

From: [REDACTED]
To: [Cleve Hill Solar Park](#)
Subject: Request to Participate in Open Floor Hearing 2, 22 July 2019
Date: 11 June 2019 16:52:25

CHSP

Submission to Open Floor Hearing 2 - 22 July 2019

Presented on behalf of The Faversham Society by Professor Sir David Melville CBE

Energy Storage System - Safety Issues

1. We are concerned at the limitations of the Rochdale Envelope in relation to hazards associated with emerging battery technology.
The Rochdale envelope is neither a blank cheque nor a Trojan Horse. It is assumed to apply to existing, safe technology which may be superseded during the course of a development. It is not appropriate for technology, known at the outset to be a potential hazard with an unknown improvement path. Caution is further advised given the lack of any NPSs relating to solar PV and energy storage systems.
2. We are concerned at the unprecedented scale of energy storage (Batteries) and known fire risk. (3 further unexplained, spontaneous Li-ion car battery fires in April/May this year). Imagine the area of the Faversham recreation ground filled with over 20,000 Tesla cars piled two deep.
3. Flood risk mitigation (the bund around the batteries) needs to specify associated access arrangements and expertise for Kent Fire and Rescue Services. Published plans do not specify any access roads to the perimeter of the bund. How is a fire at the centre of the installation to be dealt with?
4. Li-ion battery fires are acknowledged as among the most difficult to suppress. Some advice is to 'let the fire burn itself out'. This is not practicable in a large scale battery installation. Conventional sprinkler systems are unlikely to be effective. Modeling is needed on the risks of individual failure leading to a runaway catastrophe.
5. Besides uncertainty on the type of fire extinguisher to use there are known emissions of highly toxic Hydrogen Fluoride gas from burning Li-ion batteries (Nature 2017).
6. What systems for fire suppression are proposed and what are the precedents for their effectiveness for large scale installations?
- 7, Who is responsible for the assessment of risks associated with the use of emerging technologies and what professional advice on safety will the Examination commission?

The application is totally lacking on technical detail on the energy storage system. In view of the potential hazards this must be provided to enable

scrutiny and professional assessment.

Traffic and Transport

Inevitably there will be ongoing heavy traffic issues (noise, pollution and danger passing the Graveney Primary School) beyond the construction period, associated in particular with the (potentially toxic) battery replacement cycle.

Lifespan data on large Li-ion installations is sparse, but warranties and reputable tests (NREL) on batteries for domestic PV solar installations in the USA indicate a 7-10 year lifespan. In addition there will be traffic movements due to replacements resulting from PV panel maintenance and improved technology upgrades.

This should be researched by the proposers and factored into traffic plans for the whole lifetime of the solar power station

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Vice-Chairman

The Faversham Society

(Former Professor of Physics, Vice-Chancellor and Permanent Secretary)