homes, schools, community centres and businesses. By taking an active role in meeting their energy needs, these 900,000 "Prosumers" are making an important contribution to the decarbonisation of the UK electricity system. With increasing uptake of home energy storage systems, including EVs and vehicle-to-grid charging technology, prosumers will soon bring about a level of efficient utilisation of existing grid infrastructure that not long ago would have seemed impossible. It is in our view imperative that prosumers receive equitable treatment from grid operators and regulators, including reasonable, transparent and standardised grid connection fees.

[1] Strbac, G. et al. "An analysis of electricity system flexibility for Great Britain", Imperial College London and The Carbon Trust, 2016

	We support the introduction of Open Hearings and Customer Engagement Groups, and the stated commitment to enhanced stakeholder engagement across the distribution networks. In order for these Customer Engagement Groups to perform to their full potential, they must be sufficiently inclusive of the perspectives of and technical expertise of the decentralised, low-carbon generation sector, and participants must be empowered to take part in decision-making around network management and planning. At present, the STA is proactively working to improve communications and establish systems for data and information-sharing between DNOs and generation customers. For example, we are currently leading a range of industry stakeholders in the collaborative development of Best Practice guidance around mitigation of distribution network outage impacts on solar generators. As the energy system regulator, it is incumbent on Ofgem to encourage this kind of proactive responsivity on the part of network operators. Clearer and more substantive requirements around stakeholder engagement and communication will help to ensure accountability to all customers, including distributed generators, on the part of network operators. Overall, we are pleased to see the emphasis on encouraging innovation but want to see this mainstreamed into the DNO business model.

Chapter 4: Responding to how networks are used

Q2. Do you agree with our preferred position to set the price control for a five-year period, but with the flexibility to set some allowances over a longer period, if companies can present a compelling justification, such as on innovation or efficiency grounds?	In light of the pace of technology change across the sector, there is strong justification for reducing the length of the price control period to five years. Unless the criteria are highly stringent, the proposed exemption would risk undermining this proposed reform.
Q3. In what ways can the price control framework be an effective enabler or barrier to the delivery of whole system outcomes?	Current incentives for emissions reductions are inadequate drivers of deep decarbonisation across the electricity grid. To this end, we support Sustainability First's recommendation that a comprehensive, system-wide low-carbon incentive be introduced within RIIO2, encompassing connection and integration of low-carbon generation, as well as the facilitation of demand reduction and flexibility.

	One concrete example of good practice that such a framework could incentivise would be the avoidance of network outage impacts on solar generators during daytime hours in months of peak generation, as the STA and our members are encouraging with the aforementioned development of our Best Industry Practice guide. We would be pleased to see network utilisation factors as a major driver of future network returns. To deliver for the whole system, DNOs must be individually incentivised to strongly prioritise efficient use of existing assets and making full use of local flexibility and demand reduction services over continued investment in 'kit'. Ofgem must ask itself, and be more transparent with the distributed energy industry, about the vast grid infrastructure investment it permits which result in 'non-residual charges' being levied on the very innovators who could provide cheaper local alternatives. Whole systems thinking of the kind advocated for in Ofgem's consultation document requires leadership and a clearer understanding within the regulator of the great *benefits* that smart homes and businesses can provide to the wider system, particularly through the potential for peak shaving and improved network and asset utilisation. We urge Ofgem to conduct further economic analyses in this area. We have been routinely disappointed by a consistently unbalanced focus on the *costs* of distributed power, and insufficient acknowledgment of the benefits of decentralised energy solutions. This has in our view led to an inflated perception of regulatory risk that is further deterring investment in onsite battery storage at a time when such investment should be encouraged.
Q5. In defining the term 'whole system', what should we focus on for the RIIO-2 period, and what other areas should we consider in the longer-term?	Ultimately, the consumer must be at the heart of any 'whole system' approach. We recommend that Ofgem focus on enabling the delivery of consistent reductions in the carbon intensity of electricity, in line with the Government's legally binding target of reducing carbon emissions 57% below the 1990 level by 2030, *at the least cost to energy consumers*. It is also important that Ofgem takes a multi-vector approach that enables the effective integration of heat, transport and electricity. Relationships between these vectors will need to become much closer in a low-carbon world, with potential for delivering greater consumers benefits. We also urge Ofgem and BEIS to work together to ensure a coherent wider policy framework that support the whole system. BEIS energy policy is subsidising almost exclusively large centralised generation, yet achieving the cost efficiencies of smart power requires greater emphasis on local systems. Similarly, tax policies can inhibit investment in valuable technologies. For example, we are concerned about the damaging

	business rate treatment of rooftop solar power spreading to behind-the-meter battery storage. It is frankly absurd from a smart energy perspective that investors in the most efficient form of power consumption face tax penalties for optimising onsite self-supply. We also urge join-up with local and regional policies. Local authorities are increasingly interested in investing in solar and battery storage and in planning for smart neighbourhoods. There is no reason why local authorities, with serious plans, should not be able able to bid into DNO markets for network deferment – for example through local demand reduction schemes or even smart services. This would enable the 'bottom-up' and 'top-down' approach to join up, and would provide income for valuable local efficiency initiatives. Currently this co-ordination is missing, but it is essential.
Q7. Do you agree that we should be considering alternative remuneration models for the electricity SO?	Yes. Network companies are entitled to fair and reasonable returns for safely providing reliable service, but beyond that they should be incentivised to deliver deep, long-term reductions in carbon emissions at the least cost to consumers. Further encouragement is needed to make the most efficient use of existing grid infrastructure and to accommodate higher proportions of variable low-carbon generation. There is a strong case to be made for a moratorium on the building of new network capacity. We support Ovo Energy's proposals in this area, which draw on Imperial College analysis indicating that the existing network is oversized. This would encourage a focus on better asset utilisation and peak shaving, resulting in good markets for smart services. The SO would be well placed to oversee this.

