



Case story:
**RENEW ENERGY
MAINTENANCE**



Suzlon S64* turbines life extended with maximum performance

RENEW Energy Maintenance repeatedly experienced control system failures on their Suzlon S64 wind farm in South West Minnesota and a general lack of flexibility. A control system retrofit replaced the existing turbine controller and the electrical pitch system and provided them with a maximized availability and new life to the turbine.

An increased number of failures on the control system

Over the past decades, thousands of wind turbines have been installed worldwide and it is common that after ten years of operation, their performance starts decreasing and faults occur. At RENEW Energy Maintenance's remote wind project in Minnesota, they faced similar problems.

"These turbines historically had high rates of control system failures with limited flexibility in terms of improvements whether that be control logic improvements or hardware improvements, such as upgrading components.", explains RENEW's Operations Manager Nick Siddens.

RENEW was on the lookout for a cost-efficient retrofit solution that would make the aging turbines run more efficiently and increase the profitability. Many potential suppliers were in play but in the end, RENEW decided to partner with DEIF.

"After considering all our options we moved forward with DEIF because of their willingness to work with RENEW to provide a very robust and affordable system for ourselves and our current customers. Not only did this improve the performance to the project it also qualified for 80% of the Production Tax Credits".



Jim Mikel

President, RENEW Energy Maintenance

100% service independency and ownership of the controlsystem

Significant revenue is lost when wind turbines are down and due to the harsh environments, the controller eventually will fail. To make a successful retrofit, a lot of important parameters need to be fulfilled.

*Suzlon S64 is a trademark of Suzlon Energy LTD. The Trademark owner is not associated with DEIF's products or services.



“We made a thorough analysis of the wind turbines’ performance and the conditions under which they operate and based on that we tailored a solution that would meet Jim and his team’s expectations”, says Jan Harrestrup, Vice President, DEIF.

Besides extending the turbines’ lifetime significantly the availability of the turbines has been optimized with a two-digit number. The immediate result is that the turbines in 6 months after the retrofit have produced more energy than the previous 12 months.

“The upgrade is very extensive, and it completely replaced the pitch control – it switched us over to a system that we have complete ownership of and access to,” says Nick Siddens, Operations Manager, RENEW Energy Maintenance.

Improved performance and high availability

Ever since the turbines were retrofitted, RENEW Energy Maintenance has observed significant performance improvements and now have a more reliable and effective turbine control system.

“Since the retrofit, these turbines have been running great and we see it in our production and availability. The improvements were immediately apparent, and we continue to see incremental gains as we dial these systems in.”



Nick Siddens

Operations Manager, RENEW Energy Maintenance

Not only do the retrofitted turbines run smoothly but RENEW Energy Maintenance also has gained total control of the operation and enjoy their independence. They have full access to all relevant data and performance reports to monitor the turbine availability.

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