

Recent examples of efforts by advanced aggregators to expand their renewable energy growth rate

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Abstract

The installation of power generation through renewable energies such as wind and photovoltaic is progressing globally with the aim of realizing a low carbon society and reducing the environmental load. European countries or the United States, are aiming for further installation of renewable energies by taking countermeasures against issues such as frequency or voltage fluctuation caused by the expansion of the amount of renewable energies. In this report, we describe the business model of advanced aggregation companies that intensify their presence in Germany and elsewhere as an example of these initiatives.

NextKraftwerke is a startup company founded in 2009, but is the top business VPP operator in Germany. They report they can aggregate a large number of renewable energies' generation facilities by utilizing inexpensive high - speed information communication technology. In addition, they report that they can provide 3,800 MW of flexibility contributed from the network managed by their customers in response to requests from TSO. This aggregator aggregates about 5,000 power generation facilities and they consider that there is no benefit from active introduction of storage batteries and DR under German domestic rules at the present time. Therefore it is composed mainly of PV, wind, biogas power generation facilities. In addition, they possess highly accurate weather forecast technology. Since the output of the renewable energy generation fluctuates greatly depending on weather conditions, highly accurate meteorological forecasting technology makes it possible to advantageously advance power trading in the market. The advantage of NextKraftwerke consists of adoption of biogas generation facilities for flexibility, control by high-speed information communication technology, and highly accurate weather forecasting technologies. And its existence value in the market is considered high.

This report will also introduce the outline of power trading in Germany. We will also organize and introduce other advanced aggregator companies. Initiatives to respond promptly to the changes of advanced aggregator companies are considered to be an implement in today's energy industry where the environmental change is remarkable.