

Cranfield

Rep 7 -036

A1.1.1 Paper looks at alternative design scenarios to assess the impact of different land areas covered by the panels (and therefore the total number of panels.)

No indication as to what these layouts might be and effects on landscape amenity.

Includes change in panel type from 550Wp to 575Wp

A 1.2.2 Used 13 year lifespan of battery – actually not worst case. (It should be stressed that 13 years was selected by Cranfield as being at the “favourable end” of the battery lifetime spectrum).

A 1.2.6 GHG intensity factors do not include emissions associated with the maintenance of power generation facilities or worker transport which have been removed. However no figures to justify reduction in operational intensity from 9gCO₂e/kWh to 0.3g CO₂e/kWh are provided. Working from Sunnica figures a more realistic figure would seem to be 1.44gCO₂e/kWh. Cranfield recalculated figure is 4 x their estimate

A 1.2.12 Comparison figures are with gas turbine generation (460g CO₂e/kWh for OCGT and 360gCO₂e/kWh for CCGT when average figures for the grid are more normally in the region of 240gCO₂e/kWh) – this is highly carbon intensive and does not reflect the normal emissions from the grid. The National Grid dashboard figures only reach as high as 380gCO₂e/kWh

A1.2.3 Notes carbon intensity of grid can only fall with implementation of renewable generating systems such as the scheme. However, as the grid intensity falls the benefits of schemes which have very high carbon costs in construction and products, plus the potential for ongoing high losses through inefficient cables over long distances, decreases. Sunnica state battery efficiency is likely to be only 83.7% when charged from the scheme and 86.4% when charging direct from the grid.

The most efficient scenarios in terms of carbon are from sending all energy generated by the scheme to the grid and charging the batteries from the grid rather than the scheme.

This scheme, which takes 2500 acres of highly productive land out of production should not be allowed to go ahead. It is inefficient and would appear to contribute carbon to the grid rather than reducing it. The options of reducing the areas of solar panels could potential make the carbon balance worse.