Enabling a high renewable, net zero electricity system: call for evidence

Community Energy England response

Introduction

1. This is a response by Community Energy England which represents 270+ community energy groups and associated organisations across England involved in the delivery of community-based energy projects that range from the generation of renewable electricity and heat, to the energy efficiency retrofit of buildings, to helping households combat fuel poverty.

2. Our vision is of strong, well informed and capable communities, able to take advantage of their renewable energy resources and address their energy issues in a way that builds a more localised, democratic and sustainable energy system.

3. Community energy refers to the delivery of community led renewable energy, energy demand reduction and energy supply projects, whether wholly owned and/or controlled by communities or through partnership with commercial or public sector partners.

4. The overwhelming motivation of people and groups involved in community energy is to make a contribution to averting climate catastrophe, followed by a desire to bring community benefit.

5. We feel that all efforts of government should share these primary motivations and ensure that whatever else they achieve they also prioritise these goals.

6. We respond to this consultation because we share the ambition of the consultation title and the government's stated aim to "develop our existing large scale renewable support mechanism, the Contracts for Difference scheme, and ... to consider how our wider policy instruments and the markets they operate in can facilitate a move to a low cost, low carbon power system."

7. We responded to the Contracts for Difference consultation in May 2020, urging the government to include sub 5 MW onshore renewables and institute a designated Community Energy CfD. The response was that this would not be considered in AR4 but "will continue to keep all aspects of the CfD under review on an ongoing basis."

8. In workshops preparatory to the Contracts for Difference consultation Alex Campbell, then Head of CfD strategy, recognised that the scale of renewable energy build-out required to meet net zero transition targets will require government support for the foreseeable future.

9. The same applies to Community Energy, which is not just a 'nice to have' in achieving a secure, low-cost, net-zero renewable energy future but essential to the net zero ambition. The Climate Change Committee is clear on p193 (also p33 and p12) of its Net Zero report, that *"It will not be*

possible to get close to meeting a net-zero target without engaging with people or by pursuing an approach that focuses only on supply-side changes". Community energy is essential to this engagement being 4-5 times better at engaging communities on such issues as energy efficiency. It also harnesses passion, expertise and capital that the mainstream energy system doesn't - that is essential to that engagement and to grasping every opportunity for change and decarbonisation, no matter how small and local.

10. But community energy, after 5 year of cuts in support,[1] struggles to make a business case to get active to fulfil that essential role. The current government policies focus almost exclusively on centralised, big-cheque, mostly *supply-side changes* at the expense of local, collective, social projects that together can add up to cost-effective, climate solutions that also *engage the people.* This is short-sighted and potentially fatal to otherwise well-meaning policies.

11. Net zero and climate action is not just about numbers - GW of off-shore wind needed to supply all the UK's electricity. It is also about engaging everyone to take control of their energy use to reduce our 'demand' to what we genuinely need (ie reducing waste and inefficiency) so that we can supply from genuinely low-carbon sources, that are local, efficient and ideally everyone has a genuine stake in - not just as investors but as a users, managers and savers of energy. This is essentially a local and community activity and community energy must be actively supported by government to do it.

RECOMMENDATIONS:

1. Community energy is explicitly valued and supported in the Net Zero Strategy (and Net Zero Delivery Framework recommended by the CCC) and in the Comprehensive Spending review with some of the measures set out below.

2. CfD pot 1 be extended to include sub 5MW onshore renewables.

3. A Community Energy CfD be established as a separate carve-out from pot 1. The scheme should be designed with the participation of the sector.

4. Other simpler forms of support for community energy be examined to give it a route to market. For example:

5. An Urban Community Energy Fund to complement the Rural Community Energy Fund which must also be extended beyond 2022, (or a national Community Energy Fund after the RCEF ends in 2022).

6. A scheme modelled on the Scottish CARES (Community and Renewable Energy Scheme), which offers grants, loans (which can convert into grants if feasibility studies show a scheme is unfeasible.), advice, relationship brokering and more.

[1] This includes the removal of ROCs, the Feed-in Tariff, Export Tariff, the Urban Community Energy Fund and Tax Relief, punitive business rates on root-top solar, planning constraints on on-shore wind and increasing VAT on solar panels, batteries and 'energy saving measures' from 5% to 20%.

7. Social Investment Tax Relief (just extended to 2023) be reformed to reinstate eligiblity to community energy.

8. Ensure that business rates incentivise (rather than punish - as is currently the case) businesses to invest in local, low-carbon renewable generation and that they support community energy.

