

ALEASOFT CONSOLIDATES ITS LEADERSHIP IN FORECASTING FOR THE ENERGY SECTOR

INTERVIEW WITH ANTONIO DELGADO RIGAL PHD. IN ARTIFICIAL INTELLIGENCE AND ALEASOFT CEO

After 19 years of experience in the energy sector, working with the most important companies, AleaSoft consolidates its leadership in the field of forecasting using the most advanced techniques in Artificial Intelligence. We talked with Antonio Delgado Rigal, PhD. in Artificial Intelligence and AleaSoft CEO.

What kind of relationship have AleaSoft got with the energy sector?

Forecasts are a fundamental piece in almost all processes of the energy management. AleaSoft is the European leading provider of forecasts in the energy sector. We have been providing forecasts to the main companies in the electricity sector for 19 years. Nowadays, 85% of the electricity traded in the Spanish wholesale markets at the short- and mid-term is using our price forecasting as a reference. The range of services includes forecasts of electricity and gas demand, both at the national or regional level and client portfolio, energy production, hydroelectric, wind and solar, and market prices for the main European electricity markets.

What is the origin and the evolution of the project?

AleaSoft was founded in October 1999 as a spin-off company of the UPC (Polytechnic University of Catalonia) and it was the first company partially owned by this university. A new forecasting platform was developed based on a new methodology that uses a set of scientific innovations in the field of Artificial Intelligence applied to energy forecasting. The new platform was tested by Endesa and it was integrated in all their processes of short-, mid- and long-term forecasting. Afterwards, the forecasting models began to be used by Unión Fenosa, Iberdrola, Viesgo, Gas Natural, REE, Fortia, BBE, Siemens-Gamesa and all the other important companies in the energy sector in Spain. Likewise, our platform and services began to be used by large European companies like Enel, Terna, EDF, Eon, Elia, Statnett, BP, Shell, Electrabel–Suez Group–GFD, HSE, EP Produzione among the most important companies in the energy sector, plus many other companies that are large electricity consumers and need to optimize their energy purchases.

To what kind of clients in the energy sector are you oriented and what forecasts do you provide?

We can offer services to any kind of company in the energy sector, because all of them need market price and consumption forecasts. Among our clients, there are Transmission System Operators (TSOs), electricity generation companies, energy traders, retailers, Distribution System Operators, large energy consumers, manufacturers and investors of wind and solar power plants. We offer electricity and gas forecasts, both demand and market prices, for the short, mid- and long-term, from minutes ahead to decades ahead, and for all the European markets. We also offer renewable energies forecasting, mainly wind and solar energy, for all the forecast horizons and all the aggregation levels.

How is your forecasting model and where is the Artificial Intelligence used?

It is a hybrid model. It combines classical statistics techniques, Box-Jenkins SARIMA timeseries methods and Recurrent Neural Networks. Indeed, Neural Networks belong to the field of Artificial Intelligence. Also, this developed methodology, AleaModel, uses Genetic Algorithms to find the best models. Lately, Artificial Intelligence has become fashionable as something new. We have been using Artificial Intelligence forecasting models in large companies of the electricity sector for 19 years! At present, we have more than 400 Artificial-Intelligence-based models working in production environments throughout Europe. We put many resources into research and innovation to stay up to date and constantly improve the quality of the forecasts.

What is a PPA and how AleaSoft is involved with it?

A PPA is a Power Purchase Agreement at the long term that makes it possible to finance the construction of a renewable energy plant, whether wind or solar power, and the purchase of the electricity during the contract period. In a PPA, the price forecast is a key element for all the parties: investors, manufacturers, installation partners, managers, producers and consumers. For this purpose, we supply long-term market price forecasting for all the European markets.

Any other forecast that you supply?

In addition to the electricity demand and market prices, we provide forecasts for all the post-day-ahead and ancillary markets: intradaily, secondary reserve, imbalances, constrains, among others. We also provide forecasts of gas and other commodities, and, as mentioned before, hydroelectric, wind, termosolar and photovoltaic energy production for the European countries.

Future prospects?

We want to consolidate our leading position in the energy forecasting sector in Spain, keep advancing the market penetration in the European countries, and expand worldwide. In short, make AleaSoft a global reference.