**7000 Acres**

**7000 Acres Statement at West Burton Open Floor Hearing, 8th November 2023**

Deadline 1 Submission – 24th November 2023

This project comes down to three simple things:

**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 Examining Authority to address in this regard is:

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

The UK Warehouse Association have found that 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.

These examples highlight that there is growing evidence that there is sufficient available rooftop solar capacity on suitable buildings for the UK to meet its solar requirements.

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 to 11% of this capacity on average, so, around 50MW in practice.

However, increasingly, it is when power is produced which 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.**

What is worse, is that the electricity system is already finding itself with too much power on summer days - resulting in a phenomenon the 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's of energy per year by 2030. It is an amount of electricity that is hard to fathom. 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.

All this means that the contribution the system can make to the energy system is limited, and therefore the overall decarbonization benefits are also limited.

Our second key question we would like to ensure the Examining Authority thoroughly covers 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 Examining Authority 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 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. 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 some of this land to plant trees 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 have a further impact.
All of which is before any renewed expansion of urban development is considered

In addition to this, there are growing demands to increase self-sufficiency of food production, because of food security concerns in the wake of rising global political instability.

This is not about land that is Best and Most Versatile, or what land is 3a or 3b, (which are distractions frequently used by developers to deflect from the fundamental need to use our precious land resources efficiently).

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

But Harm also arises from the fact that, by proposing 4.5m high tracking panels, the Applicant has shown no sensitivity to the local area and its communities.

Our third question to the Examining Authority 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?**

There is a huge challenge to decarbonise the UK (and good progress is already being made), particularly with the closure of coal fired generation and the significant contribution by renewable generation, especially from offshore wind.

To decarbonize power, the challenges from here are in two main areas:

- The first is about getting power to the right place.

By far the largest source of the country's future energy will be Wind power – perhaps 50% or more, according to the National Grid. At a transmission level, it is essential this has the necessary grid infrastructure so it can be used. At a distribution level, we need to configure networks to enable the charging infrastructure to power electric vehicles and decarbonise transport.

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, with over 130GW of solar currently in the National Grid queue for grid connections, which is a significant contributor to the problem of massive delays in the process of securing grid connections.

- The second challenge is about being able to flexibly produce clean energy, for when the wind doesn't blow, or the sun doesn't shine sufficiently to meet demand. This is about dispatchable low-or-no-carbon generation or inter-seasonal energy storage.

These are the keys to decarbonisation.

But you don't need to take the words of 7000Acres on this.

Three major reports have been published this year that assess the decarbonization of the power sector in the UK and current progress towards delivering on that goal. In doing so, they describe the main challenges and the extent to which solar plays a role.

These reports are from the UK Climate Change Committee (CCC), March 2023, the National Audit Office (NAO), March 2023 and by the Business, Energy and Industrial Strategy Committee (BEIS), April 2023 [Note: the energy portfolio of this department is now the responsibility of the Department for Energy and Net Zero (DESNZ)]

Together, their most pressing concerns are:

- The need for overall co-ordination and planning of the energy system
- The resolution of grid connection issues – especially to deliver offshore wind generation
- The inadequate pace of deployment of wind and nuclear power generation
- The need to manage energy flexibility and intermittency of renewable energy sources

Solar simply does not feature in the landscape of key challenges to be overcome for the UK to deliver on decarbonising the power sector. Existing rates of solar deployment are not an area of concern for any of these reports and are UK Climate Change Committee stated these rates are already close to the annual capacity required to be installed to meet Government targets.

This entirely undermines the call by Applicants for extensive acceleration of solar deployment through large-scale ground mounted solar, as being necessary to achieve the 70GW solar ambition. Such schemes are redundant.

What is worse, is that uncoordinated deployment of solar has the potential to interfere with efficient and effective decarbonisation by:

- Exacerbating issues of excess renewable supply and curtailment, thereby increasing the ultimate cost of a decarbonised energy system.
- Competing for land that will be required for direct decarbonisation measures, through tree planting and restoration of peatlands.
- Providing additional "clutter" to an already overwhelmed queue of grid connection applications.
- Diverting skilled resources away from delivering on the key priority tasks for decarbonisation, e.g. offshore wind, new nuclear, carbon capture.

NSIP scale solar farms are, in fact, a <u>massive distraction</u> from meeting the challenge of decarbonization.

We accept that we need solar, but we need to deploy solar in a way that acknowledges the limitations of its contribution in our country. Wherever possible, solar should therefore be delivered where it can make its contribution with the fewest adverse impacts, such as on rooftops. It should not be ground-mounted on this scale.

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

This proposed development, along with the other three in the West Lindsey District, have the potential to significantly harm and 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.