7000 Acres

Written Summary of Oral Submission: 7000 Acres Open Floor Hearing 1 (OFH1)

July 2023

7000 Acres represents a large number of local residents concerned about the impact of the Gate Burton NSIP and three other solar NSIPs in the locality. This summarises the oral submissions made at Open Floor Hearing 1.

Need, Benefits and Impacts

In terms of **Need**, we do not dispute the need to decarbonise and that solar has a role to play.

However, the first key question we would like the inspector to address in this regard is:

What is the specific need for large scale ground mounted solar development in the UK?

There is growing evidence that there is sufficient available rooftop solar capacity on suitable commercial and domestic buildings for the UK to meet its solar requirements (without such extensive ground-mounted solar development).

The UK Warehouse Association have found that just by using only the largest 20% of commercial rooftops, this could double the UK's existing solar capacity, from 14GW to 28GW.

And in May this year, Ecotricity published a report that estimated that from what they consider "suitable" domestic rooftops, a further 37GW of solar could be installed.

In terms of **Benefits**, it is clear that the developer has persisted in providing over simplistic and misleading information regarding the role solar power can play in the future of electricity supply.

A fundamental principle for the electricity system to operate is that supply must match demand at all times. This is a challenge as demand is highly variable throughout the day and over the year.

No solar scheme can power 100,000 homes (as the developer has repeatedly stated), not even a scheme as vast as this, because solar schemes do not address the fundamental requirement to match electricity supply with demand in the moment.

Solar is an intermittent form of electricity generation. It also has the lowest "load factor" of any renewable technology, which is the actual yield from the headline capacity figure for the scheme.

For a 500MW capacity scheme, using UK Government energy statistics, solar delivers between 9-11% of this capacity on average, therefore, around 50MW in practice.

However, increasingly, it is when power is produced that matters; peak solar output is when demand is typically very low.

And when the country needs most power, on a winter evening, solar produces nothing.

Furthermore, the electricity system is already finding itself with too much power on summer days - resulting in a phenomenon National Grid calls “curtailment” - where excess renewable power is switched off, for which the generator concerned will be compensated.

National Grid foresee curtailment will grow to between 50 to 90 TWh of energy per year by 2030. It is an amount of electricity that is hard to fathom, but the whole country currently uses around 300TWh in a year - wasting between 15% to 30% of the country’s demand need, because of excess installed capacity that the system cannot handle.

And such curtailment will only serve to reduce that average yield figure from solar in the UK of 9-11% of rated output.

The second key question we would like to raise is:

To what extent can the proposed solar scheme truly contribute to the decarbonisation of the electricity system?

In doing so, we would seek the Inspector to thoroughly understand and assess the potential role of this solar scheme, what it can contribute, and crucially, what problems it also causes for the future decarbonised energy system.

This question is crucial, because these benefits will be weighed against the harms and consequences of the development, therefore the developer must not be allowed therefore to overstate and oversimplify the benefits of the proposed scheme.

The final dimension is the **Impact** the scheme will have.

Harm stems from the fact that solar has an extremely low power density, which means that a ground-mounted solar scheme of this capacity uses a colossal amount of space.

Using so much land has a tremendous, concentrated impact on the immediate area and its people - which you no doubt will have read from the many Relevant Representations made so far, ranging from visual impacts, agriculture, human health, sociology-economic effects, wildlife habitat… etc.

But consuming such huge areas of land also puts a wider pressure on land use and on agricultural crop land in particular, which is facing many pressures. The UK Climate Change Committee asserts we will need to lose land to plant trees and woodlands to sequester carbon and for energy crops, there are fears that climate change will **change** the yields of UK farmland and rising sea levels have the potential to further impact farmland. All of which is before any further expansion of urban development is considered.

In addition to this, there are growing concerns over food security in the wake of rising global political instability.

Quite simply, over committing agricultural land to such inefficient land use as ground mounted solar could very quickly become a cause for regret.

Our third question is therefore:

What are the impacts of the scheme, when considered both from the perspective of the immediate area, but also from a macro-level that truly considers the wider sustainability impacts of consuming crop land at this scale?

In the UK at present, there is a band wagon for large scale ground mounted solar development, akin to a wild-west style gold rush.

The developer must not be allowed to overstate and oversimplify benefits, and understate harms, for financial advantage.

I do not envy the Inspector his task. This is the first of four schemes, the determination of which has the potential to damage or even decimate communities for decades, and in the worst case, all for schemes that could contribute very little to decarbonisation.

It is essential that these decisions are right. This must not be all for fool's gold.