

Consultation Response

Call for Evidence by DESNEZ on Barriers to Community Energy Projects

Issue	Date	Author	Approved	Notes
1.0	21/5/24	BG		Draft
1.1	4/6/24	BG		Comments from HN incorporated
1.2	13/6/24	BG		Comments from DS incorporated too

1 Which type of stakeholder is responding?

1. Humshaugh Net Zero CIC is a Community Energy Group based in the North East of England in the Parish of Humshaugh with the aim of promoting the Net Zero Agenda at a local level. We are a voluntary group which started in 2020. Humshaugh is a rural parish of 337 households(2021 Census) beside the World Heritage site of Hadrian's Wall.

2 Where are you, or your organisation, responding from within UK?

2. Humshaugh Net Zero (HNZ) is based in the Parish of Humshaugh, near Hexham, Northumberland in the English parliamentary constituency of Hexham, Tynedale and Ponteland.

3 What are the barriers, financial and non-financial, preventing the establishment, development, and scaling of community energy projects? Please include any relevant quantitative and qualitative evidence.

3. HNZ has initiated several projects which are relevant to this Call for Evidence.
 - a. We have surveyed the Parish to see what opportunities there are for low carbon generation of electricity and heat and what barriers have to be overcome to bring these to fruition in a timely manner.
 - b. We have developed a 1 MW solar farm which is consented and now at the funding stage.
 - c. We are helping domestic consumers become more energy efficient.

3.1 Barriers preventing the establishment of CEPs

3.1.1 Financial – grants

4. Grants for energy efficiency measures are needed for poorer households and to stimulate the industry at a local level. The poorly thought out and badly administered grant programmes over the past ten years has resulted in a high degree of scepticism amongst the people in our Parish and low take-up of the limited recent schemes.

3.1.2 Financial - grid

5. The Distribution Network Operators (DNO) have to provide a response to a connection enquiry within a set time and then there is a set period for the offer to be accepted. The offer has to be evaluated, costs for the other associated electrical works obtained, the

financial model evaluated and funds put in place before an offer can be accepted. Community Groups do not have the funds to pay for a grid connection before the whole project finances are in place. The whole cost of a grid connection has to be provided up front. It is almost impossible to do everything to release funds within the three month acceptance period. We hit this problem with the solar farm. We could not accept in time and could not get an extension of the offer period so had to apply again. We have to wait the set time for a response and hopefully our funding will be in place (assuming the new offer is similar to the last) and we can accept the offer. We may have to obtain bridging finance.

6. There is no incentive for Community Energy Schemes to install battery storage schemes which could benefit local grid security and save some of the distribution system reinforcement by managing local demand.

3.1.3 Financial barrier - cost of energy efficiency measures in rural properties

7. Many of the houses in our Parish are single-thickness stone walls which are difficult to bring up to an EPC of B or C without a whole house retrofit of internal wall insulation. Whole house retrofits are very expensive and frankly uneconomic in most cases so there is reluctance to carry out this work.

3.1.4 Financial – local electricity trading

8. Local electricity trading is not feasible in most locations in the UK, including our Parish. Ofgem should make this happen quickly as has been discussed in the debates in the Parliament in recent years in connection with proposed legislation rejected by the Government. Local consumers including those in fuel poverty would benefit, price stability would improve, and Community Energy Schemes would be easier to finance with local energy trading.

3.1.5 Non-financial - grid

9. Grid connections for new community generation schemes are difficult to obtain. The Distribution Network Operators(DNO) use byzantine processes to assess connections developed in the pre-Net Zero era when connection enquiries were few and the network evolved organically. The DNO connection engineers are not fully aware of modern connection technologies and are severely overworked. For our solar farm they initially talked of a connection 15 miles away that would cost millions. That would have put off many a community group, but we have engineers who know how to deal with them and in the end, we were offered a connection 200 m away for less than £150,000.
10. The DNOs abuse their monopoly position and set their rules and procedures to suit themselves and not customers. They are still obsessed with avoiding ‘stranded assets’ which they cannot add to their guaranteed-return list of assets. For example, when asked for a three-phase supply for the school heat pumps, they only offered to put in a transformer just big enough for the school load on a new underground cable (their policy is now to underground everything) rather than rework an existing, nearby transformer and run a third phase on the existing overhead line to the school. In the end we said no, just upgrade the two phases coming into the school. Single phase heat pumps were installed, which are less efficient, but the project was then economically viable.

