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1. [Small Modular Reactors](#) (SMR) have been in the [news](#). Revolt (news170, 172, 294) has been interested in small nuclear reactors as a flexible source of electricity generation near to regions of demand. It will be interesting to see where the latest developments lead.

2. The Register [reports](#) 10th June: The UK government will today set out Second World War-style measures to keep the lights on and avert power cuts as a "last resort". The price to Britons will be high. The Telegraph has a similar [article](#) of 9th June in anticipation of Energy Minister Ed Davey's statement of 10th June.

3. Eirgrid is [reported](#) to have changed its website to cover up a misquotation of a paper about EMF health effects. The paper is Swanson & Kheifets 2006 (Radiation Research 165(4):470-8) which argues that biological effects from power-frequency magnetic fields below 5 μT are implausible. An Irish government review, issued by the Office of the Chief Scientific Adviser in 2011, appears to have zealously over-interpreted that as "The authors concluded that effects below 5 microT are implausible and *'that health effects of environmental electric and magnetic fields are impossible'* at this level of exposure." The government thus served it up for Eirgrid to quote in their efforts to crush reasoned objection over the last three years. But it's the opposite of the truth on the record!

4. Swanson & Kheifets actually say "The absence of a plausible biophysical mechanism at lower fields cannot be taken as proof that health effects of environmental electric and magnetic fields are impossible" in their abstract and "It is not legitimate to say that health effects of electric and magnetic fields are impossible" on page 477. Why do politics and big business like Eirgrid have to be so dishonest?

5. I am reminded of another Irish government false claim (revolt [news352.7](#)), in relation to magnetic fields from the EWIC cables, to the effect that only 8 out of 25,000 studies have suggested possible associations with adverse health effects. Again the truth on the record is very different.

6. No further contact has been received in connection with the EU electricity project [e-Highway2050](#), further to the approach earlier this year (news379.6). The industry group [Entso-e](#) has its own [Ten Year Network Development Plan](#) (TYNDP 2014) up for renewal in June / July. It is to introduce a 2030 horizon, bridging between the 2020 vision and the e-Highway2050. These radical far-reaching strategic views seem to be firmly in the hands of the transmission industries. So far the scant efforts at public stakeholder engagement do not seem to be meaningful.

7. On e-Highway50 Andrew Hope writes: Admiral Lord Alan West said this week that lpg tankers stretch every 20 miles between Milford Haven and Qatar 24 hours a day to ensure security of supply. Is an interconnected UK in a more secure position for being fully integrated by hvdc? And is that situation more suited to offshore wind

renewables in that they could be integrated ex UK Grid and neither affect or destabilise that Grid to any extent?

8. Andrew also writes: Radio 4 "Frontiers" programme has a Power transmission episode (on June 18th) and available on i player:

www.bbc.co.uk/programmes/b006qy5p

This expands (to an extent) hvdc interconnector concepts for the benefit of the public but fails to grasp that much of the technology required is already in use, and fails to validate the reasons for interconnection. Justification for energy be moved in vast quantities over long distances is crucial to a public acceptance of the costs involved.

9. That Radio 4 programme is worth a listen. A partial HVDC supergrid is already on the way with offshore windfarm connections. Elsewhere in Europe there may be an increase in HVDC interconnectors between national AC grids. Better HVDC supergrid should help to reduce the growth of onshore grid in the UK. For example, north-to-south HVDC offshore cables would carry offshore wind power from Scotland directly to the south of England and mainland Europe, provided the cables extend the full length of Britain and do not end at Hartlepool or Humberside on the east or Anglesea or Cheshire on the west.

10. The Radio 4 programme also mentions future transmission technology, using carbon nanotubes for electricity or using optical carbon fibre to send energy in the form of light. They would be much lighter-weight systems which would not need heavy powerlines. Light could even be beamed through the air for long stretches instead of being wired. Light is already used as an information carrier, and can be used to carry energy. After all, most of the Sun's energy radiating to Earth (the primary driver of renewable energy) is in the form of visible light. However, the programme only discusses large-scale generation, ignoring the potential for smaller localised power such as the Small Modular Reactors mentioned at Item 1 above.

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