

Bramford to Twinsted
(Towards a Solution for the 400kV Grid in East Anglia)

One would ideally like to see the whole of the proposed new Bramford to Twinsted 400kV line engineered throughout with buried superconducting cable. It would then be invisible. However, after correspondence with NG and various other industry sources, this it seems would, at present, be too much to ask for a technology which exists but is still in its infancy. However, what could be much more realistic is to argue for the two AONB portions of the line (Dedham Vale and Stour Valley) each of only 4km, to be undergrounded with superconducting cable as a kind of "Demonstrator Project". The landscape and habitat benefits of this solution are clear beyond doubt. So it is up to this community to cause a clear signal to be sent to industry by our ESO (National Grid) that the market for this tech exists now, and that now is the time to start down this path.

It is the case that even the narrow trench (less than 1m) required for the superconducting cable solution could permanently impair wildlife habitats in very sensitive areas such as Loshes Farm. However, there is a mitigating consideration: the routing for a narrow superconducting cable trench could be much more flexible than that required for the highly-damaging 65m–100m wide swathe XLPE-type cable solution (ie NG's present proposal) or overhead 400kV pylons, and therefore possess much greater potential to avoid such sensitive areas completely. This should be the preferred tech for 21c power transmission in a very beautiful, sensitive but rather crowded island such as ours.

Given that one can show that superconducting cable tech is now being used for shorter links elsewhere (although the voltage, power level and AC rather than DC would still be very demanding in our application) there is an additional reason to have NG's current approach refused. It is surely a basic requirement that a Nationally Significant Infrastructure Project should be put out to international tender. And, given its apparent availability, such a request for tenders should express a preference for the superconducting cable solution. To proceed without a formal tendering process would therefore seem to be a clear violation of UK Markets and Competition legislation. As far as we know, NG have not done this and must surely now do so before the Planning Inspectorate can even consider their Project. Is this not a very powerful argument?

Thus, if suitable superconducting cable tenders were to be submitted, our two AONB areas could be completely safeguarded from both serious habitat and serious landscape impacts. More than that, such an innovation would pave the way for a similar approach for other parts of East Anglia threatened by damaging transmission infrastructure connected with offshore and onshore power generation.

So, this is not a NIMBY argument: it accepts the necessity for huge new power flows across East Anglia. However, it is a very strong argument that the right tech should be chosen, and that we will not know the availability of this unless NG is required to issue requests for tenders. Thus, we all need to call upon NG to withdraw its forthcoming Proposal and for the Planning Inspectorate to reject any Proposal that is arrived at without a formal international tendering process that prioritises superconducting cable tech.

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