Comments received on 14-02-2015

Dear Mr. René Kemna and Mr. Roy van den Boorne,

Forgive my late response to your request for input on the EU Fan 327/2011 Review document. We have just been made aware of your work through one of our sub-suppliers Multi-Wing hence the mail format of this input rather than a formal letter.

We are a manufacturer of utility grade very large MW wind turbines which have large cooling units in their systems to ensure optimum output.

We share for the most part the opinions put forward by Multi-Wing however we would like to highlight directly some of our concerns in relation to the EU Fan 327/2011 Review Document and possible impacts it may have on the wind turbine industry.

1. **Space**. Lack of space to make design changes for the mounting of bell mouth or diffusers in current wind turbine designs. Space in a wind turbine is at a premium especially where fan assemblies are mounted and changes to assemblies are extremely difficult.

2. **Machine and site dependent cooling**. Wind turbines work in a volatile natural environment that is not a closed controllable system as is a building. Nature sets the parameters and they change. Our generator magnets have to be kept within operating temperature to protect them and ensure optimal output. This will sometimes mean more powerful compact fan assemblies to cover very high temp or very low temp occurrences which occur naturally in the non-linear world of nature but not in buildings. With climate change we can expect hotter periods demanding more turbo-cooling cycles.

3. **Noise emissions.** Effect of new regulations on the noise emissions of fan assemblies. Wind turbines have to adhere to strict noise emission regulations and changes in fan assemblies can have a detrimental impact on noise emissions.

We are at your disposal to answer any questions or to set up a meeting to discuss this subject in more detail. We support in general increases in the efficiencies of equipment as they normally contribute to better footprint indices and power delivery baselines but as in all technical decisions many facets have to be taken into account to avoid detrimental limitations.

We look forward to contributing to your work in a positive and proactive manner.

Yours sincerely,

Aidan Cronin
Advisory Specialist,

Siemens Wind Power A/S