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Dear James

**Citizens Advice response to Ofgem Call for Evidence: Households not connected to the electricity distribution network**

In this response, we have not included information relating to households disconnected by suppliers as we understand that Ofgem receives information about these consumers directly from electricity suppliers. We have, however, included information relating to micro businesses as well as households, as we have found that many people affected by being off-grid are combined business and residential operations. These groups are therefore impacted by the issues of not being connected to a mains electricity network in a similar way to people living in domestic households.

**Citizens Advice data:** We undertook a review of the data provided to us by clients on matters relating to connections to the electricity network. We discovered that we do not receive queries from clients about the issue of not being connected to the electricity distribution network (other than supplier disconnections). However, we have made some queries as a result of this Call for Evidence and have provided further information below which may be relevant.

**Information from electricity off-grid product supplier:** We have identified that there are companies that sell off-grid power solutions. One company, Energy Solutions (<https://www.energy-solutions.co.uk/off-grid>), is a company based in Rochester in Kent that supplies off-grid solutions for those unable or who choose to be off the electricity grid. A

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review of their website revealed that they sell hybrid power kits to both residential customers and commercial customers. The business customers tend to be remote farms, kennels, those running glamping or lodge sites, or rural wedding locations. As such, these commercial customers appear to be mainly micro businesses with incorporated residential premises. Energy Solutions provides a large number of case studies on their website that give useful examples of the type of properties using off-grid electricity and the reasons for doing so<sup>1</sup>.

It is apparent that one of the chief motivators for purchasing off-grid power kits is the high cost of connection to the distribution network. For instance, there was an example provided of an East Yorkshire farm that was quoted £163,000 by its DNO (Northern Powergrid) to reconnect an electricity supply<sup>2</sup>.

The locations of these customers appear to be in rural locations across Great Britain with installations noted in Kent, Suffolk, Dartmoor, Sussex, remote areas of Scotland, Cumbria, Leicestershire, and East Yorkshire.

There are implications for these customers that have been forced, through cost issues, to seek alternatives to being on the electricity network. They will have ongoing costs to maintain and replace their independent equipment as well as diesel or other fuel running costs that will be higher than an equivalent electricity network service. When something goes wrong with the equipment, they will also not have the services available to them from the electricity network companies to rapidly reestablish a supply, and no support services for those people with vulnerabilities. Running diesel or other fossil fuel generators also contributes to carbon emissions.

## Questions

- 1. Do you agree with our initial view that DNOs may be well placed to undertake evidence gathering regarding this issue? If no, who do you think would be the best party to undertake such data collection?**

We agree that DNOs (Distribution Network Operators) are well placed to understand the extent of the numbers of such consumers, both household and commercial, that may be impacted by high cost connection problems and have to resort to off-grid solutions. DNOs will have past and present records of applications for connections that have not proceeded and could investigate whether consumers have been forced to live without electricity or have had to purchase independent power solutions. The nature of such consumers could be analysed (e.g. whether household, micro business, and whether

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<sup>1</sup> Example of small business required to use off-grid solutions due to high cost to connect to the network: <https://www.energy-solutions.co.uk/news/article/kookie-kennels-scotland-off-grid-system>

<sup>2</sup> Example of very high connection cost in East Yorkshire: <https://www.energy-solutions.co.uk/news/article/96-of-our-electricity-is-provided-by-solar-via-the-easygrid>

there are people who are affected that may have vulnerabilities), the reasons for not connecting to the grid, and the differential costs, in both financial and carbon emission terms, compared to a grid connection. DNOs could also research with off-grid solutions' suppliers to identify such consumers and work with their local authorities to further locate consumers living without mains electricity.

We also believe that there may be value in DNOs investigating electricity access issues relating to transient groups or communities. Research with the National Association of Boat Owners ([www.nabo.org.uk](http://www.nabo.org.uk)) has revealed that while boat residents that are living in permanent home moorings usually have secure electricity supply, those that are living in a mobile way with no home mooring can struggle to obtain an electricity connection. As such, these consumers are forced to use their diesel or petrol generators to power their batteries. Solar panels are not deemed sufficient to power boaters' electrical needs. It is also the case that current products (such as using a 12v battery for electric cooking) are not able to provide suitable alternatives to using fossil fuel cooking and generation, especially in the winter months. This reliance on diesel and petrol usage is inefficient, expensive, and has implications for carbon emissions.

It is probable that the issue of accessing electricity supply for other transient populations is problematic (for example traveller and gypsy groups using non-standard sites or those in mobile homes). DNOs could therefore also investigate the extent of electricity access issues in such transient or semi-permanent communities.

**2. Do you have views on our potential approach (i.e. using existing mechanisms such as the Stakeholder Engagement and Consumer Vulnerability incentive) of incentivising DNOs to gather this information?**

We believe that the SECV incentive could be used to measure the effectiveness of DNOs in gathering the information on those that are not connected to the electricity network. Such information gathered could include the cost of connections and other reasons for not connecting, the impacts of higher running costs and higher carbon emissions, and the impacts due to the inability to access DNO services during power outages, particularly for those in vulnerable circumstances.

Yours sincerely

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