SEDC Response to the European Commission Investigation into German Plans for Electricity Capacity Reserve

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The views expressed in this document represent the views of the SEDC as an organisation, but not necessarily the position of a specific SEDC member

Introduction

The Smart Energy Demand Coalition represents businesses offering services and technologies for the provision of demand-side flexibility. Our response to the European Commission's investigation document focusses on the specific provisions concerning participation of demand response operators.

The SEDC generally acknowledges the positive role that a Strategic Reserve can play in securing trust in the energy system, whilst minimising negative effects of generation overcapacities and interference with price effects in the regular electricity market. We acknowledge that the underlying risk assessment and design elements for a Strategic Reserve may be based on different criteria than the assessment for a market-wide capacity mechanism, but they must be non-discriminatory.

As a major concern on the German Capacity Reserve, we agree with the Commission's assessment that the definition of eligibility requirements in the reserves programme may - and in the view of the SEDC *will* - lead to the de facto exclusion of Demand Response operators. Rather than reflecting the system needs in an objective manner, the current proposals appear to have been written with a specific focus on generation. Adjusting these requirements and correcting the distortions cannot only be expected to reduce the cost of the capacity reserve, but it is also legally necessary in order to comply with the State Aid Guidelines (section 3.9.6) and the Energy Efficiency Directive (Article 15.8).

The Value of Demand Response in Capacity Products

Demand Response can add significant value to the electricity system when being allowed to compete on a level playing field with generation in capacity products. This has been proven in many countries around the world, e.g. in the US, Australia, Korea, and in Europe, e.g. in Belgium, UK, France, Sweden, Denmark. The inclusion of Demand Response increases competition which has the potential to reduce the the clearing price in auctions, thus delivering important savings to consumers, who ultimately pay any cost of the capacity (up to billions saved due to Demand Response in the case of US capacity markets).

In addition, allowing Demand Response to access capacity reserves on an equal footing helps unlock those Demand Response assets that would otherwise sit idle: A significant amount of Demand Response assets are only available to participate in rare dispatch products, because they have low capacity but high dispatch costs. These assets are excellent providers of capacity in capacity products (reserves or capacity mechanisms), but bad providers of energy on a regular basis. Hence, owners would not be willing to take the associated (investment) risks to offer flexibility, e.g. into volatile day-ahead or intraday markets.

Finally, reducing loads to maintain system balance at times of system stress is reducing CO2 emissions, as it is often the most polluting generation plants that operate during these times, and that would be replaced by Demand Response.

The SEDC therefore considers the inclusion of demand-side assets on a non-discriminatory basis not only a matter of equal treatment and fair competition. It is also an economically and ecologically beneficial, helping unlock Demand Response capacity that would otherwise sit idle, empowering consumers and fostering competition in the power system.

Recommendations on the individual eligibility requirements

To provide non-discriminatory conditions for the participation of different resources, the SEDC recommends seven key revisions of the eligibility requirements. We welcome that most of the barriers we propose to tackle have also been identified in the European Commission's letter to launch the inquiry.

The proposed adjustments will be relevant for Demand Response and in many cases also for storage and distributed generation. While all of these are important, we emphasize that the first two provisions are of utmost importance for any fair market.

1. Allow for aggregation

The proposed capacity resource requires availability 8760 hours per year for two years. Without the ability to pool assets, Demand Response is practically excluded, since no load asset can fulfil such high availability requirements standalone. Aggregation could solve this challenge: pooling a number of assets to ensure there is always sufficient capacity available to be dispatched when needed.

On top of that, aggregation enables the possibility for distributed resources, including Demand Response, distributed generation and storage, to reach the minimum size of 10 MW. Without aggregation, only very few distributed and demand assets would be able to participate simply due to the minimum size requirement.

We note that the German Ministry of Economic Affairs has argued that aggregation hinders the monitoring that assets are not active in the market and do not return to the market. The German Ministry has also stated that the IT requirements for TSOs would be higher. The SEDC contests both arguments. The monitoring of aggregated assets in a pool does not add any complication compared with monitoring them individually. Also, TSOs have other programs in place already that deal with aggregation, such as the interruptible loads programme (AbLaV) and all balancing reserve products (FCR, aFRR, mFRR). In fact, since TSOs would have a single connection only to the aggregator (not to each load in the pool), there would be fewer IT connections than without pools.

