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The Planning Inspectorate,  
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13th February 2023

Dear Sir/ Madam,

Reference - BERDEN HALL SOLAR FARM - Section 62A Planning Application:  
S62A/22/0006 / UTT/22/2946/PINS

Please accept this letter as FURTHER OBEJECTION to the proposed planning application above referred.

Ten good reasons for **NOT** approving a solar farm  
**AND**  
An application of the NPPF Planning Regulations

1. As a general rule, it takes about 200 acres (80 hectares) to generate the same electricity by solar panels as just **ONE OFFSHORE** wind turbine. This represents a grossly inefficient use of precious land, whatever its quality.
2. Berden Hall Solar Farm will use 163 acres of fully fertile farmland thereby reducing the UK's valuable food production capacity for forty years at least and thereby exacerbating food insecurity (now also critically affected by the ongoing war in Ukraine). This issue alone is sufficient reason to ban solar farms automatically on fertile farmland. However, Statera (the applicant) insists this farm should be located close to Brent Pelham sub-station without any alternatives having been investigated. This insistence could be in order to enhance local landowners' investments in their land together with new battery storage units nearby the sub-station.
3. Solar farms generate 'ragged' electricity because of the random incidence of clouds or overcast skies which restrict electricity generation from the panels. In addition the panels only work during daylight whereas demand for electricity is continuous for 24 hours. Hence, there is a necessity for expensive short term battery storage (which has an historical propensity for "spontaneous" combustion of the lithium in the cells).

4. With hardly any electricity generated during the winter months, the average energy produced by a solar farm is only 11% of the installed capacity of the panels. Another gross inefficiency. In comparison, a North Sea wind turbine generates over 40% of its rated output on average throughout the year. Although this proposal is for a solar energy farm, the comparison with North Sea wind power is very relevant because wind power is landed at Sizewell in Suffolk and will be readily available for transmission to Brent Pelham sub-station where it could cover any supply deficiencies which might occur around this location if the solar farm is not authorised.
5. Solar farms produce their maximum electricity in the summer when demand for electricity is at its lowest, leading to high energy wastage because unused electricity cannot be indefinitely stored like gas. Wind turbines produce their maximum electricity in mid winter when demand for electricity is at its peak - so, much less wastage with wind power.
6. This Solar farm will have only one connection with the grid system (through the battery storage) and, therefore, very little network connectivity. In contrast, North Sea offshore wind turbines hook directly into the National Grid through onshore sub-stations, mostly, at this stage, located on the Suffolk coast. This enhances the UK's international high voltage security connectivity with Norway, France, Belgium, Denmark, Ireland, the Netherlands and Germany. In addition, wind farms in the North Sea are connected North and South by a high voltage cable to instantly balance UK supply and demand in the event of outages.
7. The Government has already indicated strong support for offshore wind, and its lack of support for solar farms by offering £225.0m of incentives for offshore wind compared with £3.3m for solar at the recent Contract for Difference (CFD) auction. This indicates that Government is 7 times more supportive in using wind power to meet zero carbon by 2050, rather than inefficient solar power. As a result of this clear government preference, there is no need for a "balance" of renewables to be installed.
8. Wind power expansion has been constrained so far by the lack of shallows in the North Sea. For example, the recently announced SeaGreen project, just off the Scottish coast, had to set a world record for the length of the legs supporting their new wind turbines. But, now that **floating** wind turbines have been introduced, this opens up the whole of the North Sea for future wind turbine investment. In comparison, the development of solar farms is seriously restricted by their already profligate use of our scarce countryside.
9. It should be emphasised that being "renewable" does not mean "zero" carbon. Certainly the generation of electricity by wind turbines or solar power is carbon free, but the manufacturing and installation of such farms can incur much CO<sub>2</sub> release. This can be measured by a statistic called Embodied Carbon Footprint (ECF) defined by the weight of carbon dioxide released during the introduction of these farms, and then divided by the number of kWhs of electricity expected to be generated during the lifetime of the installation. Presently, this is about 50 gms CO<sub>2</sub> per kWh for solar and 7.5 gms CO<sub>2</sub> per kWh for wind turbines. If the reader thinks that the carbon footprints are only measured in gms so it doesn't matter, they should look at the following calculation for solar farms;

