New actors on the energy market: aggregators and energy communities

7th REKK Energy Futures event, November 11, 2020

Q&A

Below you can find answers to the questions that could not be raised during the online workshop due to time limitation. Thank you to our speakers for answering them after the event.

Where is the boundary between the energy community and active consumers acting together?

*Marion Malafosse (DG ENER): "*Jointly acting final customers are defined in the Electricity Directive article 3 as a group of consumers "who consumes or stores electricity generated within its premises located within confined boundaries or, where permitted by a Member State, within other premises, or who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity".

Most of the activities jointly acting final customers can engage in are similar to the ones of a citizen energy community. However, as mentioned in my presentation, energy communities are not defined by the activities they can perform but by their governance structure and the primary purpose they serve. This is in fact the central difference between a Citizen Energy Community and jointly active customers. Citizen energy community have to be a legal entity – which is not the case for jointly active customers; and they have to provide environmental, economic or social community benefits. There is no such obligation for jointly active customers."

Do you think that virtual power plants will be the only main driving force in the power sector? Thank you in advance!

*Elias de Keyser (Next Kraftwerke): "*No, VPPs are only one the many solutions for a decentralized energy system. They are a great tool to unlock (smaller scale) flexibility and manage renewable portfolios better. But we also need market reforms, for example to reduce the time frame in which electricity can be traded. Barriers to enter the balancing markets need to be removed, they should be technology neutral and technical requirements should be reasonable. Many such markets are still very much geared towards conventional large-scale power plants. In any case, European flow-based market coupling and harmonization of balancing markets through the PICASSO and MARI projects will have a very big impact on the sector. We still lack a good solution for seasonal energy storage, which will be necessary to bridge longer periods of low wind and solar resources. Whether we will find a solution for this or not will determine the electricity mix in the next decades substantially."

What is the effect of repeatedly turning on/off charging on the EV's battery life?

*Elias de Keyser (Next Kraftwerke): "*There is no negative impact. To be clear, we provide flexibility by smartly starting and stopping the charging process (so-called V2G), we don't discharge the battery to the grid (so-called V2G). The operation of the EVs is in full agreement with the car brands (at this point in time Tesla, Renault, and BMW)."

Why hasn't NextKraftwerke entered Hungary so far? Few PV systems coupled with batteries or other reasons? Many bigger PV plants must schedule/ forecast their generation by law.

*Elias de Keyser (Next Kraftwerke): "*We are a relatively young company (founded in 2009) so our internalization goes in well-prepared steps. Some years ago, we looked into the Hungarian market, but we saw more potential in other European countries at the time. Clearly, things are evolving in the good direction though, so we are keeping an eye out. Hopefully, we can provide our services in Hungary in the future!"

How can you know or estimate the available balancing capacity with EVs? The chargers (and cars) have different charging power and consumption profiles.

*Elias de Keyser (Next Kraftwerke): "*When an EV is plugged in, we perform a short calibration test to establish the available charging power. Combined with the state of charge of the battery, and the user preferences provided through the app, we have a good view on what flexibility is available from that specific car. Besides, we also have historical insight in the pool as a whole (how many people leave and join unexpectedly etc.). This way, we can manage the pool of EVs very accurately."

Could you imagine the acceptance of special sub-measurement and settlement system (installed by the Aggregator), which is adjusted to the flexible electrical equipment's and which is different from the smart meter of the whole household consumption? Is it practice in Western Europe?

*Elias de Keyser (Next Kraftwerke): "*This is an important question. Many balancing products require second-basis data exchange with the grid operator to show accurate response to the activations. A smart meter is often not sufficient for this – it can also not steer the flexible installation(s). Therefore, some kind of steering box from the aggregator is in any case necessary. Some countries choose the route of obligatory certification of the steering box (our preferred way of working), other countries demand an additional meter of the TSO or DSO to be installed (usually driving up the cost for the client substantially). Although both form a barrier for aggregators, it's important to make sure that everyone is accurately reporting on what they deliver to the system. A balance needs to be found between fairness and accountability on the one hand, and no overly complicated procedures for measurement acceptance on the other hand."