Large Energy Company

Artificial Intelligence drives an over 200% increase in divisional profitability using Azure Data Services

This large energy company delivers safe, reliable service to millions of customers in North America. With a long history and clear vision for the future, they recognize the importance of wind energy and have invested in several wind energy projects. Once fully operational, these projects have the capacity to serve more than a million homes.

Services

- AI and Machine Learning
- Data Ingestion and Engineering
- Predictive Modelling and Demand Estimation
- Optimized Preventative Maintenance
- Dashboard Design and Development

Effective May 15, 2020, T4G Limited merged with MNP. The following case study applies to work done by the T4G team prior to the merger.

Challenge

The client was seeking new ways to increase the efficiency of their internal processes so that they could proactively replace wind-farm parts before they become unreliable.

Using their wealth of data, this energy company needed to enhance their ongoing measurement and improvement programs and deliver new efficiencies across all production facilities.

They were looking for a solution that would blend data-driven analytics with straightforward usability.

Solution

MNP has deployed a scalable and integrated 'special forces' AI/ML and data analytics team tailored to the client's ongoing needs. For this project, our team used Microsoft's Azure Data Services to deliver an easy-to-use dashboard that enables the client to predict and avoid many demand generation and maintenance issues.

Our team created a preventative maintenance engine that:

1	Employs Microsoft technologies to deploy machine learning models that estimate demand, optimize preventative maintenance, and uncover opportunities for new efficiencies
2	Ingests, analyzes, and interprets supply, demand, price, and production data from structured, unstructured, and streaming sources
3	Examines historic data over a 5-year period using machine learning to identify what breaks why and when
4	Proactively suggests and prioritizes repairs by integrating with both logistics and procurement systems

Results

MNP's innovative solution dramatically contributed to wind farm uptime, increasing the overall efficiency of renewal wind energy. The client saw a 200% increase in divisional profitability without any new physical investment. They could also accurately estimate market price and revenue attainment and experienced a dramatic increase in load forecasting accuracy.

+200%

INCREASE IN DIVISIONAL
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NEW
PHYSICAL INVESTMENT