

Notes on the December 6th CCG Meeting on Renewable Energy Use at Home and Generated in the Region

The meeting comprised a short introduction by Mike Cockerell and presentations by Jan Davies and Tom Broughton, both members of the Climate Change Group.

1.

Presentation by Jan Davies - Personal Experience of an all-electric household.

1. Jan installed 3 solar panels in 2012 and an air source heat pump in 2021. He runs an electric vehicle.
2. He has also had a battery and connection to the national grid using an interactive battery inverter. The latter allows him to import electricity from the grid when prices are lower and store any surplus from his solar panels and export any surplus power to the grid. However, with his electric car and electricity operating his air source heat pump he imports from the grid in normal daily use to keep his battery charged.
3. Although he explained the complicated balance that needs to be achieved in inputs/outputs and cost considerations he did say that it is possible to simply leave the system to his supplier's (Octopus) programme to work this out without him bothering.
4. The efficiency of the panels has decreased but not significantly since new although he did explain that the installation was difficult due to neighbour's objection to the use of their garden for scaffolding.
5. He explained the considerations he applied to the type, cost, operation and maintenance of the air source heat pump. Regarding the market supplying new products - the specifications and costs are changing over time. Also, mass production and standardisation should reduce real costs over time. He stressed that you need to seek guidance before you proceed and the first step will be to install a good level of household insulation.
6. The audience had several questions of Jan during and after his talk and the subject raised a considerable level of interest.

2. Presentation by Tom Broughton - Achieving the Electricity for Net Zero within Chichester District.

1. Tom has been involved in local energy initiatives since 2010. He is one of the original organisers of the Meadow Blue Community Energy Scheme, Merston (near Chichester). This is a 100% community owned solar array helping to generate clean energy and support local community projects. It generates enough electricity to power over 1200 average houses. During the pandemic the nearby Ferry Farm community owned wind farm near Selsey used some of its surplus to fund laptops for local schools.
2. Tom's presentation took us through his thoughts about how the increase in electricity generation required for the Chichester District to achieve net zero by 2050 could be achieved. He had calculated the capacity required based on the current population and land uses and took stock of what level of sustainable energy existed now and would have to be added using two different projections. This led to the following considerations:
 1. Land based wind turbines were obviously a cost-effective option and some areas of the district had levels of wind suitable for such turbines. However, Tom gave his view and from his personal experience that this was an almost impossible option to achieve in practice due to local opposition.
 2. Our key energy production selling point is the number of hours of sunshine in this part of the world. If Chichester District made a proportionate contribution to the UK Climate Change Committee's projections for solar power (ie 500MW) then an area the size of Bosham peninsula would be required for new solar arrays. But clearly the answer would be more likely to be a mixture of roof based solar panels on houses and other buildings and new solar arrays, so reducing the area of new land required for these significantly.
 3. There were several questions from the audience as Tom developed his propositions. and proposed nuclear energy in terms of small modular nuclear reactors although that didn't seem a popular option by others. The audience, however, did seem impressed by the potential contribution of solar energy in our area and the community projects such as the Blue Meadow scheme.

The two presentations are available in pdf format: