2020 Budget representation

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 200+ strong 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.

Budget representation

Introduction

Thank you for the opportunity to make a representation regarding HM Treasury's 2020 Budget. As the voice of the solar and energy storage industries in the UK the STA has a unique insider perspective on the state of Britain's solar markets and understanding of the drivers and barriers to deployment of these technologies.

Solar is a vital technology to the decarbonisation of the power sector and the realisation of net zero greenhouse gas emissions by 2050. Today solar is the most cost-effective source of new power available and can be delivered rapidly at large scale[1,2]. Its growth, alongside the phase out of coal, is already playing a vital role in decarbonising the power sector and the industry supports thousands of jobs across the UK. It is imperative that the government ensures its role is expanded to drive decarbonisation faster and further, whilst capturing the full economic benefits of doing so.

By 2050, the Committee on Climate Change (CCC) anticipates that electricity demand will have doubled in the wake of a transition to electric vehicles, the electrification of heat and the production of clean fuels. This increased demand, combined with old nuclear generation being taken offline, will need to be met with a quadrupling of renewables, including 54GW of solar by 2035.3 By the end of 2020, it is expected that 14GW will have been deployed, meaning an average of more than 2.66GW will need to be deployed over the next 15 years to remain on target for the UK's carbon budgets. This will not happen without significant policy intervention.[4]

The STA therefore makes the following recommendations to unlock the potential of solar energy in the UK. These policies will go a significant way towards empowering the transition to net zero by maximising the potential of solar energy, and represent low-cost, value for money solutions to the taxpayer and the exchequer.

[1] https://www.auroraer.com/insight/prospects-subsidy-free-wind-solar-gb/
[2] https://www.solar-trade.org.uk/cost-reduction-potential-for-uk-large-scale-pv/
[3] Committee on Climate Change (2019) *Net Zero Technical report*. https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-Technical-report-CCC.pdf
[4] Solar Trade Association (2019) *The UK solar PV market outlook.* *https://www.solar-trade.org.uk/wp-content/uploads/2019/11/STA-2030-Deployment-forecast-final.pdf*

Recommendations

1. Hold regular CfD auctions inclusive of solar

The CCC has regularly recommended new government-led clean power auctions for solar and onshore wind to support the UK's decarbonisation targets, as well as keeping the cost of energy down for bill-payers. This policy is also endorsed by the CBI, National Infrastructure Commission, Energy UK and many others[5]. Since 2015, solar and onshore wind have been effectively excluded from this mechanism as the Government has not undertaken an auction inclusive of "established" technologies – paradoxically, on the grounds that these technologies are proven to be deliverable at lower cost.

We concur with the analysis from the CCC recommending that Government establish a subsidy free CfD auction mechanism for mature low carbon technologies. Large scale solar costs are below those of offshore wind, but for investment to be unlocked there needs to be access to similar long-term contracts. The CCC projects 40GW of solar generation capacity, or triple the current capacity, will be required by 2030 in order to be on track for net zero by 2050. A technology neutral CfD would enable faster and more cost-effective electricity sector decarbonisation by boosting deployment of solar and onshore wind. This would help reduce annual electricity costs to consumers by £200m-300m annually by 2023[6] as these technologies represent the most cost-effective energy generation solutions today, cheaper than new gas-fired generation and nuclear. Further, lifecycle analysis of solar and onshore wind reveals emissions of 6gCO2e/kWh and 4gCO2e/kWh respectively, considerably lower than other forms of generation, including gas with carbon-capture and storage (78gCO2e/kWh).[7]

This policy approach would deliver a net gain for the Treasury via a boost for jobs and growth in the renewable energy sector. As the cost of solar has fallen significantly, we would not expect there to be any cost burden on the Treasury from allowing access to CfD auctions, in fact there would be an increase in tax revenue directly due to the stimulation of investment and subsequent growth in the solar industry. Greater deployment of onshore renewables will also help ensure clean power is available to meet rising demand brought on by the rise of electric vehicles and the electrification of heat.