2. Allow Demand Response to recover opportunity cost / receive energy payment

It is discriminatory to allow generators to recover their fuel cost during dispatches, but disallow Demand Response to recover opportunity cost. In the same way that generators incur fuel costs, Demand Response resources incur the cost of not consuming, e.g. by turning down production, heating or cooling processes. Energy payments and opportunity costs should be considered as equivalent and treated equally.

This is particularly important, as particularly the loads facing high opportunity costs would be expected to participate in the Capacity Reserve programme (rather than other flexibility programmes or price-based adjustments of demand).

The German Ministry of Economic Affairs proposes that Demand Response should price any dispatch cost into the capacity bid. This is wrong for two reasons: firstly, the capacity reserve does not have an upper limit for the number of dispatches and it can be used for both system adequacy issues (market does not clear) and congestion management. This makes it practically impossible to estimate dispatch costs as a whole. Secondly, even if it was possible to estimate the number of dispatches, requiring Demand Response to put these cost (including a considerable risk premium due to the uncertainty) into the capacity bid puts Demand Response

in a very substantial competitive disadvantage compared to generation, which can recover opportunity costs. This contradicts the ambition of a level playing field.

3. Allow assets below 110kV to participate

The limitation to assets at 110kV voltage level and higher closes the market for the majority of Demand Response resources and for distributed generation and storage. In our understanding – and in comparison with other existing rules - such a limitation is not justified. It should be possible for all distributed loads ("Schwarmtechnologie") including household loads to participate in the market.

The limitation is in contradiction with the balancing reserve product requirements, where any asset at any node can participate, and also with the AbLaV, where assets can participate up to two node levels away from high voltage grids. In addition, since the capacity reserve allows for much longer activation time (12h and more) it should be feasible to consider any local network issues if that was necessary.

4. Define a maximum dispatch duration

The current proposals suggest that product design was not defined by the system needs but specifically on the basis of the capabilities of generation, not taking into account the characteristics of storage and Demand Response. Generation usually does not require any upper limits for the dispatch duration, and such limits have not been defined. For Demand Response and storage, however, upper limits in line with the actual system needs are very important to assess whether it is possible to participate or not or what the costs of pooling will be (longer dispatch durations require more assets per 1 MW of firm capacity).

We propose that dispatch duration should be a fixed number of hours based on system needs, as it is done in many other products, such as balancing reserve. In case there was an objective system requirement for a long dispatch opportunity for TSOs, all resources would have to accommodate that. However, having no limit at all leads to unnecessary challenges for Demand Response and storage. It should be noted that an upper limit on the dispatch duration has an additional positive effect, as it avoids the need for high risk premiums in the capacity price, thus helping to lower the auction's clearing price.

5. Limit test dispatches to max. 2 per year

Test dispatches can be very burdensome and costly, especially if opportunity costs are not reimbursed for Demand Response as argued in point 2. For loads, it would be sufficient to check the continuous consumption as an indication that the load is still available. In addition, to verify that the load can actually be dispatched, a test once or at maximum twice per year would be sufficient and should be limited to cases when there were no real dispatches during the year. This is usual practice in most strategic reserve programmes within the EU and abroad (e.g. 1 per year in the following US markets: PJM, NYISO/New York, ERCOT/Texas, ISO-NE/New England, CAISO/California; 2 per year in Ontario).

6. Allow companies to pursue their own hedging strategies to ensure the availability of energy

The SEDC acknowledges that assets participating in the capacity reserve should always be able to prove that they have acquired access to sufficient energy resources to meet their obligations. However, an obligation to procure energy in advance for the full 2-year duration of the contract is unjustified, in the same way that generators are not obliged to acquire fuel in advance. Consumers participating in the Strategic Reserve would naturally have an incentive to invest in price hedging to ensure their obligations at low risk and should be

able to pursue their own optimisation strategies. In case any limitation was introduced, however, we recommend that loads participating in the strategic reserves programmes should be allowed to buy the energy up until month-ahead. This would be a more realistic requirement without affecting short-term pricing, as it is very unusual for industrial companies to buy power so far ahead.

7. Allow demand resources to return to the balancing reserve markets

According to the current proposals, loads that participated in the capacity reserve, can never return to markets that pay for capacity. This includes the interruptiblility scheme AbLaV, but also the balancing reserve markets (as those also pay for capacity).

A load may be better suited to provide capacity for some time, but later may have a different consumption pattern and therefore be more suited for balancing reserve. In order to have an efficient allocation of loads to different markets and ensure the best economic outcome, it should be possible for loads to offer their flexibility into the balancing reserve markets after they left the capacity reserve.