

Dr. John Tamblyn  
Chairman  
Australian Energy Market Commission  
Level 5, 201 Elizabeth Street  
Sydney, NSW 3000

Melbourne, 13 June 2008/SFO

Dear Dr. Tamblyn,

**Supplementary Submission**  
**National Electricity Rules – Rule Change Proposal: confidentiality**  
**arrangements in respect of information required for power system studies**

Vestas welcomes the opportunity to make a supplementary submission in relation to the rule change proposed by the National Generators Forum (“NGF”) regarding modifications to the confidentiality arrangements in respect of information required for power system studies.

As per our letter dated 28 May 2008, Vestas broadly supports the NGF proposal, with some suggested amendments. Vestas would like to elaborate on our submission as follows.

**Background**

Vestas is a manufacturer of wind turbines, being a leading provider of wind power solutions on a global scale. Vestas employs over 15,000 people worldwide, operating in all continents of the world, having installed over 35,000 wind turbines in more than 60 countries. Globally, Vestas installs a wind turbine every four hours.

Vestas has been involved in the design, implementation, commissioning and operation of a majority of all wind farms in Australia. Vestas has seen the wind industry develop in Australia in recent years and is firmly interested in taking an active role in the future development of the industry for many years to come.

Vestas wind turbines offer modern, competitive energy solutions based on 25 years of experience that incorporates the continual development of technologies within aerodynamics, power regulation and generator regulation. Some of the technologies specific to Vestas products include OptiTip, OptiSpeed, Active Stall and AGO (Advanced Grid Option, which is a Low Voltage Ride Through system). Over the past 25 years Vestas has succeeded in improving the generation output of our wind turbines by a factor of 100.

Vestas has one of the largest research and development units in the wind energy industry, with technicians working rigorously to improve the reliability and



performance of our wind turbines. We continuously monitor a large number of turbines in operation, both in order to optimise the design and to use the data and knowledge to make turbine operation even more reliable and cost-effective.

Before introducing a new type of wind turbine, Vestas tests the new technology (in our own test centres), the energy production and the power quality and noise level. These factors are crucial to the quality and competitive edge of a wind turbine.

Although wind is an unlimited resource, the efficient conversion of that resource into electricity depends on the effective use of current technology which will continue to enhance with the development of new technology from today's ideas.

The wind energy industry has grown substantially in recent years. This growth has brought with it an abundance of wind turbine suppliers with their various technologies. The protection of the intellectual property in these technologies is critical to the wind energy industry and in turn, development companies which rely on such protection to provide competitive advantage that fuels the investment in technological advancement. The diminishing support of such protection tends to lead to a commoditised market lacking innovation as competitive advantage diminishes.

The wind energy industry has seen on many occasions entry and sustainability of markets hampered as the protection of intellectual property has being compromised in a local market which in turn affects the global advantage of individual companies.

This in turn has hampered the growth of such markets, limited the competitive environment and limited the introduction of new technologies which are designed to improve the efficiency of the wind turbine generators and overall performance of the wind farm integration onto the grid network.

It is imperative that the National Electricity Market (the "NEM") provides a safe environment that respects and protects the intellectual property of wind turbine manufacturers to fully capture the benefits of new technologies today and into the future that are being enhanced on a global scale.

If Australia is to achieve its target of 20% renewable energy by the year 2020, wind energy will need to play a big role in this challenge. It is therefore crucial that the market conditions and regulatory environment are supportive of the development of the wind energy industry so that the Australian Government's target can be reached.

### **Comments to the Proposed Rule Change**

As part of the Technical Standards for Wind Generation and other Generator Connections rule change enacted in March 2007, generators are required (under Rule S5.2.4) to submit to NEMMCO the model source code, the block diagram and



other information which was defined in March 2008 under the Generating System Data Sheets and Generating System Model.

Vestas recognises the needs of others (Generators, Registered Participants and Network Service Providers) in the electricity market to provide services that promote the Market Objective, and in particular, promoting efficient investment.