3.1.6 Non-financial – planning

11. The national policies for Net Zero and Planning are not well aligned. There is no real support for low carbon technology implementation including community led schemes. There is still effectively a ban on onshore wind in England. Small wind turbines may be consented, but these are close to the ground and not valuable enough to justify preventative maintenance, so their performance is poor and they fail within a few years. Wind turbines of 500 kW and above do not have these problems. This size of wind turbine is very useful at a community scale.
12. At a local level, planning departments are overloaded. We submitted a pre-application notice which is meant to ensure the actual application addresses the issues. Two departments, roads and heritage, did not respond to the pre-application and went on to ask for additional information not only after the application went in but after the consultation period for the full application was closed. Even worse they did not provide a comprehensive request but produced a string of requests. This resulted in six months of delay, six months closer to the Net Zero target date, six months more of avoidable CO₂ emissions.
13. Listed buildings and those in conservation areas need to have energy efficiency measure fitted like others. The rules need updated to allow sensible measures.
14. Roof mounted PV panels may not be allowed in conservation areas, if they can be seen from a road .
15. Northumberland County Council have a policy that would only permit small wind turbines in our Parish. We could displace all the carbon dioxide emissions from the domestic sector in the Parish if we could put in a two-megawatt wind turbine. Their policy would require eighty small ones - unreliable and low performing as indicated above.

3.1.7 Non-financial – lack of contractors

16. The number of reliable contractors for energy efficiency work in our area is very low. Many conventional heating engineers are not interested in installing low-carbon systems due to reluctance to become involved in grant funding due to bad experience, and lack of training. There are some contractors for high value options such as fitting heat pumps, but almost none for energy efficiency in our area. The nearest whole-house retrofitter to us is in Scotland.

3.2 Barriers preventing the scaling of CEPs

3.2.1 Financial

17. The difficulty of organising funding for community energy due to the low financial returns since the FIT schemes ended has hindered our activities. Local energy trading could allow a higher income but is currently not possible in our Parish.

3.2.2 Non-financial

18. The low regard the public has for grants for low carbon-technologies and the lack of good energy efficiency funding schemes have limited our scope for action.
19. Not all communities have the expertise to negotiate with DNOs for connections. There are schemes in our area which have been abandoned because of this e.g. at Slaley. DNOs are monopolies answerable to Ofgem and not their local communities.

4 Please indicate whether the community energy scheme(s) you typically work with are urban or rural?

20. Rural - Humshaugh is a Rural community.

5 Are there any regional issues impeding community energy projects? Please include any relevant quantitative and qualitative evidence.

21. The rural nature of our parish means we have the following benefits –

- Space of solar farms and wind turbines
- More space in general around houses for off-street parking and thus domestic energy chargers, though not in the centre of the village.

22. And the following disadvantages -

- Weak electricity distribution grid lacking capacity for significant low carbon generation. New lines installed through our Parish in the last few years were sized for the wind farms they serve, with nothing spare for community generation schemes. This is due to the effective bar on 'stranded assets' in the distribution system by DNOs as they do not receive their regulated return on these.
- Lack of three phase electrical supplies for large heat pumps and higher power electric vehicle charge points for tourists and residents without off-street parking. When the school wanted a three-phase supply for heat pumps, the DNO offered a dedicated supply with no spare capacity and a very high price. Less efficient single-phase units were installed. The next village, Wall, has no three-phase supply and this has halted the deployment of large heat pumps and ruled out small industrial business expansion.
- No gas grid so the only option for low carbon heat is electricity even if we move as a country to an augmenting or replacing gas with hydrogen. The main fuel for heating at the moment in the Parish is expensive imported oil.
- Few or no contractors willing to work so far from their urban bases
- Low housing density ruling out the more economic medium size district heating schemes. We have investigated district heating for the village and this is not anywhere near an economically viable option.
- Car use is very high due to the low number of buses and no trains. Electric cars are too expensive for many including those in fuel poverty.

6 Where you have identified possible or actual barriers, do you have any proposals for how these might be reduced or removed, and why do you think the actions you propose would be effective and appropriate? Please include any relevant quantitative and qualitative evidence.

6.1 Grant funding for low-carbon technologies and energy efficiency

23. Funding schemes need to be better thought out. There needs to be a thorough analysis of where previous schemes have failed and the lessons learnt so that public and industry confidence returns. These lessons to be learnt include –
- Making sure that one body only actually deals with the householder and takes full responsibility for the performance of the installation. End the cascade of responsibility across multiple sub-contractors
 - Makes sure there are enough competent contractors who are willing to undertake the work under the scheme in advance
 - Make sure that there is thorough training available for technicians in the installation practices with sufficient places and apprenticeship support
 - Make sure the contractors are paid on time
 - Make the scheme available for at least five years so that the contractors can invest in equipment and training
 - Don't waste more time by doing pilot schemes.
- (Addressing issues raised in section 3.1.1)
24. To encourage owners of stone walled houses to bring their properties up to the EPC standards of B or C, substantial grants are necessary. (This will cost a lot of money which could possibly be recouped in a revamped property tax, as the value of the house would increase.)
25. (Addressing issues raised in section 3.1.3)

6.2 Planning for low-carbon and energy efficiency developments

26. Mandate that local authorities give priority to these schemes over others without these measures and deal with them within proscribed times.
27. Mandate that local authorities will decide in favour of these schemes unless they are clearly and demonstrably in serious breach of planning legislation.
28. Change the National Planning Guidance to allow single and a small number of wind turbines up to 4 MW each to be installed by community energy companies.
29. Shift the emphasis in the National Planning to allow more energy efficiency measures to be installed on Listed Buildings even if the character of the building is slightly affected, especially for the lower grades of listed buildings.

