

Sunnica's Application for a DCO Should be Denied and Significant Changes to the Application Required Before Presentation to the Secretary of State

Summary

The project should not be approved because of:

1. An applicant with no track record in solar projects or battery energy storage systems is proposing to develop the largest solar project and battery energy storage system in the world. The many projects with battery energy storage systems globally have resulted in 50 major fires with death and injury to fire fighters and the release of toxic chemicals. As such the project poses a major environmental risk to the area exacerbated by the applicant's overconfidence arising from its total lack of experience.
2. Beyond the safety risks of the project, the deliverability of the project is severely in question because of Sunnica's lack of assets and track record
3. Its highly negative affect on the environment, local communities and food production

The process requires that the Secretary of State be presented with a DCO that he could approve even if a negative recommendation is attached. Changes that should be made to the DCO include:

1. The battery energy storage system is not an Associated Development and so should be deleted from the scheme, which would have the additional benefit of eliminating the principal safety risk to the community and the principal technical risks that could cause the applicant to fail to deliver.
2. It only promises to deliver a small solar farm (>50MW) whilst trying to acquire rights to land commensurate with a 500MW generation. The local authorities have proposed mitigations to the scheme that the applicant says would limit the generation to 178MW. Since they are only promising 50MW, there is no reason not to accept the local authority

limitations in full. Since most UK solar projects have been on the order of less than 50MW, there is no valid argument that such projects cannot secure private investment.

3. Adequate performance bonds. High risk projects commonly see large escalation in the costs to complete them even with much more experienced contractors than Sunnica. A salutary lesson comes from the Cambridge Guided Bus Project whose costs escalated by on the order of 100% from the original estimate and the final delivery of the project had major safety short cuts and additional costs to the public purse of £26M. Cambridgeshire Council had relied on parent company guarantees that were clearly ineffective in mitigating the risks to the public purse. Those who don't learn from history tend to repeat it. Given the very high-risk specification of this project, the Secretary of State should require a performance bond of £600M to be deposited to protect the public purse from Sunnica's last of substance and ensure that they are properly invested in the safe and complete delivery of the project.

Sunnica's lack of substance and lack of capability

Ownership tree includes a plethora of entities that have delayed filing their 2022 accounts. The ultimate owner is also a start up company which claims to have funds from the sale of assets. The ownership has changed regularly since this project was first muted and the lack of stability of their ownership is an additional major risk to the delivery of the project.

The applicant's lawyers objected regularly to Sunnica being characterised as being inexperienced. It is a fact that Sunnica have never traded and their accounts show negative net assets. Hence Sunnica have nothing to risk in this project and nothing to contribute having never done any solar projects. So the indignation of their lawyers amounts to some of the companies in their current ownership tree have done solar projects in the past. However, these companies have been completely absent in the process and a number of them have delayed filing their accounts due in January until after the decision on the examination process. If those companies were fully engaged in this project, they could have applied for the DCO in their own right or put in an appearance in the process to demonstrate their engagement. Instead, Sunnica have fielded only a team of lawyers who have no capability to actually deliver this project or any other. The fact that there is a major set of financial firewalls between the

assets of this tree of companies and the project is for a reason – they do not want to put these assets at risk against the high risk of a project with both an unprecedented size of solar generation and an unprecedented size of battery energy storage.

Sunnica's lack of experience has been demonstrated in the process by the constant submission of bloated inadequately summarised information very often missing milestones. If the company can't even manage the paperwork associated with the project on time there is severe doubt about the deliverability of the project by this contractor.

Their response to the various council representations on removal of particular parcels of land from the scheme was to say it amount to 326 MW and would cast doubt on the viability of the project. However, this would leave a 178MW project which is bigger than most UK solar developments. By their nature al of those 20 and 30MW schemes were commercially valuable and fundable even without a BESS and so Sunnica could produce a safe reasonably scaled project if they wanted to, but instead they have got excited about making a few founders of Sunnica rich by selling on a DCO to an unknown investor at the highest price they can achieve independent of safety or deliverability. They have largely treated the local population and their representatives with contempt during the process – didn't attend a public meeting arranged by the local MPs Lucy Frazer and Matt Hancock. They conducted their “consultation” on line with Zoom and worked hard to avoid answering any questions that might clarify even what the proposal was.

BEES is not an associated development

The applicant argues the BESS is an associated development because it can only store four hours of generation of the solar farm which it described verbally at the Issue Specific Hearing on November 1st as having a capacity of 2.4GWhr. When challenged to then have the DCO say the battery should only be allowed to store energy generated by the solar farm, it says no, the National grid should be allowed to store any generated energy from anywhere on the grid in the battery. This is because such storage represents significant revenue streams for Sunnica. And of course, although they describe the battery as having four-hour capacity, this is not particularly relevant because for much of the year when there are fewer daylight hours and the Sun is lower, the array will generate much less power and for instance in the winter months, there will not be enough generated by the solar array to make use of the battery at all.