9. VAT on 'energy saving measures', including solar panels and batteries, reduced to zero.

10. A Community Feed-in Tariff (just introduced in the Netherlands at 14.6c/KWh) to offer long-term certainty.

11. A Community Smart Export Guarantee with a floor-price for exported community energy and a dynamic tariff to enable projects to take advantage of higher prices at times of peak demand, over a reasonably long term. The Smart Export Guarantee is too short term to assist in making an investment case for a generation project.

12. Energy Efficiency Funding that delivers for genuinely vulnerable people and is available to community energy projects, recognising the increased take up and enhanced interface with the householder as well as the legion social benefits that community energy can bring.

13. A Community Renewable Heat Incentive (RHI) with a reasonable lifespan.

14. Grants and funding to allow community energy to work with Local Authorities, develop collaborative projects and do Local Area Energy Planning. Government together with Ofgem need to identify and fully resource an approach to Local Area Energy Planning that sets out a core role for community energy groups.

15. New procurement guidelines for Local Authorities and other public bodies which provide routes for community energy partnerships. Devon County Council is leading the way by developing a Power Purchase Agreement with Devon Community Energy Network which will enable more projects and the increased social benefit that goes with them.

16. Ensure that the energy transition is regulated to prioritise decarbonisation as soon as possible and to maximise social benefit, by building this into Ofgem official guidelines.

17. Ensure that new local energy conservation, efficiency, DSR and flexibility markets are created that are accessible for new entrants and in particular for community energy groups.

18. Study and learn from practice in the Netherlands where government has developed a community Feed-in Tariff at 14.6c/KWh. They have developed a joint approach for community energy - all onshore wind and solar developments have to offer up to 50% investment opportunity for local communities. Investments are being managed through a structure led by coops and not by bankers.

Call for evidence questions

Maintaining growth in renewable deployment to meet net zero targets

1. How is the industry currently approaching developing renewables projects without CfDs? In what ways might non-CfD backed projects obtain revenue from wholesale and other markets, and secure investment

1.1. The community energy sector, which was more than doubling in size every year between 2014 and 2017, now struggles to put together an investment case to do any kind of renewable generation, and so is focussing on adding value wherever else it can, particularly in energy efficiency and fuel poverty work where a recent study[2] calculated it was delivering social returns on investment of 9:1; but also in innovation exploring flexibility, local supply, EV charging, community transport and much more.

1.2. This loss of the ability to do local generation projects means that a huge number of local opportunities for supply that will not be taken up by commercial companies will never be built. Large amounts of local investment that, without community energy opportunities would probably not have contributed towards the energy transition, will not now be accessed. Large numbers of people that could have been engaged as active participants in and even campaigners for the energy transition, will not now be engaged. A potential army of allies for this urgent transition will remain unmobilised. All of this represents a shameful waste of resources.

1.3. In the absence of a business model of delivering community benefit projects based on revenues from community owned generation, community energy is being innovative in looking for new business models and over recent years has developed many PPAs for onsite usage of energy. In the future it will be looking to revenue stacking, including from providing grid services and flexibility but currently the income available barely justifies engaging in the markets where it is available.

1.4. Local supply, particularly at substation level on the low voltage network, would enable revenues but is currently made difficult by regulation - something that if correctly drafted the Local Electricity Bill may help to change. Large suppliers seem to be lobbying against this at government and Ofgem and Elexon level, where they have the capacity that our sector doesn't have to attend Modification panels. The P379 modification to enable 'multiple suppliers by meter splitting' (which would allow community energy to supply local customers when they were generating rather than all of the time) is being blocked in the panel process by large incumbent suppliers with a vested interest in the status quo.

2. What do you consider to be the effects of increased low-carbon deployment on future wholesale power prices and renewable capture prices?

[2] Bristol University study. https://drive.google.com/file/d/1BhI6fB4_AS68OC1ClsksKBMEzqeM2z2A/view?usp=sharing

2.1. We have witnessed increased volatility in the spot price due to large amounts of free energy being available at certain times and extreme scarcity at others, resulting in negative pricing at times and a record of £1,400 p MWh. This has been exacerbated by the increased penetration of a reduced energy market during lock-down. But the system has coped and learned how to develop. Government and vested interests are still arguing for nuclear power on the grounds of needing a percentage of 'firm power'. As 'variable' renewable energy generation increases we need an increase in low-carbon 'dispatchable' capacity, which is difficult to come by and is not provided by biomass generation which is higher carbon than coal.

