

Response ID ANON-YYV8-PVQU-C

Submitted to **The Future for Small-scale Low-carbon Generation: A call for evidence**

Submitted on **2018-07-26 20:33:32**

About you

What is your name?

Name:

Nigel Hargreaves

What is your email address?

Email:

nigel@norwichcommunitysolar.coop

What is your organisation?

Organisation:

Norwich Community Solar

Are you happy for your response to be published?

Yes

Would you like to be contacted when the consultation response is published?

Yes

(optional) How did you hear about this consultation?

Where did you hear of this consultation?:

Email from BEIS

Other (please specify):

Opportunities and challenges from small-scale low-carbon generation

1 Have we accurately captured all the opportunities and benefits that small-scale low-carbon generation can provide to the UK energy system over the short, medium and longer-term? Are there any that we have missed? Please provide evidence.

Please enter comments here:

No. You are failing to pay adequate attention to the opportunity presented by small scale distributed generation and storage to balance and interoperate with heat and transport systems from the bottom-upwards, by continuing to line in a paradigm where balancing is carried out solely from the top -downwards by National Grid. This is counter to the principle of decentralisation and misses the fundamental opportunity for balancing to commence through distributed generation, storage and smart, in-home technology integration at the system edges.

But then you still see energy users as "consumers" and so this is not surprising (energy is never consumed). It also inhibits grass-roots and community scale innovation as your policies follow through and overlook the potential here.

Please upload file here:

No file was uploaded

2 How can government help consumers benefit from small-scale low-carbon generation such as local communities, local authorities, and those in fuel poverty?

Please enter comments here:

Any generator at any scale ultimately needs a route to market. The most exciting opportunities for small scale generators in recent years have been driven by a predictable and financially secure tariff - the FiT - which you have demolished behind a smokescreen David Cameron described as "green crap" (2013) while brazenly continuing to subsidise the fossil fuel industry (see fracking, offshore oil and gas subsidies). In the coming absence of FiTs small scale generators will face years of uncertainty about where they can seek a secure and viable market (while Ofgem deliberates the issue with the usual cronies in the industry) apart from behind the meter import avoidance schemes - which ironically will encourage grid defection and place the burden of network charges on other less equipped network participants. So, Government can do the following to help: 1/ support small scale generators by returning some form of financial support and incentivisation for this sector to regain its footing. This could include offering a secure export tariff. 2/ Return financial incentives such as the UCEF and EIS that were removed, which then undermined community capacity. 3/Speed up introduction of peer-to-peer trading legislation to provide a revenue stream from trading surplus energy between small scale generators and demand centres. This will help to resolve the network charging issue as well. 4/Enhance and enforce regulations for housing developers to include small scale generation and possibly storage in all new build properties. 5/Offer financial subsidies to make small scale storage more affordable thereby encouraging self-supply. And of course greater financial support should be given to measures encouraging energy conservation to reduce the level of demand and waste in the first place - this would address fuel poverty in the first instance.

Please upload file here:

No file was uploaded

3 The introduction of enabling technology and systems such as the roll out of smart meters, and half-hourly settlement, will provide commercial incentives on energy suppliers to develop and offer tariffs. Will smart tariffs provide a viable route to market for small-scale low-carbon generation? If so over what time frame, and what are the possible barriers to these smart tariffs?

Please enter comments here:

The current smart meter roll-out is a "train crash" (quote Government) and has been ill-conceived right from the start, as too expensive, too aged and too centralised. It will cost more than £12bn to rectify the SMETS1 into SMETS2 fiasco and will be technologically obsolete before it is commissioned - even if the DCC ever gets fully up and running - which is debatable. It will probably never complete a rollout of 52 million electricity and gas meter and deservedly, advanced metering infrastructure desperately needs a re-design to align with decentralised principles. Beyond that, TOUTs are going to be possible only with suitable digitalisation of the metering system and interoperability with common smart tech used in homes. They will not in themselves be viable for small scale generators (let's call them 'utilizers') as a viable route to market unless the whole system seamlessly interoperates from end to end and storage is part of the chain. The advent of smart tariffs on the other hand, while encouraging load-shifting and possible flexibility, will promote dynamics not previously seen in the system as digital agents acting on behalf of humans chase the best offers in almost real time. Watch out for novel balancing challenges unless balancing is commenced from the bottom-up.

Please upload file here:

No file was uploaded

4 Do you agree with the challenges we have identified? Are there any challenges small-scale low-carbon generation presents that you think we have missed? Please provide evidence.

Please enter comments here:

Yes. Safety - unless the MCS scheme is continued - which should obviate the concern around tracking SSG deployment.

Please upload file here:

No file was uploaded

5 How would you propose the small-scale low-carbon sector, suppliers, off-takers, network/system operators, and/or government can overcome the challenges presented?

Please enter comments here:

Clearly there needs to be a way that Small Scale Generators (SSGs) and Community Energy Groups (CEGs) can be better represented in policy and regulation making, which is currently dominated by and preferential to the established institutional players. We are in need of greater equity (and honesty) in the energy system and less undermining of SSGs and CEGs by removing their financial support as though this was the reason people are facing higher energy bills.

Please upload file here:

No file was uploaded

6 What are possible ways to track and monitor behind the meter installations (we would appreciate specific suggestions in relation to how information can be sourced (e.g. direct from businesses and households) and the method for sourcing it (e.g. an annual survey))?

Please enter comments here:

All installations should be MCS certified. This gives the generation capacity installed. Then the import requirement will change and this is data held by the import supplier. The import supplier knows what happened before and after. So a simple calculation using supplier held data can reveal the impact of BHM installations. You need access to supplier data that has been de-identified.

Please upload file here:

No file was uploaded

7 What are the special considerations that should be made when attempting to track different kinds of behind the meter activity?

Please enter comments here:

Confidentiality, privacy and provenance. All of which could be supported by blockchain based registration and metering of assets and energy usage.

Please upload file here:

No file was uploaded

8 How do we develop our tools to model and evaluate the system (including system costs and resilience) as decentralised generation and storage develop, specifically approaches to system modelling, data capture, forecasting demand and evaluation of value for money?

Please enter comments:

Evaluate whether the current data laws around energy usage are fit for purpose. Force suppliers to open up and utilise the DCC better. Accelerate deployment of non-invasive (and cheap) advanced metering infrastructure and the data networks behind it.

Please upload file here:

No file was uploaded

Levelling the playing field – how should government respond?

9 Are off-takers, suppliers, and aggregators able to lead the deployment of small-scale low-carbon generation currently? If so how will this occur, over what timescales, and what are the implications for deployment levels? How would deployment be supported by the capacity and ancillary services markets as well as the emerging corporate PPA market? Please provide evidence.

Please enter comments here:

The Government need to differentiate what it means by "small scale" and realise that the current market arrangements present barriers and disadvantages everywhere if the generator is under 100MW, let alone under 100kW. One size does not fit all in the legislation and, as is acknowledged, interventions in small-scale (sub-100kW) installation economics can have a massive impact. So, offtakers, suppliers and aggregators can play a significant role but will presently be of most utility to the larger generators rather than truly small scale ones.

Please upload file here:

No file was uploaded

10 What would be the impact on jobs, deployment, and the supply chain, if deployment were left to market forces beyond 2019? Please support your answer with clear evidence.

Please enter comments here:

Independent energy players will probably disappear and be sucked into larger conglomerations - as is already in evidence in both the generation and storage portfolios of large companies. Truly small scale actors will probably tend towards greater instances of grid-defection and maximum self-supply to avoid import costs.

Please upload file here:

No file was uploaded

11 In your view, are small-scale low-carbon generators currently able to deploy independent of subsidy e.g. through the PPA market? Does this vary for differing technologies and capacities of small-scale low-carbon generation e.g. domestic vs. commercial scale? If not, can you explain how long will it take for this market to emerge and if government intervention is required? Please provide evidence.

Please enter comments here:

Very unlikely that the current PPA market is strong or long-term enough to provide a reasonable and secure IRR to new small scale deployments. As long as a PPA pays about a third to a half of the import cost, new SSGs will look for behind the meter deals not involving the PPA market. In cases of larger generation capacity and storage, the flexibility market becomes more attractive to supplement PPA income and so is more viable.

