Together Against Sizewell C

TASC's IP no: 20026424.

Sizewell C Evidence to PINS by Neil Crumpton on behalf of TASC

It has recently been announced in the global media that billionaire industrialist Mukesh Ambani, one of the rich people in Asia, is investing in giga-factory to mass produce alkaline electrolysers. The aim is to reduce the cost of electrolytic hydrogen for the production of 'carbon-negative' synthetic aviation fuel from biomass and electrolytic hydrogen. The industrialist's stated goal is to achieve a hydrogen production cost of 1USD per kgH2 by 2030. TASC submits this development as further evidence that there is considerable value in utilising 'excess' electricity (excess supply to instantaneous consumer Grid demand).

The BEIS DDM model shows a wide range of scenarios in which there are considerable amounts of excess electricity which is mostly curtailed rather than utilised. Unless the DDM model is developed further it is likely to fail to identify significant cost-benefits and UK industrial opportunities of some scenarios and ministers will be poorly advised.

The highest excesses occur in the Renewables + Carbon Capture and Storage (CCS) scenarios compared to nuclear-inclusive scenarios. TASC has pointed out in previous evidence that this excess electricity is very likely to have value, for example in the production of electrolytic 'green' hydrogen, powering Direct Air Capture (DAC) plants, heat storage or export via interconnectors. Green hydrogen and carbon from biomass or DAC can be used for the production of synthetic hydrocarbon fuels such as low-carbon or even 'carbon-negative' aviation fuel in addition to storable liquid or gaseous fuels for back-up generating capacity (for periods when RE supply falls below instantaneous consumer Grid demand).

TASC submit this globally significant electrolyser investment as further evidence that the BEIS DDM model is not sufficiently developed to provide accurate comparative cost modelling and strategic advice on energy matters to ministers and subsequent energy policy formulation. TASC contend that the SZC DCO should not be considered until BEIS has made significant improvements to the DDM model to incorporate the full range of cost-benefit possibilities.

Neil Crumpton, on behalf of TASC

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