

Power generation forecasts for wind power plants

Precise forecasts for wind power plants support ENGIE to act flexible and fore-sighted on the electricity markets.



Challenge

Wind power - clean, competitive and available at all locations. As one of the fastest growing energy sources, the benefits of wind energy are numerous. Wind-generated electricity is a cost-effective and renewable way to produce energy and supply large areas without being dependent on fossil fuel.

Integrating this intermittent power source into the electricity grid is one of the challenges that energy providers as ENGIE have to face. "The development of wind power is one of our priorities", confirms Lorenzo de Menten, Quantitative Analyst at ENGIE.

"Worldwide ENGIE has nearly 4.300 MW of installed wind power capacity." The challenge is to manage the variability of wind generation in order not to affect grid reliability. Energy providers have to avoid market risks - instead, only making sound decisions in this volatile market will serve the purpose.

Solution

In order to determine wind feed-in volumes for the present and in the short-term, ENGIE obtains precise forecasts for wind power from enercast. It is used for the group's wind power plants installed in several European countries.

enercast provides ENGIE with robust forecasts for the next 15 days, which are updated every hour. Furthermore, in the short-term the energy provider gets an update every 15 minutes to be able to fit the decisions on short-term.

The system uses forecasts from European weather services, which are designed for the individual plant with the help of artificial neural networks. The results are robust power forecasts, which can be regularly updated. The addition of a plant's real

measurement data contributes to increases in the precision of the forecast.

Benefit

By actively supporting the energy transition, ENGIE is preparing for the sustainable energy world of tomorrow. Its innovative and tailored solutions meet their clients' needs. "We want our customers to make the most of their energy - everyone wants a clean, flexible and stable energy supply", says Lorenzo de Menten.

"We have to balance our power position at any moment to avoid market risk in a volatile power market. Weather is continuously changing as such power volumes produced by wind and solar parks are not stable." enercast helps ENGIE to get a clearer view on the future outcome of their parks and to be ready to act on market.

"It allows us to reduce our risk due to volume uncertainty and volatile day-ahead and intraday market prices", explains Lorenzo de Menten. "We are also better balanced before production delivery as such we minimize our imbalance cost."

Customer | ENGIE SA

ENGIE is committed to taking on the major challenges of the energy revolution, towards a world more decarbonized, decentralized and digitalized. The Group aims to become the leader of this new energy world by focusing on low carbon generation, energy infrastructure and efficient solutions adapted to all its customers (individuals, businesses, territories, etc.). Innovation, digital solutions and customer satisfaction are the guiding principles of ENGIE's development.

“We evolve in a very competitive market and therefore need cost efficient solutions. enercastr is efficient first of all because of their forecast accuracy. But that’s not enough when you manage the risk of a growing green portfolio. With new challenges every day, we look for flexibility. Thanks to enercastr’s responsiveness we receive support and adapted tools to our evolving needs. The Application Programming Interface (API) we use to communicate information is efficient and easy to use. It gives us the opportunity to automate all our processes. And finally, the service is reliable - when you have automated processes you need to trust the system you use.”



Lorenzo de Menten

Quantitative Analyst

ENGIE SA



ENGIE includes energy management activities performed by 1.300 employees located in 12 offices in more than 50 countries. With five cross-continental trading platforms, ENGIE covers the full energy mix, serving clients throughout the value chain: producers, distributors, financial institutions, investors, energy project developers, state entities, infrastructure operators. ENGIE’s offer includes a wide range of services, such as physical supply, offtake, cross-border trading, physical and financial risk management, market access, and M&A facilitation for energy producers.

Actively supporting the ambition to lead the Energy Transition worldwide, ENGIE offers to its customers a range of innovative services supporting the integration of renewable energy sources, and provides solutions to the energy transition challenges: as part of the offer, ENGIE develops demand side management services, aggregation and valorization of flexibility on energy and reserves markets, frequency support services as well local power optimization, power islanding or multi-storage services.

www.engie.com

Services



Power forecasts for energy providers and municipal utilities

With enercast city you can render renewable energy sources projectable and integrate them into your processes. [MORE](#)



Direct marketing of forecasts for wind- and solar electricity

If you want to behave optimally on the electricity market, you need to know the direction from which the wind blows and when the sun shines. [MORE](#)



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The online service enercast offers power forecasts by the hour up to 72 hours ahead. [MORE](#)



Wind Power Forecast

The online service enercast.de offers precise forecasts for wind energy, using the wind-power-forecasting model. [MORE](#)

convincing



With its forecasting services for the energy sector, enercast GmbH is one of the 365 „Selected Landmark 2012“.



The WRG (Wirtschaftsförderung Region Göttingen) conferred enercast GmbH with the Innovation Award 2011. enercast GmbH came in third in the services category.



The web service enercast placed third for the Innovation-IT Award 2011 in the category industry software which is awarded by the Initiative Mittelstand.

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