Chapter 5: Driving innovation and efficiency

Q11. Do you agree with our proposal to retain dedicated innovation funding, limited to innovation projects which might not otherwise be delivered under the core RIIO-2 framework?	Our organisation strongly supports increasing investment in innovation, and that includes retaining the innovation stimulus where projects can demonstrate long-term value to consumers but are at higher risk of under-delivery by the core RIIO-2 framework. However, the current "siloed" approach to rewarding network companies for performance within discrete categories, or for participation in one-off pilot projects, has failed to deliver meaningful improvement at the whole-system level for grid customers or consumers. We need a comprehensive, system-wide approach, engrained within the business model of DNOs – not with the goal of demonstrating one-off viability of a particular flexibility or storage technology - but to enable system-wide transformation.

	The distributed energy industry is already highly innovative, but it is struggling to find markets for its services. It is this issue that Ofgem must address as a priority to unlock innovation.
Q16. Do you agree with our proposal to extend the role of competition across the sectors (electricity and gas, transmission and distribution)?	We support market competition where appropriate, provided that a robust regulatory framework would be in place to ensure the effective delivery of consumer benefits. We need Ofgem to accelerate the opening up of markets for new, smart energy services, including in network deferment (which should include demand reduction, not just flexibility services), and more liberalised balancing markets allowing a wider range of participants. We strongly support the continued separation of network operators from owners and operators of energy storage assets. If network operators were to be allowed to compete in this space, the tendering arrangement would need to be completely overhauled due to the enormous asymmetry of information that would be at stake. Ofgem should clarify that network operators may not directly control other distributed energy resources such as electric vehicles and instead use price signals to manage and encourage flexible resources.

Chapter 6: Simplifying the price controls

Q19. What views do you have on our proposed approach to specifying outputs and setting incentives?	The six output categories presently in use will not adequately reflect the realities of the low-carbon smart grid. These criteria should better reflect that "Reliability and Availability" can be achieved through more efficient utilisation of existing grid infrastructure, enabled by energy storage and demand response, as opposed to the building of expensive new infrastructure, and the passing on of those costs to consumers. We would therefore support the addition of a "System Flexibility" or "Utilisation Factor" category as a means of encouraging network operators to maximise usage of current resources. We strongly support Ovo Energy's proposals for a 'Flexibility First' approach. Given the primacy of these customers to the transition to a low-carbon smart grid, it seems appropriate that the "Customer satisfaction" category ought to place greater emphasis on the specific concerns of low-carbon distributed generation customers, particularly around the availability and affordability of grid connections. Further incentives ought to be in place for grid operators around the carbon intensity of electricity they carry. We understand that there may be temporary costs associated with managing the variability of large volumes of solar PV generation, and in the short term it may be worthwhile to

	compensate network operators for taking on these additional costs as they invest in the system flexibility upgrades required to bring on even larger volumes of this generation over the medium to long-term.

Chapter 8: Next Steps

Q49. Are there any sector-specific issues or policy areas that we should ensure we review and consider as we develop our sector-specific proposals?	The need for a coherent 'post FIT framework' demonstrates how urgently reforms are needed, particularly to unlock local markets for flexibility services and for ToUTs. Currently the onsite solar and storage industry has no forward sight of the policy landscape from next April. We are concerned that the sector is falling into a gap between the smart homes 'vision' and the reality of where we are today. As things stand, some of our members can already provide smart services, aggregating domestic functionality, but there is no market for these services, so the value of smart homes cannot yet be monetised. This damages the economic viability of these projects. We also do not know what future arrangements will be for the remuneration of surplus exported power, but if market solutions are mooted, metering requirements could be prohibitively expensive. It is vital that this specific policy area be addressed effectively and in timely fashion, to reward smart functionality, lest the development of smart homes and offices be impeded. We are also eager to see ECO3 extended to smart retrofits, to ensure that vulnerable homes are not left behind and can benefit from the potential wider cost savings that smart homes can realise. We strongly agree with Ofgem's assessment that future demand is likely to continue to be affected by increased generation at a local level and more self-sufficiency because of new technologies and falling costs, along with greater uptake of EVs and energy storage systems (4.81). The combined impact of these developments will be profoundly transformative, and could deliver enormous benefits to consumers in terms of affordability, reliability and security of energy supply whilst achieving tremendous reductions in energy system carbon emissions. However, these benefits will not be realised unless grid operators take decisive action today to support distributed, low-carbon generation.