This says conclusively that the battery is not primarily associated with the solar generation but is there for other revenue streams from storing energy generated in other ways. As such, it does not need to be sited with the solar array but could be in a much safer area where the dangers from fire and release of toxic materials were less threatening to the local population. Hence it is not an Associated Development and should be excluded from the scheme. Indeed, if given the Carte Blanche they have requested, they might increase the battery storage capacity even more to enhance such revenue streams. They have also argued, incomprehensibly, that the hazards presented by the battery are not related to its capacity (in the Issue Specific Hearing on November 1st). This illustrates further their lack of experience and knowledge related to BESS. The normal way to assess hazards for safety critical projects is to consider the severity of an adverse event and the probability of such events by a team independent from the design team. The design team then proposes mitigating measures which reduce the risk for severe hazards to low. It is well reported in the press and the literature that high-capacity lithium-ion batteries present a significant fire risk from thermal runaways, even with much lower capacity BESS. Such accidents have caused injury and loss of life to firefighters and significant damage to energy security for the time it takes to restore the plant to an operational condition.

Case Study: what can go wrong - The Guided Bus

My earlier submission reference 12582 described Sunnica's Companies House filings, which show they have never traded and have no net assets but a balance sheet deficit in excess of £400,000. Sunnica claims financial substance through its connections to parent companies and the earlier submission described how those connections are essentially worthless to the Secretary of State because of the firewalls between Sunnica and the parent companies. The firewalls will protect those parent companies from the consequences of the project going awry and hence the financial burden of problems would fall on taxpayers. You might think that this is unimportant because this is just a conventional project which does not use new technology; so nothing is likely to go wrong and the Secretary of State is unlikely to have to provide funding to resolve problems. However, similar projects have been long delayed and the public purse has had to pick up substantial costs.

A good example of a similar scale project might be considered to be the guided busway in Cambridge, constructed from 2007 to 2011. No new technology was involved in what was essentially a somewhat advanced tram system. The project was initially offered for £73m but a huge raft of delays and overruns increased the cost to £126m. It was later established there were also major problems with the quality of the work carried out, which in 2017 were estimated to require further repairs that would likely bring the final cost to £200m to £300m. It didn't just fail by delay and cost overrun. After completion of the project by an under-funded provider, the short cuts taken to cover up the financial and operational inadequacies came to light. In this case of the guided busway – independent experts quoted in the Cambridge News - "Flaws in the scheme include subsidence, which means 50 per cent of the shallow foundations will need to be rebuilt, cracks in the concrete beams and water ingress. This has led to bumpy and uneven tracks which the authors say raises "catastrophic" safety concerns." The Cambridge County Council were still commissioning and acting on safety reports in 2022, this is eleven years after the initial delivery of the project in 2011.

So a project doesn't have to be the James Webb Telescope to incur eye watering cost overruns – all that is needed is a team battling with issues that they have not personally dealt with before, combined with a project of scale and complexity. Sunnica have no prior experience in the field at all, so their estimates of what it might cost are not based on valid experience of actual construction of such a large project. Their partners, have experience in the various sub-systems, but they will not be responsible for the whole system. It is worth remembering that no project has delivered a solar farm and battery energy storage system of this scale in Britain or anywhere else.

So the Sunnica project should give the Secretary of State some major concerns, for example:

1. Catastrophic safety risks arising from the short cuts Sunnica may take to deliver the project within their financial constraints – the most obvious area for this is the Battery Energy Storage System. This is bigger than any delivered in the world and with precedent for major fire and explosion accidents (50 already reported with much smaller BESS systems).

2. Performance bonds: the Cambridge County Council had a performance bond of £7.5m with the contractor (BAM Nuttall) for the guided busway contract (compared to the £73M estimate), which became essentially negligible compared to the cost overruns involved. They also had a guarantee from the parent company and they had clauses giving liquidated damages for the project being late. More than 10m in fines were levied on the contractor for lateness using the liquidated damages clause, but more than this was spent on consultants and lawyers to sort out the mess. The Cambridge County Council in the end took legal action against the contractor, which was settled out of court with £26m cost to the public purse. The fact that public purse had to bear these costs shows that the parent company guarantee was not effective in this case and relying on parent companies to give substance to small contractors is not effective. The performance bond, even had it been the size of the original estimate would not have covered the cost overruns and repair costs that actually occurred. With this in mind, it would be quite conservative for the Secretary of State to insist on a performance bond at least the size of the current estimate for the Sunnica project (£600m).

Overwhelmingly negative effect on the environment and local communities

This comes as no surprise given their evasive consultation with local communities where they shamelessly exploited the COVID lockdown to evade consulting on their proposals.

The vast structures proposed are admitted by the applicant to be an eyesore but they propose to plant saplings at the end of their construction phase which won't in any way shield the construction for many years. The structures will have a devastating effect on the habitats of wildlife over the area.

The diffuse design across such a large area requires a vast array of lorry movements over the several years of construction and cuts the connectivity of local communities. The project seeks to turn a rural agricultural area into a vast power plant – completely inappropriate.

Carelessness about UK food supply

Sunnica have made misleading statements about the land they propose to use for this project. Despite taking 2500 acres of land including a significant amount of grade 2 very good agricultural land, they are only guaranteeing to

provide 50 MW of generation and battery storage. Just as the Ukraine war shows relying on unreliable foreign sources for energy is folly so is relying on the same unreliable sources for food.

Conclusion

A poorly thought through project from an unqualified applicant that if approved would present major safety risks to the local community and major financial risks to the Secretary of State whilst promising benefits (50MW of generation with four hours of storage) out of all proportion to the land wasted and these risks.