



Orkney Research & Innovation Campus LLP (ORIC)
The Robert Rendall Building
Franklin Road
Stromness
KW16 3AN

Date: 22nd August 2022

Net Zero, Energy & Transport Committee
Scottish Parliament

Re: Regulatory Barriers to ‘Self Supply’ at Orkney Research and Innovation Campus

Dear Members of the Scottish Government Net Zero Panel,

This letter and accompanying technical note outline the main challenges resulting from the recent OFGEM decision relating to ‘behind the meter’ installations being subject to curtailment in grid-constrained areas – of which Orkney is one. This letter provides a specific example at the Orkney Research and Innovation Campus (ORIC) but as illustrated in the accompanying note this issue is not unique to us.

Over the past 12 – 18 months ORIC has worked with energy systems specialist Solo-SMS (a subsidiary of SMS plc) with a view to jointly developing a 48kW solar PV plus battery storage project at the Robert Rendall building on the campus. This project aligns with the ‘Net Zero’ ambitions of ORIC, its owning partner organisations Orkney Islands Council and Highlands and Islands Enterprise and organisations based on the campus. Project development activities proceeded to an advanced stage with clearance of a number of technical, commercial and practical hurdles.

Regrettably this project has now been rendered unviable due to the financial impact of the OFGEM decision to insist on curtailment of ‘behind the meter’ assets and the substantial additional connection charges associated with such an arrangement (I am told are estimated to be £30,000 at minimum and likely to be in excess of this figure). As a result of this decision ORIC has been forced to reassess its pathway to achieving ‘Net Zero’ with campus buildings and operations. Whilst we will continue our efforts, this ambition now looks significantly more difficult to attain as a result of this decision until such time as a new interconnector to the mainland is in operation.

In terms of a solution to this issue I would ask to the panel to ensure that there is recognition that the current regulatory environment is disadvantageous for sections of society and make an argument to OFGEM, Innovate UK and relevant ministries and policy makers for the right to ‘self supply’ in generation constrained zones to be reconsidered.

Hopefully the example provided here is of some value in your efforts to progress the Net Zero agenda and the panel may use ORIC and the unfortunate decision I briefly described above as an example if you wish.

Yours sincerely,

John McGlynn

Executive Manager - Orkney Research & Innovation Campus LLP (ORIC)

ReFLEX Orkney lessons learnt

Headline

“DNO’s have the right to limit self-supply of renewable electricity generated behind the meter during periods of curtailment.”

100 word (high-level) summary

“The installation of multiple small-scale PV and battery systems, or larger-scale single microgeneration systems (above 3.68kW per phase) requires agreement from the Distribution Network Operator (DNO) to connect to the grid and the Active Network Management (ANM) system in Orkney. In defining a pathway to connect new microgeneration to the grid and ANM, a specific technical point of contention was uncovered around whether the DNO had the right only to curtail microgeneration at the boundary meter (to prevent export to the grid), or at the asset level (to prevent self-supply) . Ofgem confirmed that the development of ANM arrangements is a DNO-lead innovation, not something prescribed by regulation, meaning that the DNO has the power to curtail at the asset level (to prevent self-supply)).”

1 Challenge being addressed?

“As the DNO has the right to curtail generation behind the meter in a period of curtailment, this effectively means the consumer demand is “owned” by ANM generators. Consumers are not allowed to satisfy their own demand during these periods from onsite generation, and instead are required to import increasingly expensive retail electricity from the grid. This negatively impacts the business case for investing in measures such as solar and battery installs as the amount of generation from the system may be significantly reduced due to curtailment. The result is a disproportionate impact on lower income households as coordinated funded microgeneration installations may not be viable, and businesses investing in microgeneration measures to reduce carbon and cost may not see sufficient return on investment. This is clearly at odds with government strategy to encourage private capital to help fund Net Zero, and encourage businesses to decarbonise.”

2 What was achieved?

“The challenge was not overcome. Regulatory change would be required to address this fundamental question around the right to self supply within generation constrained zones.”

3 Intended impact?

3.1 What do we want to happen in sharing this publicly?

“Some recognition that the current regulatory environment is disadvantageous for sections of society and make an argument for the right to self supply in generation constrained zones to be reconsidered”

3.2 Target audience?

◀ IUK / Ofgem / policy makers ▶