

Expanding the grid

National Grid recognises that it needs a major expansion of grid capacity to carry all the extra electrical power that will be needed as people switch heating and transport to electrical methods. They also see they need more capacity to handle more intermittent renewable power on the system, as they seek to make more connections available to the mushrooming solar and windfarms seeking access and long distance transport for the power they hope to generate.

National Grid is talking about an increase in electricity volume of 50% by 2035. This is well short of what would be needed for net zero. We will need increased power to handle a growing population, as well as increased power per head when people switch more of their activities to electrical means. They talk of an investment of a large £54 bn. which may well be an understatement. They need to put in subsea cables to offshore wind to get the power to land, and pylon mounted cables to route the renewable power long distances from generation to use. There will also need to be a complementary investment in local power cables street by street and house by house as more people want supplies beyond the capacity of their current installations.

This poses a number of planning and environmental issues. Many people object to pylons strutting across the valleys and landscapes of England, and few want to live under powerful electrical lines where they need to cross urban areas. There will be a lot of pressure to put more of this underground which greatly increases the costs. All this extra capital will need rewarding, so electricity prices will need to reflect the need for so much money to be committed to expanding the grid as well as all the extra cost of additional and different generating systems. More renewables also means more back up generation which is costly to provide, or means the construction of expensive large battery farms, pump storage systems or conversion into hydrogen and synthetic fuels using the renewable power.

Given planning delays and the long enquiries used by those against all this is going to take many years to accomplish. What are your thoughts on the feasibility and practicality of this approach?