It's the long-term nature of paying back on the investment in low carbon generation assets that is currently not served by a shorter term PPA market! This leads to lack of investment security and a dis-incentive to invest in SSG schemes.

Please upload file here:

No file was uploaded

12 What factors, including financial, affect your decisions to invest in small-scale low-carbon generation?

Please enter comments here:

Internal rate of return - how long will it take to pay back my investment and have sufficient margin to generate community benefit. Also the carbon displacement impact - the bigger the better.

Please upload file here:

No file was uploaded

13 Does government need to take regulatory intervention(s) to enable the development of competitive markets for small-scale low-carbon generation? If so, what and why? If these actions were taken, what benefits would this provide to consumers and the electricity system?

Please enter comments here:

I think 'collaborative markets' would be more helpful to small low-carbon generators than competitive markets. Collaborative markets would build more benefit to local energy systems by using locally generated energy, locally and keeping the value in the community rather than loosing it to the wider system. However this needs a redesign of the current energy trading system to open it to Peer-to-peer traders and have a much more locally balanced nature. It does not remove the need for a national energy system or market but just re-focusses emphasis on decentralised and distributed ways of organisation and trade - better aligning with current trends anyway.

Please upload file here:

No file was uploaded

14 How can we encourage and unlock private sector finance to enable market-led deployment?

Please enter comments here:

Open the markets to P2P as well as traditional vertical trading. Provide greater confidence to small scale actors by offering a financial support mechanism that guarantees a minimum return on energy products and encourages efficiency and conservation through local energy markets. The latter can tessellate into the national market and offer VPP arrangements as well.

Please upload file here:

No file was uploaded

15 How would a guaranteed route to market operating at a discount to the market price impact the transition of small-scale low-carbon generation to competitive markets? Please provide evidence to support your answer.

Please enter comments here:

It would be an insult and confirmation that market rules are biased towards the benefit of institutionalised actors and the larger players. What SSGs need is a guaranteed, long-term and FAIR rate of return in the market so they can do 20-year financial models.

Please upload file here:

No file was uploaded

16 What innovative solutions would be required in the PPA market to bring forward small-scale low-carbon generation? Please provide evidence to support your answer.

Please enter comments here:

Make them longer term. Perhaps CPI linked or internationally benchmarked if the energy is potentially exported. If it is into a local energy economy, then the carbon abatement value, embedded benefits and line loss factors should be credited to the PPA rate.

Please upload file here:

No file was uploaded

17 A guaranteed route to market would require costs to be robustly controlled for consumers, as outlined in the Control for Low Carbon Levies. How could this best be achieved, without creating 'boom and bust' cycles for the small-scale low-carbon generation sector?

Please enter comments here:

Stop subsidising fossil fuels and then Government will have money to spare for supporting LCGs better!

Please upload file here:

No file was uploaded

18 What would be the general challenges (including technical challenges) of designing a guaranteed route to market that offers a time of export tariff to support the aim of developing a smart and flexible network?

Please enter comments here:

Better data availability to the DSO about what is happening on their systems in realtime - they will need to invest much more in data infrastructure and make this data available to the SSG. See OpenLV from WPD.
HH or higher resolution settlement.

Please upload file here:

No file was uploaded

19 How long would a guaranteed route to market need to run for to help the development of competitive markets?

Please enter comments here:

Nobody knows.

Please upload file here:

No file was uploaded

20 How could future regulations or other interventions be designed in order to capture the benefits of storage combined with small-scale low-carbon generation? If specific technical requirements are needed, please specify those as well.

Please enter comments here:

The DSO should be able to control storage as well as other storage owners.

Please upload file here:

No file was uploaded

21 If implemented what effect would the actions you outline have on the small-scale low-carbon generation sector and the benefits this sector brings to UK consumers?

Please enter comments here:

See above answers. In general it would encourage investment into SSG and offer a greater rate of energy decarbonisation. Increasing distributed capacity will facilitate transport electrification. Support and encouragement of local energy markets (including peer to peer trading) will advance democratisation of energy and equity in the energy space as well as increase community capacity and resilience - that in turn will put less pressure on the transmission system and avoid costly reinforcement at all scales.

Please upload file here:

No file was uploaded