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1. Joe McCool from the Northern Ireland group SEAT writes 17-05-2014: “Has anyone noticed that France is undergrounding all its power lines? Presumably, France has more concern for the welfare of its citizens than the UK has for its subjects. Allez les bleus.”

2. A new well-conducted study on animal navigation reported in the top journal Nature shows birds disoriented by electro-magnetic noise in the frequency range c. 20 kHz to 5 MHz [Engels et al, Nature, 2014, doi:10.1038/nature13290]. This covers the medium-wave band for AM radio, well above the ELF range for powerlines, although some power systems may have “dirty electricity” into this range. Birds (migrating robins) have previously been shown to be disoriented by laboratory radiation at a particular Larmor frequency within this range, but this is a first measurement of such an effect of actual man-made noise in the environment. The disorientation was due to broadband noise of lower intensity (c. 1 nT at any single frequency) than observed before, and far below ICNIRP guideline levels, and was not confined to any specific part of the spectral range.

3. Magnetic fields and radiation are recognised by the WHO as *possibly carcinogenic to humans* (Group 2B) both in the ELF range (3 Hz to 3 kHz, including typical power systems) and the RF range (30 kHz to 300 GHz, including AM, FM and mobile phones). In both cases there is controversy and a question as to the biophysical plausibility of such effects, or even of any possible biological effect, at the low exposure levels of man-made EMF in the environment.

4. Nature also carries a substantial commentary on the Engels paper by long-term authority Joe Kirschvink [doi:10.1038/nature13334]. He says “*the levels of radio-frequency radiation that affected the birds’ orientation are substantially below anything previously thought to be biophysically plausible*”. This should be a signal to those who claim such effects are “impossible”, or “biophysically implausible”, when it might be more reasonable to say biophysical plausibility is not yet established. Lack of established plausibility is not the same as implausibility. It does seem premature to claim implausibility at this still early stage of magneto-biology and quantum biology; it would seem wiser to respect the scientific uncertainty about potential mechanisms.

5. Joe Kirschvink further claims that the new results “flatly contradict” those of Ritz on the Larmor resonance effect. But the new study only applied (and screened) broadband noise at a lower level than was needed for the Larmor effect. The lack of a Larmor spike in the birds’ behaviour is no contradiction. The two results are complementary rather than contradictory.

6. The CPO inquiry into Dong Energy’s cables and substation near St Asaph in North Wales closed in May. Dong’s closing submission argues the case for a CPO, largely in general terms as to whether such a CPO would be possible in principle, particularly for restrictive covenant rights rather than for freehold ownership, given that a CPO is

supposed to be a last resort. Prima facie there does seem to be a question as to whether a CPO should be needed in this case when agreements have been reached with the relevant landowners. Those agreements should incorporate any restrictive conditions needed.

7. I am reminded of National Grid's CPO applications in 2001 for parts of the cable section of the new Yorkshire 400 kV line. Hearings started but were terminated after a day or two when National Grid announced they had finally obtained all the necessary agreements with landowners and consequently withdrew their CPO applications. The inspector, having taken advice from the Department, ruled that the hearings were no longer necessary and would cease, with apologies to frustrated third party objectors including those with rights over relevant land but whose agreement was not required. So it will be interesting to see if Dong's different approach is upheld.

8. Dong's proposals already have planning permission, subject to a Condition 20 which requires (with provisos) the cables to be located at the side of the permitted corridor furthest from an objector's home and in a trefoil formation which would ensure low magnetic fields (news372.3). The closing submission says that "*DONG intends to comply with the condition*". All well and good! However, the submission also claims there is "*no defensible justification for requiring compliance with condition 20 in any event*", since "*Government policy is met*".

9. There can easily be defensible justification for requiring specific precautionary measures beyond government policy, since government policy does not address all possible particular situations. Government policy requirements tend to be (and are in the Dong case) the minimal requirements which can be applied universally. There can be local or particular situations, not necessarily exceptional, where further measures may be justified. The government advisory group SAGE followed the ALARA principle ("as low as reasonably achievable") regarding EMF exposures, although it was not an express policy recommendation. Any practical measure which reduces exposure without cost or impediment should then be defensibly justified.

10. To consider exposure reduction without cost or impediment is a key test. Another version (e.g. news64) is "*would you agree that, given a choice of creating a new exposure or not, other things being equal, choosing avoidance of exposure would be reasonable*". This should be easy to agree in the EMF context where there is evidence giving rational grounds for concern. Yet industrial representatives (like Dong and Eirgrid) have failed this test, possibly through fear of precedent; they seem more comfortable dismissing EMF below ICNIRP levels as a non-consideration. To their credit, National Grid have taken a more enlightened approach since the 1990s when they finally accepted the principle of exposure reduction, other things being equal.

11. Dong's submission goes further, claiming that (minimal) compliance with government policy also should guarantee commercial certainty and freedom from complaint. There should be a bit more to that than minimal compliance! Consents and planning conditions quite properly can require more.

12. The Planning Inspectorate has accepted Forewind's development consent order application for the 2.4 GW [Dogger Bank](#) Teesside A&B. To make comments or take part in, or be kept informed about, the examination process, register as an interested

party via the [National Infrastructure Planning Portal](#) by 12 June 2014. The application for the 2.4 GW Dogger Bank Creyke Beck proposal is almost half-way through the examination phase. A further 2.4 GW proposal (Teesside C&D) is also planned.

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