(Addressing issues raised in section 3.1.6)

6.3 Grid connections for community schemes

30. Ofgem should mandate that DNOs appoint dedicated officers to handle connection applications from community groups in a timely manner. These officers should help the groups fill in forms and be their point of contact for all aspects. Their roll should be to advise on the most economic point of connection, any technology which could help reduce the cost of connection, the optimal size for the development given the nature of the local grid and to progress the connection through the internal DNO processes.
(Addressing issues raised in section 3.1.5 and 3.2.2)

6.4 Extend grid connection offer acceptance period for Community Energy Schemes

31. To give time to assess the financial viability and organise finance, CES connection offers from DNOs should be valid for a year.
(Addressing issues raised in section 3.1.2)

6.5 Allow DNOs more flexibility in system upgrades

32. Ofgem to allow DNOs to add initially underutilised, assets to the registered database for the regulated return. Ofgem to recognise the fact that electricity use will increase two or three-fold to cope with Net Zero especially in rural areas and so it now makes sense to upgrade the network, not just for immediate need, but of the growth over the next ten years: permit larger transformers, three phase supplies where currently single, automatic voltage regulators on transformers, heavier cables to carry future loads and spare switchgear in substations for future expansion.
(Addressing issues raised in section 3.1.5)

6.6 Set up a framework for local electricity trading

33. Community energy companies should be allowed to sell their output locally (on the same feeder from a primary substation). There clearly needs to be a charge for using the local grid, but this should be reasonable and there is no need for a transmission system charge. The total electrical system charges should not be prohibitive, but enabling. Reduced priced electricity from local generators should be available to all local domestic consumers, not just those who are able to invest in the generation project to help with fuel poverty.
(Addressing issues raised in section 3.1.4 and 3.2.1)

6.7 Grid service payments for local resilient networks

34. To facilitate grid resilience at a local level, community energy systems should be encouraged to fit battery storage to enable local peak demand management and island operation when the grid is under stress with suitable payments systems.
(Addressing issues raised in section 3.1.2)

7 Which existing or past government support mechanisms and policies have been most helpful in implementing community energy projects and why? Please include any relevant quantitative and qualitative evidence.

35. Humshaugh Net Zero has benefited from grants under the Rural Community Energy Fund and support from the North East and Yorkshire Energy Hub, The grants funded the study of low-carbon generation opportunities in the Parish and the planning application and development of a 1 MW solar farm in the Parish. Having the grants accelerated the development which is essential to try to combat climate change.

8 Could you share any evidence, either quantitative or qualitative, demonstrating how community energy projects are supporting the delivery of the UK's national net zero targets and providing additional benefits (e.g., reducing fuel poverty and improving community well-being).

36. The 1 MW solar farm which is well advanced and should be built in early 2025, will save 50% of the carbon emissions associated with the domestic consumption of electricity in the Parish. We are targeting 100% saving by 2030 and hopefully more to make inroads in the carbon emissions associated with other domestic activities.
37. HNZ has clearly raised the awareness of deploying low carbon technologies and energy saving in the Parish through the coffee mornings, evening meetings, newsletters and social media stories.
38. The school heat pump has been a financial and comfort success and is being used as a case study of what can be done. It has raised the profile of energy issues and now the Governors are exploring installing solar panels.
39. The increased awareness has also led to the Village Hall Committee exploring the installation of solar panels and a battery store.
40. The number of electric cars in the village has more than doubled in four years, though this is not entirely due to the activities of HNZ.
41. With the adoption of the measures outlined in section 6 a lot more could be done.
42. Our campaigning has led to discussions with the DNO, Northern Powergrid, at a strategic level. We are working with them to help them deliver their ambitions Net Zero goals. This will require quick regulatory change by Ofgem in many cases, as outlined in section 6.

9 Could you share any evidence, either quantitative or qualitative, of the wider system impacts (positive and negative) of community energy schemes and how any negative impacts can be mitigated.

43. We have not, as yet, encountered any negative aspects of community energy schemes. We have had nothing but support locally and lots of interest from other community groups in the North East of England.