Title of abstract:
Advanced Wind Power Plant Control

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Speaker biographies for the primary author (presenter) of no more than 100 words.

Graduated with a master degree in control engineering from the university of Aalborg, Denmark in 1999. Worked 3 years implementing image analysis software. Has been with Vestas for 3 years developing SCADA systems and wind power plant control and currently has the title of 'product manager, power plant control'

In 150 words or less, please describe the purpose of your presentation, including the following points:

What will be the most important 3 learning objectives from this presentation?

In the wind energy market the focus is moving more and more away from the individual turbine and towards the entire wind power system. The requirements for power control and power quality control are increasing all over the world. These requirements originate from national grid codes, local utilities and customers. In order to make the wind power system fit into the already existing grid the local utilities often require that the wind power system must help to maintain the stability of the grid and also often require control of and feedback from the wind power system. The customers who often sell the production up front require accurate control of the wind power system. Inaccurate or faulty control over the wind power system can have serious contractual and practical implications.

The presentations main focus will be on the grid requirements that Vestas is seeing around the world. Vestas has been putting a lot of effort into creating a very powerful and stable embedded platform for wind power plant control and the presentation will explain how this controller in corporation with the turbines and other substation equipment helps to meets those requirements.

The presentation will also focus on the integration between utilities and the Vestas SCADA system and the integration between third parties and the Vestas SCADA system. Monitoring of turbines and substation equipment is also an important subject and the presentation will briefly cover these issues along with reporting.

To monitor and control the wind power plant through a SCADA system is the first step of the industry. That being done, the focus of Vestas is now to look at the interface point at the substation. This will be elaborated through solutions developed by Vestas to meet the customer and utility requests to have reliable control and monitoring of the substation.