2.2. Much better is local flexibility complemented by storage so that demands can be managed down or met locally as the system requires. The energy system should be treated holistically so increasing heating energy efficiency and storage can facilitate controlling electricity demands so that heating can be powered electrically at times when supply is plentiful and cheap rather than at times of immediate need coinciding with peak electricity demand.

3. How viable will investment in new renewable projects based primarily on wholesale prices be in future? Could this investment case be supported if there was more extensive deployment of flexible assets such as storage?

3.1. The government has recognised that meeting net zero targets cannot be done without the cheapest form of renewable generation, onshore wind and solar, and that these technologies still need some support, and will "for the foreseeable future"[3], to secure the private investment to get built.

3.2. The same applies to community energy.

3.3. It cannot make a business case based solely on wholesale prices, which are hugely volatile and have dropped sharply recently. This has increased the uncertainty and removed any immediate chance of their being the secure foundation of an investment case.

3.4. If renewable assets could supply larger amounts of peak (expensive) electricity by storing it when it is generating excess it would be able to command a higher average price making itself more competitive in the market, since it has priority access to the grid. However, flexibility assets, especially storage, are expensive and would require government support and incentives in addition to commanding higher prices to justify (certainly community energy) investing in then at sufficient scale to make a difference. Local micro-grid solutions are likely to make intensely local flexibility solutions enabled by smart meters more viable which would be cost effective and also increase local people and businesses' involvement in the energy system and increase incentives for them to invest in local energy solutions.

4. How much longer after the 2021 allocation round should the current CfD be used? Is a price based on a short-run marginal cost market the most effective basis for a long-term renewables contract?

[3] Alex Campbell, Head of CfD Strategy BEIS, April 2020.

4.1. The Contracts for Difference model should be used as long as it is necessary to provide market certainty to enable investment to get the capacity required to achieve net zero built. Already CfDs have been awarded at prices below the prevailing wholesale price. Certainty for investors, especially in current volatile times, is worth money in the bank. The same can be said for community energy. It has been the uncertainty caused by policy changes that ended the ability of the sector to continue doubling in size every year after 2017. Without the Feed-in Tariff or equivalent, it is virtually impossible to make any business case for community energy to get active at all.

5. Are there any changes or alternatives to the wholesale market that might facilitate merchant deployment?

6. How can market participants be encouraged to provide contracts to secure low-cost investment in renewables?

6.1. Some parts of the British public have accumulated over £125bn in savings during lock-down. Increasingly investors are looking to be part of the solution. Community energy offers local impact that investors can point to, get involved with and amplify through local advocacy and behaviour change. Very often the money invested would not have been invested in the energy transition in the absence of a local community project. Without the community project the local energy potential of that site would not have been realised, as they are often of no interest to commercial developers, due to the difficulty of dealing with small scale local building owners.

6.2. So community energy harnesses unconventional market participants, who are content with long-term investment, low returns, reduced democratic power i.e. 1 member 1 vote. However these people can then become active market participants in the energy transition, as they become repeat investors, active energy savers and energy system participants, innovators in and advocates for the energy transition. This is the sort of engagement that the Climate Change Committee means when it says we will fail to meet net zero without it. Additional to these benefits community energy is better at engaging the rest of the community in energy issues than either government or commercial participants and deliver 12-13 times the community and social benefit of commercial installations.

Ensuring overall system costs are minimised

7. **How could intermittent renewable generators change their operating or investment behaviour to respond to wholesale price signals?**

7.1. By installing flexibility systems, storage, hydrogen production, community heat generation, local low-cost supply.

7.2. Community energy is already involved with many market players in flexibility, storage, market data, supply, exploring in a community settings how future schemes would work[4]. Many

[4] https://www.repowering.org.uk/fuel-poverty-2/

partners are begging to be involved in these community embedded trials as they provide access to information about how it will work in the community. They are exploring the cost and benefit of investment in battery storage, connected to local solar generation to reduce peaks, and make better use of local supply when it is available, including by community members intertrading their shares of cheaper, day-time solar energy, storing energy in homes with existing solar panels to reduce evening peak demand.

7.3. Future technologies such as compressed air batteries, hydrogen electrolysis and others than can store excess renewable electricity for use when demand is high or supply is scarce, may be an important part of increasing the load factor and effectiveness of renewable generation and will have implications in reducing the cost of reinforcement of our generation capacity and supply grid to meet increased future electricity demands. These future savings should be invested up-front in these measures to support the increased roll-out of 'variable' renewable generation.

8. What would be the impact on the cost of capital of introducing greater exposure to the market price for power?

9. In your view which of the potential options for providing increased exposure to market signals offers the greatest benefit to the consumer? Are there any other options that we should be considering?

