

Energy Forecasting



Predictable wind is reliable wind.

As more and larger wind projects come online, utilities, plant operators, and grid managers recognize the importance of managing the intermittent nature of their electrical generation.

Correctly forecasting the distribution of wind energy allows these organizations to rely on wind-produced energy without impacting energy reliability.

Power Production Forecasting

AWS Truepower provides highly reliable forecasts of wind speed, wind direction and wind plant power generation that are vital to plant operators, power marketers, utilities, Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs).

Predicting a renewable energy project's output days, hours or minutes in advance provides significant cost savings for utility operations.

Forecasting the short-term energy production from a wind project can

greatly reduce imbalance charges, minimize incremental reserve costs, facilitate plant dispatch scheduling, inform spot-market trading, and optimize plant maintenance.

The challenge of successfully integrating large quantities of renewable energy into the power grid has been a key focus area at AWS Truepower for over two decades. With our forecasting services, the risk and uncertainty of integrating wind energy is greatly reduced.

Forecasting Services

AWS Truepower employs sophisticated atmospheric models to forecast the weather conditions for each project site. Unlike most other firms offering similar forecasting services, AWS Truepower has been developing, customizing, and validating numerical weather prediction models since the 1980's. This makes AWS Truepower not just model user but a model developer as well.

Our forecasting system also includes adaptive statistical techniques that are customized for each project to produce the most accurate forecasts possible. The system predicts wind speed and direction at a wind project site, then converts that prediction into plant output estimates.

Forecasts can be provided from several minutes to several days, or even weeks in advance. Our web-based interface presents all the information the user needs in a clear and simple format. With a click of the mouse, our customers can access tabular or graphical forecasts and examine the recent record of forecast accuracy. We can also provide regular written reports of forecast performance.

Construction Planning

Our accurate forecasts ensure maximum productivity and safety at your construction site and reduce the costs associated with crane lifts. There are no long-term contract obligations and AWS Truepower provides convenient delivery formats.



Ramp Events

The passage of storm systems, weather fronts, and development of strong local circulations can cause sudden increases or decreases in wind speed. These rapid changes in wind speed are commonly known as ramp events and have dramatic effects on wind farm energy production.

AWS Truepower employs a suite of several different numerical weather prediction models at any give time. This allows us to generate multiple

forecasts and asses the probability of rapid changes in the weather occurring. This information coupled with site data allows for the creation of unique ramp event forecasts that enable timely and accurate prediction of rapid changes in local weather conditions.

Delivery

Forecasts are generated and delivered around the globe from AWS Truepower's secure forecasting operations center.

Forecasts are delivered automatically through our interactive online portal, web services (xml), FTP, or e-mail, and are updated on a customized schedule to meet customer needs.

AWS Truepower has an extensive forecasting research program that continuously advances power forecasting techniques. Advancements that prove beneficial are immediately implemented in our operational forecasting services. Research is the core strength behind our forecasting services, but our success results from our goal to always exceed client expectations. Each power forecast is uniquely developed to satisfy the distinct needs and risk tolerance of the client.