WindESCo

Accelerating Annual Energy Production for Wind Turbines

Find, Fix, Measure

WindESCo

Our industry leading analytics platform provides the missing link between SCADA data and business value

Actionable Solutions

Our industry-leading analytics go beyond basic reporting to *find*, *fix*, *measure*, and *continuously improve* plant performance

Trusted

We improve plant performance for *leading IPPs* worldwide on both self and OEM-operated plants

Multi-disciplinary Approach

Our analytics platform combines *engineering models*, *artificial intelligence*, *wind domain expertise* and *experience models*

Focused on ROI

Our current customers are seeing a *1 – 7% increase* in plant output with a **payback period** of *less than 1 year*

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Safety Note

Values cannot be prioritized
Things that are prioritized can be deprioritized

Safety is never "first" or "#1"
We follow our safety every day on every job all the time
Safety is an "always" value

We put on pants everyday because it is a value
We would never leave our house or start a job without our pants
Safety values are like just like putting on your pants

Put on your safety values everyday

- Manny Sanchez

A data mistake that led to learning for AEP improvement

ASSUMPTIONS THAT FAIL TO CLARIFY DATA REQUIREMENTS
"Data is like water, neglect its quality and fear the indigestion" ~Adrien Saint

Asset tags required
Asset tags vary from OEM to OEM and even from model to model. Knowing which tags you need and how to get access are critical to success

Data Intervals
Some data points are useful at 10 min, but other tags for special analysis require smaller intervals to deliver high value

Data Storage
Backing up the right amount of data may be needed to analyze before an after changes can be made. How much and what exactly is needed?

Data Exchange Methods
When it is flowing the right way, how can you connect other parties? Direct API login, File exchange or proxy server?

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Two essential questions for AEP improvement analytics

WHAT IS YOUR DESIRED VALUE?
HOW ARE WE GOING TO ACHIEVE THAT GOAL?

ROI, NPV, IRR
Each business compares value differently. Ensure a good understanding of the Value Proposition.

When are results needed?
When do you need to see results based on budget availability, wind seasons, financing or other constraints?

Revenue Generation
Is the aim of your analytics to improve the asset output at the end of the project?

Cost Reduction
Is the aim of analytics to reduce costs at the end of the project?

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Data frustrations for AEP improvement

ALL DATA IS NOT THE SAME

Tools used for analytics are only as good as the data and the user experience

Lack of Data Standards

Variations in the market stemming from OEM differences and competitive drivers results in less benefit to the market. Conduct a data readiness assessment first.

Ai & ML

Tools alone will not solve problems. They require domain expertise for proper application.

Generalist vs Specialist

Does it make more sense to work with one partner who does a lot, or a few partners that specialize in fewer areas?

Insource or Outsource?

Determine when it make sense to insource resources vs outsource to a third party? What is achievable for the specific busines vs the market capability?

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2 Primary Issues with data to improve AEP

Imagine a place where we can freely and easily exchange data...

...THEN, GO BACK TO REALITY!

Data Security

Anticipate the time required to review security requirements and process steps.

Data Storage

Backing up the right amount of data may be needed to analyze before an after changes can be made. How much and what exactly is needed?

Data Standards = World Peace

Data isn't going to be standardized and you need to plan on working with someone who has developed standards to collect and process the variation.

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Wind is complex. Accurate analysis of the existing SCADA data requires a combination of domain expertise, engineering models and machine learning techniques, all while taking into account differences in turbine models. It's important to find a partner with demonstrated expertise to help you optimize your wind project effectively.

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