WHY UK GRID-CONNECTED WIND AND SOLAR ARE POINTLESS.

The issue is connected with dispatchability / intermittency, at least in the UK and the nearby developed part of Europe. Despite what you might hear, there is no realistic prospect of affordable multi-day whole-grid-scale electricity storage being invented and developed in time to deal with climate change. So, electricity must be generated as it is required. There is limited scope for electricity demand to be shifted in time, and much of what can conveniently be done in this regard is already current practice. Hydro power is fine - wonderful, in fact - and some of it can even be used as pump storage to store small quantities of power, even for long periods, but it gets expensive once the most suitable sites have been used up. The intermittency of wind and solar means that, in reality, wind and solar generation are powered largely by gas (and disproportionately by the least efficient, OCGT type of gas plant in order to reduce its capital cost because it is not used continuously). At present, what the wind and solar generation does, at least in theory, is to reduce the amount of gas fuel used, at the cost of increased wear and tear, without reducing at all the requirement for gas plant to be built and maintained. This may seem like a fairly good deal but, in order to deal with climate change, as soon as possible the gas plants need to be replaced by much lower carbon generation, which will have to be nuclear. Crucially, running even a modern dispatchable nuclear plant at anything lower than full output does not significantly reduce its costs or environmental impact. There is therefore NO POINT in planning a power system which will intermittently replace some of the nuclear plants' available output with energy from wind or solar. Therefore, grid-connected wind and solar plant will eventually be doing nothing useful, and the money invested and reliance placed on it will merely have detracted from attention which could have been given to a real solution.

Offshore wind is said to be less intermittent than some other intermittent energy sources like onshore wind and UK solar. However, even the smallest degree of intermittency still requires that the whole capacity of all intermittent generating plant be unnecessarily duplicated with plant, such as gas or nuclear, which is dispatchable. This is because, occasionally, there is no wind anywhere in the UK or developed western Europe. All the wind generation then stops, but the grid has to continue to operate. Such periods can, of course, coincide with low solar insolation, so solar generation may also be low. All this indicates that we need to exclusively build the forms of generation that work well together to do what the grid needs, and can be scaled and mass-produced cheaply. Wind and solar do not fit into this requirement, and their promotion is distracting attention and investment from things that really work.

What I have explained above is not a new discovery, and yet the UK and Germany have wasted a fortune on technologies that were never suitable to solve the climate change problem. This makes me wonder whether the grid-connected wind and solar investment elsewhere in the world has been similarly counterproductive.

TR.
www.350.me.uk