

## **Response 2 from Irish consumer to Ofgem's 'Cap and floor regime: Update on our Initial Project Assessment of the Greenlink interconnector'**

### **Part 1:**

Dear Sir/ Madam,

Greenwire in their last attempt to get an wind electricity export business started between Ireland and The UK were stating that they could get a landed capacity factor for that wind generated electricity of 35%. To do this and discounting distributing losses of up to 6% they would need to generate at a 37% capacity factor. This was clearly impossible as when with a different wind energy company members of the management team in Element Power/ Greenwire built Lisheen 1. Then the highest largest capacity wind turbine furthest inland in Ireland and it only achieved a capacity factor of 15%. Bord Na Mona have built the Mount Lucas wind Farm in county Offaly quoting a capacity factor of 35%. Data that I have extracted from the SEMO web site over 3 periods of up to 2 months at a time shows it achieved capacity factor of between 9.9 to 20.6%. I initially projected a capacity factor of between 13 and 17% based on the Lisheen 1 wind farm data. The other problem that afflicts the wind energy business is particularly poor engineering expertise. They have an inability to do even the most basic technical research. The Mount Lucas project manager never heard of optimized wind farm layout when I questioned him at a presentation given by BNM. On Mount Lucas and other wind farm projects this particular company were planning in same general area of Mount Lucas. In the Institute of Engineers in Ireland. It was embarrassing to have to listen to such ignorance from a so called project manager. The other issue that you might want to research is the general mechanical unreliability of these large greater than 2 megawatt wind turbines. BNM are having significant problems with their wind turbines. Which I believe is caused by the poor layout of the site. The wind turbines are too close together and are creating wind shear conditions for one another which will dramatically shorten their operational lives. Wind farm layouts for the proposed Maighne wind farm in County Kildare are only slightly better than the attempts made by BNM. The other fundamental issue you will encounter doing business with Greenwire Element Power is political. Putting these large wind turbines in areas of relatively densely populated areas 500 meters from habitation and the effects of Infrasound Low Frequency Noise on the health of people would mean that most of these wind farms could be legally closed down. Do yourself a favour ignore this Greenwire project it is a greed driven fantasy.

### **Part 2:**

Martin.

Most of their wind farms will be in The Irish Midlands where capacity factors are going to be less than 20%. The Irish 37% target of wind penetration of the local market is impossible to achieve ask Eddie O'Connor. I had a conversation about this with the former chairman of the ESB and he concurs with O'Connor. I actually modeled outputs of wind electricity production that could be consumed in the internal Irish market and do not see them exceeding 20% on a consistent basis. The idea that these projects can be operated using one set of wind turbines over the project duration is absurd. Very few wind turbines of any capacity last this long and these larger greater 2 megawatt wind turbines have major and unsolvable technology problems. The average lives of wind turbines of all sizes is well less than 20 years with a massive range around the average. There is a significant correlation between the increase in wind turbine operating capacity and the decline in their average operating lives. These larger than 2 megawatt wind turbines especially as laid out by Element power and gang will operate for about 8 years economically and have massive output drops over their limited operating lives. So the volume of output from this crazy scheme will be a fraction of what Element Power state.

If you want figures in this I have them. It would be unwise economically and politically to have any thing to do with them. Walk away while you can.