*The total weight of CO2 by the introduction of a solar farm is  
50 gms multiplied by the estimated kwhs in the farm's lifetime  
Equals 50 x 11% efficiency x 50,000 kwhs installed capacity x 40 years lifetime  
Equals 50 x 0.11 x 50,000 x 24 hours x 365 days x 40 years / 1,000,000 for tonnes  
Approximately equals 96,000 metric tonnes of CO2*

96,000 tonnes of CO2 is a massive amount of carbon and way off the scale for a zero carbon target. The next paragraph discusses how this should be mediated.

10. The National Grid has recently announced that there are so many wind turbines planned for the North Sea that East Anglia will be exporting energy to the rest of the UK sometime soon. So, there is an expectation of surplus efficient wind power being networked westward from Suffolk by the grid, and available, en passant, at the Brent Pelham sub station for feeding the local network. Now, no electricity consumer (and green levy payer) wants to suffer low voltage while they wait for the solar battery storage unit to fill up and domestic lights to brighten. So, there is **NO NEED TO APPROVE** a Solar Farm at Brent Pelham. It can be totally replaced by wind turbines located in the North Sea, thereby improving efficiency of local renewables and reducing the local carbon embodiment from 96,000 tonnes to 15,000 tonnes (as calculated using 7.5 gms CO2 per kwhs).

## **CONCLUSIONS**

**IN ESSENCE, THERE IS NO JUSTIFIABLE REASON FOR CONSTRUCTING SOLAR FARMS ON PRIME FERTILE FARM LAND BECAUSE FOOD SECURITY MUST REMAIN PARAMOUNT.**

**SOLAR FARM ENERGY IS HIGHLY INEFFICIENT AND CAN BE REPLACED BY THE SURPLUS WIND ENERGY ANTICIPATED FROM THE NORTH SEA. IN PARTICULAR SOLAR FARMS SHOULD NOT BE APPROVED IN EAST ANGLIA.**

**OFFSHORE WIND POWER IS NOW RECOGNISED BY GOVERNMENT AS THE FUTURE FOR LARGE SCALE RENEWABLES IN THE UK, BUT SOLAR PANELS SHOULD ALSO BE ENCOURAGED FOR MILLIONS OF EXISTING AND FUTURE ROOFS AND WASTELAND - PARTICULARLY WHEN FLEXIBLE 'THIN FILM' TECHNOLOGY IS PERFECTED FOR WRAPPING AROUND BUILDINGS.**

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**NATIONAL PLANNING POLICY FRAMEWORK (NPPF) implications**

**When there is NO up to date development plan available (as in Uttlesford) the NPPF suggests the following processes to test the “presumption in favour of sustainable development” (NPPF paragraph 11, sub paragraph (d)).**

***Alternative 1 (as specified by the NPPF)***

***Permission should be granted for any proposal unless the application of policies that protect areas of particular importance provide a clear reason for refusing the proposal.***

*Interpretation specific to Solar Farms on BMV land*

There is a clear need to protect fertile farm land in order to maximise home food production unless something better could be done with this land - but there isn't anything better because there will be a surplus of efficient wind power in East Anglia so large scale inefficient solar energy will not be needed in this region.

**OUTCOME 1: LEGITIMATELY REJECT SOLAR FARM PROPOSAL**

***Alternative 2 (also as specified by the NPPF)***

***Permission should be granted unless any adverse impacts of refusal would significantly and demonstrably outweigh the benefits, when assessed against the policies taken as a whole.***

*Interpretation specific to Solar Farm on BMV farmland.*

If this proposal were rejected there would be no adverse impacts because there will be surplus wind power available in East Anglia to provide the electricity which the solar farm was intended to supply. The benefits of not having solar farms would mean that, first, fertile farmland for necessary food production would be retained and second, the countryside in the UK would not be unnecessarily industrialised and desecrated.

**OUTCOME 2 : LEGITIMATELY REJECT SOLAR FARM PROPOSAL**

February 13th 2023  
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