Vestas also appreciates the need for the release of information to NEMMCO to facilitate the NEM objective for the reliability, safety and security of the national electricity system. As the NGF-proposed rule change does not change the provision of this information, we believe there is no impact on this objective in this area.

Vestas does not support the unfettered provision of such information to Registered Participants who require it for studies such as load flow, static and dynamic system studies. Such a practice may be extremely harmful to the providers of the information, such as Generators and particularly wind turbine manufacturers.

The provision of such information should be limited, such that it does not compromise the intellectual property of the provider. A balanced approach that limits information to that that does not impact on intellectual property is essential. To this end, the approach provided by the NGF Rule Proposal goes a long way towards this objective. Many Generators and wind turbine manufacturers consider model source code to be confidential information, as it contains critical intellectual property.

To undertake dynamic system studies, detailed dynamic models of plant and generating systems are required. These studies usually focus on the overall performance of the generating plant and the output of that plant which is represented by the output of the model. Hence the interest in the models should be limited to the performance of the model and not the inner workings of the model which details how the technology works in practice. Vestas believe there is no legitimate reason for Registered Applicants to understand the inner workings of a third party plant.

Hence, should the provision in the current Rules remain unchanged in relation to provision of model source code to NEMMCO, there should be no valid reason for a open source code model to be provided to any other party. Any models provided to any other party (Registered Participants and Network Service Providers) should be in a secured format (object code or encrypted format) in such a way that protects the proprietary information.

It should also be noted that a model that is encrypted (compiled or a form of secured format) is a 'complete' model, whose performance in a dynamic study is the same as if a source code model were to be used. The performance of the model whether in source code or in an encrypted form provides the same performance.



A new term - "releasable user guide" - was suggested in the NGF proposal. This proposal, as understood by Vestas, was to provide two features.

- Firstly, to act as a user guide to the model such that any user who receives the model may be able to operate the model, and integrate the model into a grid study easily and efficiently in much the same way a user manual comes with new software: to help the user get to work with the model as efficiently as possible.
- Secondly, to provide information about the model and the Generator's plant that will assist a user in undertaking certain system studies. Vestas believes that this may be similar to concept expressed as 'releasable data' in Econnect's submission.

As expressed in our initial submission of 28 May 2008, it is extremely important that any such information that is provided in a releasable user manual needs to be clearly defined. It should be recognised that the information will be used for limited purposes such as dynamic and load flow studies. As expressed in Econnect's submission, the data required to undertake load flow and dynamic studies in a NEM case study could be limited to specific items.

With the understanding that that the data is not confidential in any way, this process provides more certainty for all concerned as it is clearly expresses what is required to be provided and under what terms.

In relation to the NGF proposal concerning a "releasable information register", Vestas believe that this is a reasonable request, given that it is often manufacturers of plant that provide the models and information. In such a system, the owners of the confidential information have no control of who receives such information. Vestas would prefer a system where Registered Participants are required to enter into confidentiality agreements as the current NER provisions provide little or no real penalties for any recipient of information to ensure the information has limited disclosure as required under the Rules.

Vestas does not believe the suggestion that an inability for connection applicants to receive the source code may result in "a greater reliance on commissioning test and therefore greater risks of project delays and costs". In reality, the NSP works closely with the connection applicant and has all model details prior to construction of the wind farm, and is deeply involved in the feasibility studies of the wind farm. In such cases, functional block diagrams, and encrypted source code have already been passed onto the NSP.

In regard to commissioning tests, these tests are part of the whole process of the installation of the wind farm. Results of these tests only verify what wind turbine manufacturers have already tested at their factory.

Regarding the flow of information between an NSP and the NSP's consultant, there is no pathway to the provider of that information. A wind turbine manufacturer that provides the detailed model of its wind turbine must be involved when an NSP approaches a consultant. Thereby, the wind turbine manufacturer may require the signing of a deed of confidentiality between it and the consultant. Otherwise, parties not subject to a confidentiality agreement may be able to obtain highly competitive intellectual property, as well as advertise to their clients that they possess such intellectual property.

Yours sincerely  
**Vestas Australia**



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