

East Park Energy 07.07.26

BESS safety management plan

BESS system failures in the UK and around the world have shown that it has the potential for significant danger to the environment & local population. As with other solar projects, the on-site security for this project appears minimal. With the huge levels of resistance to these developments around the UK, significant levels of equipment theft and UK involvement in worldwide conflicts, on-site security should be the very highest priority. Lord Robertson, the former Nato secretary general has highlighted in the House of Lords the vulnerability of the UK energy infrastructure to sub threshold attacks particularly from Russia. Current energy site security is woefully inadequate to protect us from such attacks. On this proposed site, maintaining security when there is 40 miles of perimeter fencing around what amounts to a 3 square mile site would be really challenging.

I see little mention of cyber security in the applicants documentation and the written questions that I submitted some time ago about this subject remain unanswered. The manufacturer of the equipment for the BESS system will no doubt install monitoring equipment that will allow them remote access. Especially if this equipment comes from outside the UK, what measures will be in place to prevent unwanted interference from either the equipment supplier or hackers in general?

Currently the UK does not enjoy a good relationship with Russia. Russia has a history of hacking & sabotaging energy assets (such as subsea cables in the Baltic). We need to wake up to this threat before it becomes a serious reality. Will there be a manual backup to all the automated systems in the event of power failure or outside interference?

Choice of battery system – Page 2 oBSMP Item 1.2.1 states that “For the purposes of this document a concept design has been considered that uses a BESS system based on Lithium-ion phosphate battery technology.” However, Page 11 of oBSMP, item 1.3 The first sentence states that EPE will use Lithium-ion batteries. What type of battery system does EPE intend to use? Lithium-ion phosphate and lithium-ion batteries are not the same. Why has this document used one type of battery technology if EPE are using another (less safe) battery technology?

Safe BESS operation - Page 31 oBSMP item 3.2.1 Last bullet point states that “In some circumstances it will be necessary to discharge stored electricity from the batteries to enable first/second responders to deal with the incident.” This contradicts the statement on page 23 oBSMP item 2.6.2. “However, the batteries within the BESS enclosures will still hold charge in the event of a fire, even after the electrical system is isolated. It will not be possible to confirm that there is no residual risk from the energised batteries within the BESS enclosures”. Which of these statements is correct?

Water storage containers – The OBSMP gives a capacity of 2x 228,000 litres. Without giving the actual dimensions of the containers, it gives a specification for the depth of the concrete slab (1 metre). how was this figure arrived at without knowing the footprint of the tanks?

Water usage In BESS incidents – In the Merseyside BESS incident it's reported that possibly over 5million litres of water was used. San Diego Gateway Energy storage 8 million litres. Moss Landing Monterey 2.6 million litres. Drogenbos (Belgium) 1.4 million litres +400kg of powder.

4.3.3 East Park Energy give figures of 1900 litres per minute for 4hrs, this would completely exhaust their storage tanks. In the above cases, the fire service used millions of litres of water over many hours/days. The East Park Energy site water supply is only available via hydrants connected to the two storage tanks according to the Email from the fire service that was read out at the meeting on 09.06.26, this was confirmed by the applicants expert witness. Has any industrial BESS fire ever been extinguished with so little water?

Minimum safe spacing requirement, Page 5, item 1.4.3 & Page 19, 2.4.2 appears to conflict with Page 22 item 2.5.1, which refers to “multiple joined, or close coupled” containers. Some of the minimum distances given on page 20 item 2.4.6 seem unnecessarily minimal (1-3 metres). Boundary cooling within metres of a lithium battery fire is fraught with danger. There are options for centralised BESS storage sites, or dispersed BESS storage sites. East Park Energy are favouring a centralised system. Centralised systems have some advantages, including cost, but one major disadvantage is a much greater risk of a fire spreading due to the close proximity of multiple containers. In view of the minimal supply of water for firefighting, this is a highly questionable decision

Cleve Hill solar site is having issues with water supply just to clean their solar panels. What is their status in the event of a fire on the site, do they also just have the limited quantity of water in storage containers? What legal framework is in place to shut down an operating BESS in the event of an operator non-compliance?

4.5.6 States that the surface drainage system will contain the full firefighting volume, that shouldn't be a very demanding requirement when the only water that's available is the limited amounts in the storage tanks? Obviously with the proposed site being in the Kym valley, runoff cannot be allowed to run into the River Kym which feeds into the Great Ouse which in turn is pumped into Grafham Water reservoir.

Smoke plume impact – 4.5.10 In the event of a battery fire, the heat given off by the fire would carry the toxic fumes upwards, potentially traveling many miles before cooling & sinking. The receptors within a 1km of the fire would most likely be well below the height of the toxic fumes. Weather conditions including barometric pressure would play a huge role in determining the location that is affected by the fallout. It's not unusual for sand from the Sahara to fall on the UK!

After the East Tilbury BESS incident, there were problems (taking months) appointing a suitable waste contractor to deal with the contaminated waste. Why was there not a SOP in place for dealing with toxic waste after a fire? Presumably this site went through a similar planning process to East Park Energy?

Industrial BESS sites are a relatively new thing. A lot of the technical requirements for BESS sites are based on very limited experience. As knowledge is gained & rules are rewritten will BESS operators be legally forced to upgrade their existing sites to ensure protection of the environment, & the safety of the staff, firefighters & the local population?

Representatives of East Park Energy have demonstrated that their profit is more important than the welfare of the local population. In the event of a catastrophic failure, will individuals involved in promoting this project be held responsible?

Energy Provision - The applicant has claimed that the proposed site could provide energy for over 108,000 homes. In no way can a 400MW solar site power this number of homes, except in summer for 3 hours either side of noon, when solar energy production is at its highest and demand is at its lowest. Solar energy production throughout the year is totally inverse to domestic demand. Winter solar energy generation in this part of the country, in ideal circumstances, with a tilt angle for maximum annual production of 36 degrees, will produce a little over a third of summer production. The East Park Energy site has large areas of north facing land, this will reduce winter energy production further.

BESS system - When it's dark or overcast the 100MW BESS site will be able to supply these 108,000 homes with less than 1KW each, and even this will only be for a very short period of time.
Claims that 108,000 houses can be supplied is very misleading, these homes could be supplied by this system, but in the winter months its contribution would be minimal.