PRESS RELEASE
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New operations and maintenance system reduces the cost of offshore wind

PETTEN – A new system for wind farm operations and maintenance is set to significantly reduce the maintenance costs. The system has been developed by the Energy Research Centre of the Netherlands (ECN) using data from energy company Essent/RWE. It efficiently collects and analyses data from offshore wind farms and is used in order to continuously improve the cost-reducing strategy for operations and maintenance.

Operations and maintenance (O & M) account for approximately 25% of the costs of offshore wind farms. This is relatively high compared to the maintenance costs for onshore wind farms. The cost of operations and maintenance for offshore wind farms is around EUR 0.03 per kilowatt hour of electricity. Glen Donnelly, ECN Wind business development: "These costs can be reduced by a third in the space of ten years." Achieving this calls for the use of innovative tools and processes. ECN's Operations & Maintenance System is now ready for launch and will enable the industry to run offshore wind farms at lower costs.

Collection and analysis of data essential

Wind farms produce large quantities of data: hundreds of sensors on the turbines collect and send data. Technicians and engineers also collect data. The data relates to areas such as breakdowns, repairs, spare parts that may be required, engineer reports as well as the loads placed on the turbines and how long different components will last. All of this is collected within the O&M system and organized for fast processing. Essent/RWE is providing ECN with operational data to test the O&M system using real information. Niels Bijkersma, project manager at RWE Innogy: "Thanks to our years of experience managing and maintaining offshore wind farms in the United Kingdom, we can contribute to ECN's advanced O&M system, designed to meet the needs of cost-conscious operators." Better preventive maintenance in particular can help prevent sudden breakdowns and damage, thereby cutting costs.

The more you know, the more you save

Glen Donnelly from ECN explains: "In view of the predicted growth in offshore wind energy in the years ahead, cost reductions are of major importance. If you can build up a long term and smart database of operational data and are able to analyse it quickly and effectively, you have invaluable information for a sophisticated O&M strategy.". This will enable wind farm operators to for example plan exactly how many working boats will be necessary, how many people need to be in the maintenance team, what components should be kept in stock and when maintenance must be scheduled. Most importantly it allows a long-term process of continuous cost saving improvements over the wind farms operating lifetime. "That knowledge can result in significant cost savings and prevent turbines breaking down unexpectedly and failing to supply energy."

Part of the total cost price

Reducing the costs of offshore wind is an essential condition for achieving the ambitions of the Dutch National Energy Agreement entered into last year. It set a target of producing 4,450 MW of electricity from offshore wind by 2023. The target is based on a cost price that decreases consistently over time. The O&M system is an important contributor to enabling cost price reduction and has been developed within the FLOW programme. FLOW aims to achieve cost reductions for large offshore wind farms and stimulate Dutch companies to innovate in this fast-growing sector.

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