PPAs also gaining ground in Germany

With long-term supply contracts, known as PPAs, renewable energy producers can make themselves independent of state subsidies. In Germany, too, markets are evolving, but there is room for much more, say experts.

For a long time they were not an issue in Germany due to the adequate and secure support for renewable energy plants through the feed-in tariff. However, a growing market for PPAs (Power Purchase Agreements) is now also emerging in Germany. These are long-term electricity supply contracts between operators of renewable energy plants and industrial customers or electricity suppliers. Especially for old wind turbines, which, in accordance with the German Renewable Energy Act (EEG), will no longer be subsidised within a few years, this offers a perspective for continued economic operation (page 26).

ENERCON will supply the production sites and coldstores of leading German logistics companies and food producers with environmentally friendly electricity at a fixed price as part of a power purchase agreement (PPA)
Photo: FRIGO Coldstore Logistics

According to a study by the consulting firm Deutsche Windguard, wind turbines with a total rated capacity of 4,000 megawatts will no longer benefit from a fixed feed-in tariff from 2021. Between 2021 and 2025, a further 2,300 to 2,400 megawatts could be affected. Various options are available to the operators after the subsidies stop: they can dismantle the turbine, repower it, or continue operating it. However, the continued operation threatens to fail due to economic viability: in view of low and fluctuating prices on the electricity exchange, an extension of the term is likely to be worthwhile for only a few.

Both sides benefit from the fixed price

This is where PPAs come in. They are used to agree on the permanent supply of a certain amount of electricity at a fixed price, irrespective of the electricity exchange. In countries such as Sweden, the United Kingdom or the USA, this form of electricity marketing has been common for some time. According to financial services provider Bloomberg New Energy Finance, in 2018 companies worldwide purchased 13.4 gigawatts (GW) of clean energy through PPAs. To provide a sense of scale: in 2017 the total was only 6.1 GW. And if the contract details are right, PPAs are a win-win situation for both sides: wind turbine operators can sell their electricity at lucrative prices over the long term and continue to operate their old turbines. Customers benefit from a stable electricity price and are protected against price increases. In addition,

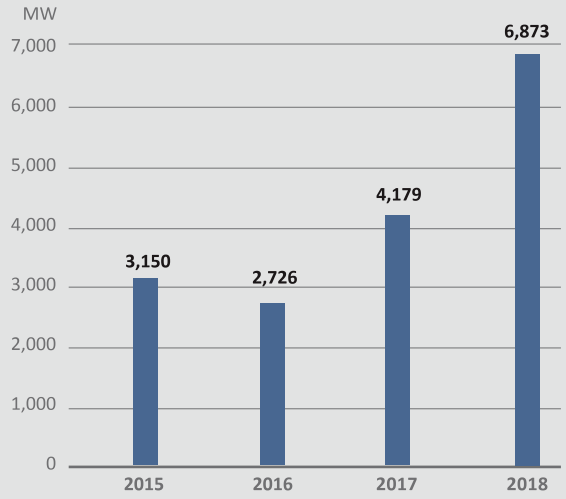
many companies now want to become "greener" and are pursuing a corresponding sustainability strategy. The purchase of green electricity is an important step here.

One of the first companies to conclude PPAs in Germany last year included the direct marketer Statkraft, which supplies industrial companies with electricity from six wind farms, and the wind turbine manufacturer Enercon, which supplies cold stores with electricity from four wind farms. Greenpeace Energy also entered the PPA market and launched what it considered the first PPA in Germany in September 2018. The green electricity supplier wants to supply its customers directly with green energy from northern German wind turbines. Greenpeace Energy announced that the contract will come into force on 1 January 2021 with a term of five years. In May 2019, its competitor Lichtblick also announced the signing of a PPA with the wind turbine operator PNE. From 2021, the green electricity company will supply its customers with electricity from ten wind turbines (13 MW) from the Papenrode wind farm in Lower Saxony. The turbines were connected to the grid in 2000. Lichtblick explained that it intends to purchase the electricity from PNE up to the end of 2023.

For many experts, however, this is only the "beginning of a far-reaching development", as the management consultancy Horváth & Partners calls it. According to the consultants' estimates, by 2020 the electricity of about 80 percent of the turbines that are no longer eligible for subsidies could be marketed via PPAs. "This could ensure the survival of turbines whose continued operation would be unprofitable if revenue development were uncertain", writes Horváth & Partners. The Berlin consulting firm Enervis Energy Advisors concludes in its analysis that by 2040 more than half of the European wind farms and solar parks will probably be financed through long-term electricity contracts.

Worldwide PPAs for wind energy

(MW, On-/Offshore)



Source: BloombergNEF Corporate PPA Database

"The market for PPAs is booming above all in Scandinavia, but also in the United Kingdom, Spain, Portugal and the USA"

The experts from Aurora Energy Research show in their study that Germany still has some catching up to do compared to other countries when it comes to PPAs: "The market for PPAs is booming above all in Scandinavia, but also in the United Kingdom, Spain, Portugal and the USA. In Germany, on the other hand, the existing potential is still largely untapped." In this country, "at least 13 percent of commercial electricity requirements could be covered by PPAs, which corresponds to a market volume of 2 billion euros."

In September, Statkraft announced it would purchase electricity from six citizen's wind farms in Lower Saxony for a period of three to five years once the EEG subsidy comes to an end.
Photo: Mark Mühlhaus|attenzione