Further, the development of large-scale solar parks offers a unique opportunity to enhance local biodiversity across the UK. A growing body of scientific evidence indicates that well-designed and well-managed ground-mount solar installations can support wildlife habitat and meaningfully contribute to achieving national biodiversity targets. Solar parks have several advantages in this respect compared to other landscapes. They are secure sites, with little disturbance from humans and machinery once construction is complete, they require little if any use of chemical pesticides, herbicides or fertilisers, and typically incorporate ecological features such as drainage ponds and hedgerows, which can be designed to optimise their habitat value.[8,9]

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[5] https://www.cornwall-insight.com/publications/energy-spectrum-and-daily-bulletin/energy-spectrum/issue-671/nic-expert-calls-for-pot-1-cfd-auction-to-help-achieve-net-zero

[6] https://www.auroraer.com/insight/prospects-subsidy-free-wind-solar-gb/

[7] Pehl, M., Arvesen, A., Humpenöder, F. *et al*. (2019) Understanding future emissions from low-carbon power systems by integration of life-cycle assessment and integrated energy modelling. *Nat Energy* **2,** 939–945. https://doi.org/10.1038/s41560-017-0032-9

[8] Gall, N. and Rosewarne, E. (2019). The Natural Capital Value of Solar. London: Solar Trade Association. https://www.solar-trade.org.uk/wp-content/uploads/2019/06/The-Natural-Capital-Value-of-Solar.pdf

[9] Hernandez, R.R *et al*. (2019). Techno–ecological synergies of solar energy for global sustainability. *Nature Sustainability*. 2 (7), 560-568.

2. Reform business rates

Reformation of business rates already sits firmly on the Government's agenda following the announcement of a review in the Queen's Speech in December 2019.

Under the current system, business rates penalise companies and organisations who invest in clean energy technologies like rooftop solar. The technology is categorised as 'plant and machinery' and the rateable value is determined by whether the installation is primarily exporting or self-consumed. The methodology to determine the rateable value was revised in 2017, resulting in an enormous **increase of 600-800%** for all commercial self-consumers, **and 300-400%** for public sector self-consumers such as schools and hospitals. These disproportionate business rates remain a substantial barrier to commercial rooftop PV in the UK, deterring deployment by placing a significant cost-burden on businesses who seek to reduce their carbon footprint by installing onsite renewables.

Solar PV, battery storage, and other clean energy technologies should be excepted from business rates to ensure that those who take meaningful action to cut their carbon emissions and energy bills are not punished for doing so. This would place clean energy technologies on par with gas-fired Combined Heat & Power (CHP). The Government's own energy policy endorses the growth of decentralised generation and self-generation of clean electricity. Currently, CHP and solar PV are the only two mainstream energy technologies that can be installed with the primary aim of self-consumption. CHP has received an exception from business rates since 2001. As it stands, solar does not, which puts the zero-carbon option at a distinct competitive disadvantage. Reforming business rates to except solar PV, battery storage and associated technologies including solar thermal is essential to enable fair and reasonable treatment of zero-carbon technologies making the most efficient use of the generated electricity (onsite) and increase proliferation of commercial clean power.

A boom in the commercial procurement of clean power technologies will drive jobs and growth in the solar industry and the wider renewables sector. New research published by National Grid estimates that the energy sector will need to fill 400,000 jobs to deliver net zero by 2050.[10] Furthermore, growth in solar would support cost-effective decarbonisation across several commercial industries, including, but not limited to, retail, brewing, dairy, football, and warehousing.

3. Restore VAT on solar to pre-October 2019 status and add battery storage to the Energy Saving Materials list

In October 2019 changes were made to how VAT is applied to solar PV and battery storage. Now, where the cost of materials exceeds 60% of the total installation cost, the rate of VAT on the material element rises from 5% to 20%. This is applicable to solar installations and combined solar and storage installations. That these technologies can attract a 20% VAT rating while fossil fuels such as coal and fuel oil enjoy a reduced rate cannot be justified under current circumstances.

The STA acknowledges the Government view that changes to VAT were brought about as a result of EU directive, and reasonably expects a reversal to be forthcoming following the UK's departure from the EU. In the interim, the addition of Battery Storage to the Energy Saving Materials list would help to ensure that consumers are not priced-out from accessing this vital technology, and that the nascent domestic battery storage market is not stunted by unfair tax treatment. HMRC noted that the changes brought in were expected to have a negligible impact on exchequer revenue.[11] Therefore, a reversal and the addition of battery storage to the Energy Saving Materials List, would also be reasonably expected to have a negligible impact.

