

SUMMARY OF THE INTERVIEW BY PILAR SÁNCHEZ MOLINA FROM PV MAGAZINE SPAIN TO ALEASOFT

AleaSoft, November 21, 2018. Pilar Sánchez Molina from pv magazine Spain interviewed Antonio Delgado Rigal, Doctor in Artificial Intelligence, Founding Partner and CEO of AleaSoft, on November 21, to talk about the market equilibrium, the impact on the electricity prices of the measures applied and announced by the Government and the appropriate transformation of the energy model, among other issues.

AleaSoft, leading company in demand, production and price forecasting for the European electricity markets, at the short, medium and long-term, states that, fortunately, Europe is an integrated continent with a common electricity market and a unified set of compulsory compliance rules and regulations. This is an advantage to avoid too many initiatives by governments that may eventually affect the common electricity market or be sanctioned as disguised aid. The basic rule is the liberalization of markets, stable and transparent markets, in addition to free competition.

AleaSoft works for all agents involved in the energy sector: from System Operators (TSOs), Utilities, traders, retailers, large consumers, all types of generators in the electricity industries, wind and solar farm developers, and also with banking entities and investment funds.

In the interview, it is highlighted that, at the moment, the rise of PPAs is posing a revolution in the expansion of photovoltaic production in Europe. We are already working beyond the scope of forecasting, taking advantage of twenty years of experience in the European electricity sector. Our idea is to create synergies in Europe between different actors involved in a PPA, mainly plant developers, retailers and consumers, together with banks and investment funds.

When the exemption from the Special Tax on Hydrocarbons was approved and the 7% tax on generation was suspended, in this case for six months, the market price fell by around 5% and 6%, although it is a difficult effect to calculate because it is embedded within many other factors that affect the price of electricity. At **AleaSoft** it is estimated that, as of April 1, the price of the electricity market will rise again around 4% or 5%, although we expect the Government to repeal definitively that tax that damages generators and Spanish consumers against their European competitors.

For the year 2019, the price forecasts of **AleaSoft** are above 60 €/MWh if the current external conditions related to fuels and CO₂ are maintained.

According to Antonio Delgado Rigal, the increase in the price of CO₂ has directly influenced the price of electricity. The current high electricity prices are an input that favours investment in renewable energy but they also slow down the economy.

In a context in which the increase in the price of CO₂ and other measures, such as the diesel tax, generate controversies and in which to accelerate the transition towards cleaner energies or processes is undoubtedly beneficial for the environment, but could negatively influence the industry, it is considered that the adequate transformation of the energy model, since it is a complex process, is based on not being in a hurry and changing the rules as little as possible, thinking long-term and taking into account market equilibrium. We should think about the mistakes that have been made due to excessive regulation.

In **AleaSoft**'s opinion, the agents that regulate the price of CO₂ must take into account the damage they cause to the European economy with a price too high.

The tax on diesel or the mention of ending the manufacture of polluting engines in the future creates chaos in the land transportation sector. In Spain and the rest of Europe, car manufacturing has a great weight in the GDP. If the electric car is the future, **AleaSoft** proposes to encourage manufacturing and buying with bonuses and also creating charging stations that in turn are profitable for those who install them.

The renewable sector sees optimistically the commitments of the Government with the ecological transition. However, according to conversations with plant developers, banks and investment funds, the main problem is the excessive regulation and the zeal of the Government to try to lower prices. The

electricity market is a tool to obtain an equilibrium price between supply and demand. If the Government talks about changing the market for something unknown and regulated, it really doesn't help the investments that are now more necessary than ever.

Regarding the influence of energy efficiency and the increase of renewable generation in the price of electricity, at **AleaSoft** it is considered that in the future there are factors that will lead to lower electricity demand as is the case of energy efficiency but there are other factors that will increase electricity consumption as is the case of electric cars and other new uses of electricity or as a substitute for domestic and industrial gas.

According to Antonio Delgado Rigal, the closure of nuclear and coal thermal plants will generate a great need for renewable energy production.

Despite these new events that are revolutionizing the energy sector in Europe, in **AleaSoft** it is considered that the market equilibrium between supply and demand will be maintained and that the average prices of the next 20 years will be around the 50 €/MWh.

In the interview it is stated that the introduction of large quantities of generation plants from renewable sources will not be easy. There is the difficulty of financing and there is the difficulty of finding counterparts in the PPAs. Large consumers do not have the habit of buying electricity at long-term and banks do not want to take too many risks. We also have another technical difficulty related to the connection points to the grid that are finite.

Regarding the current system of electricity price formation, it is recalled that the current market is 20 years old and has worked quite well. The price is formed by a balance between supply and demand. There are times when the price has been high, as it is now, due to external factors such as the price of fuels and CO₂. Other times the price has been high because of the droughts we have had. There have also been periods of low prices for oversupply and lower fuel and CO₂ prices. In general, there has been a mutually beneficial balance for producers and consumers of electricity.

The current and future market will need production with gas combined cycles for many years as renewable energies are not stable throughout the day and we will have prolonged drought periods.

The Spanish market is integrated into the European electricity market, with the same rules. Our electricity generators sell electricity throughout Europe, just as our consumer market agents buy electricity even in Poland. In theory, if the interconnections capacity were infinitely large throughout Europe, we would have a single common price for each hour.

The interview highlights that an important issue related to the market is stability. Investors flee from regulatory changes and from the uncertainties of the new unknown.

When asked if he believes that the rise in electricity prices in Europe could cause a worrying slowdown in the economy, Antonio Delgado Rigal answers that, undoubtedly, European companies compete with the rest of the world. A high electricity price, especially in electro-intensive companies, means that the products have a higher production cost and cannot be sold in competitive international markets. This is the case of Alcoa, that in mid-October announced the closure of two aluminium production plants in Spain due to the high cost of electricity. If the production plants are not profitable, they close and transfer their production to other countries with better conditions. If electricity keeps a high price, the deceleration will be a tangible fact. In addition, the high price of gas also influences this process of closures as well as the high price of CO₂.