10. Should CfD generators be incentivised to account for flexibility and wider system impacts, and/or to provide balancing services to the system operator? How could this be achieved?

11. Should the CfD mechanism incentivise minimum grid stability requirements (in CfD plants) to minimise system costs and help ensure secure and stable operation? How could this be achieved and what are the barriers?

11.1. Yes. Simple capacity of variable generation without complementary measures to manage the grid will not solve the problem. It should be incumbent on developers to put in place related measures commensurate with their installations and the CfD scheme should be clear about what those are and the CfD strike prices should reflect the increased costs of those measures.

11.2. Community energy is well adapted and motivated to provide a diversity of local services connected to local generation, especially if they can bring benefit to local people. It has been innovating on this front, especially since simple generation projects have become more difficult to do, to finance its other community based activities.

12. Do CfD projects receive the right incentives to locate in the optimum locations?

12.1. In England many 'optimum locations' for onshore wind are ruled out of getting planning permission because they are not so designated in their Local Plans. The plan blocks to onshore wind in England must be removed.

12.2. Many optimum locations are optimum for perhaps a single turbine to serve a local community, which would be interested in investing to develop it. But because CfDs are only

available to >5MW projects the project will be too small, unsupported and so the 'optimum location' is never optimised and the opportunity is wasted.

13. Are there actions which Government should consider, outside of Ofgem's current electricity network charging reviews, to help incentivise efficient market behaviour regarding the location of renewable assets?

13.1. Yes. Support communities with the motivation to get involved in the energy system to do so and to contribute to providing assets that contribute to the localisation and the resilience of the energy system by supporting community energy via some of the recommendations in the Introduction above.

14. Should the CfD do more to enable the sustainable growth, cost reduction and competitivity of UK supply chains and how could this be achieved?

14.1. We support the focus on the sustainability of supply chains and the initiatives to localise as far as possible and develop local/domestic manufacture and supply chains. One opportunity that could be facilitated by supporting sub 5MW and community projects is increased re-use of 2nd hand turbines as existing sites are repowered (almost the only onshore wind activity that is facilitated by the planning system in England).

Supporting and adapting to innovative technologies and business models

15. What are the benefits of renewable projects using multiple low carbon technologies or being co-located with low-carbon flexible assets? Should the CfD support these projects and why?

15.1. The future of energy is local, holistic, and we urge democratised, to engage everyone in it. Most energy is used (or wasted) locally, most journeys are local, most energy use decisions are made by people in relation to local usage. Moving energy around wastes energy and cost money in system charges and reinforcement. Electricity is expensive to store even for a short time. Flexibility and resilience can be increased by a diversity of technologies that saves the need to invest in generation assets.

16. What are the benefits of projects with assets in different locations, including projects paired with flexible assets? Should the CfD support these and why?

16.1. Energy security and resilience necessitates a mix of not just of technologies but also sizes and locations and a mix of sizes and technologies in a mix of locations. Flexibility assets are an obvious pairing to increase the efficacy of any size of asset. But multifunction should be built into any project. For instance, a community centre, if the energy system enables and incentivises this, can be built and orientated to need less heat, reduce need for cooling, capture and store passive solar gain as well as electricity, provide local grid management services and community EVs and charging as well as energy education and more, paid for by local investors and controlled by local people drawn in by the project.

17. **What changes would Government need to make to the Contract for Difference Regime to facilitate the coordination of offshore energy infrastructure, what would be the benefits and costs of making them, and could there be a similar case for other renewable technologies?**

18. **What changes would Government need to make for the Contract for Difference to facilitate deployment of offshore wind as part of a hybrid offshore wind-interconnector project, and what would be the benefits and costs of making them?**

19. **What role could international renewable projects play in our future generation mix in GB? Are there benefits to supporting these projects with government schemes and how could this be achieved?**

20. **Should part-built project continue to be eligible to compete for CfDs after the fourth allocation round? Are we considering the right implications and what are your views on these?**

21. **Can cost savings be achieved by developing extensions to existing projects, if so,how great are these cost savings, and what is the justification for these projects being supported through CfDs or any other government mechanism?**

22. **Similarly, can cost savings be achieved by repowering older projects, if so, how great are these cost savings, and what is the justification for these projects being supported through CfDs or any other government mechanism?**

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FURTHER INFORMATION

Community Energy England (CEE) was established in 2014 to provide a voice for the community energy sector, primarily in England. Membership totals over 270 organisations. Many of the member organisations are community energy groups, but membership extends across a wide range of organisations that work with and support the community energy sector.

www.communityenergyengland.org