[10] National Grid (2020). Building the Net Zero Energy Workforce. https://www.nationalgrid.com/document/126256/download
[11] Seely, A (2019) *VAT on solar panels*. House of Commons Library Briefing Paper no. 8602. London: House of Commons Library. http://researchbriefings.files.parliament.uk/documents/CBP-8602/CBP-8602.pdf

These changes will stimulate the small-scale battery storage market and lessen the administrative burden on small businesses. Battery storage has a significant role to play in reducing demand on the power grid, which is facing a substantial rise in demand with the future electrification of heat and the transition to electric vehicles. Stimulating the battery storage market will also help ensure the skilled installer base necessary to deliver domestic low-carbon technologies.

This will be vital to decarbonising the UK's housing stock over the coming years, which currently accounts for 40% of carbon emissions. As part of the transition to net zero, battery storage will need to become increasingly prevalent in new and existing homes. Reducing cost-burdens on households will stimulate the uptake of this technology sooner, reducing the burden on the grid and supporting the shift towards net zero.

4. Zero-interest loans for solar and battery storage

Following the reduction and eventual closure of the Feed-in Tariff (FiT) scheme, the annual uptake of domestic solar has fallen. Deployment of small-scale solar (>5MW) under the FiT scheme in 2018 was 86% lower than at its peak in 2015. This has resulted in the closure of several businesses operating within the solar industry, and associated job losses. Solar and storage are both essential to decarbonising the grid and the UKs building stock and stimulating demand now will reduce the amount of government investment required to ensure an adequate skilled installer base exists in the future.

While a combined solar and battery storage system is more affordable than ever, it still represents a significant upfront investment for a household. Zero-interest loans would ensure that these technologies are not simply the preserve of those who have the cash immediately available and enable many more households and businesses to take meaningful action on climate change while cutting the cost of their energy bills.

Zero-interest loans, underwritten by the Scottish Government through the Home Energy Scotland scheme have already proven successful, albeit on a limited scope and scale. A nationwide roll-out would drive consumer demand for these technologies and accommodate the growing desire for access, as underlined in a 2018 survey by ClientEarth which revealed that 3 in 5 households want solar PV and battery storage and would have these installed if greater assistance were available.[12]

This policy would significantly enhance the domestic and commercial retrofit markets for both solar and battery storage, stimulating the installer base and driving jobs and growth in the industry. As the UK's housing stock currently accounts for 40% of carbon emissions, domestic solar PV and battery storage will need to become increasingly prevalent to enable the transition to net zero. Assisting households to access these technologies will ensure they are deployed rapidly and at scale, supporting the shift towards low-carbon homes and net zero.

5. Civic estate renewable energy procurement plan

By establishing a target to provide the civic estate with 100% renewable electricity, the Government can further cut the operating costs of the estate and accelerate its decarbonisation. It will also provide a boost to the renewables sector via a steady stream of business opportunities, and signal to the wider world its firm commitment to leading by example on net zero.

[12] ClientEarth (2018) *Climate Snapshot.* https://www.documents.clientearth.org/wp-content/uploads/library/2018-08-20-clientearths-climate-snapshot-coll-en.pdf

With the economics of large-scale PV continuing to rapidly improve, the STA is actively working with Renewable UK, the non-profit organisation RE100, Solar Power Europe, and other partners to further develop and promote Power Purchase Agreements (PPAs) in the UK as an alternative route to market for new solar farm development.

Committing to 100% renewable energy for the civic estate will increase opportunities to secure public sector PPAs, bolstering solar deployment in the post-subsidy environment. Further, this provides a quick win for the Government in the run-up to COP26 and represents low hanging fruit compared to potentially more complex policies that will be required in future to fully realise net zero.

Across the country, local authorities and the private sector have already introduced programmes to drive the procurement of renewable energy in the form of the UK100 and RE100 respectively. This is an important step to enable the transition to net zero and strengthen the business case for post-subsidy solar development. The Government has an opportunity to demonstrate it recognises and shares those ambitions by setting a serious target - 'Gov100' - which will build on the efforts already made by some departments to procure renewable energy.