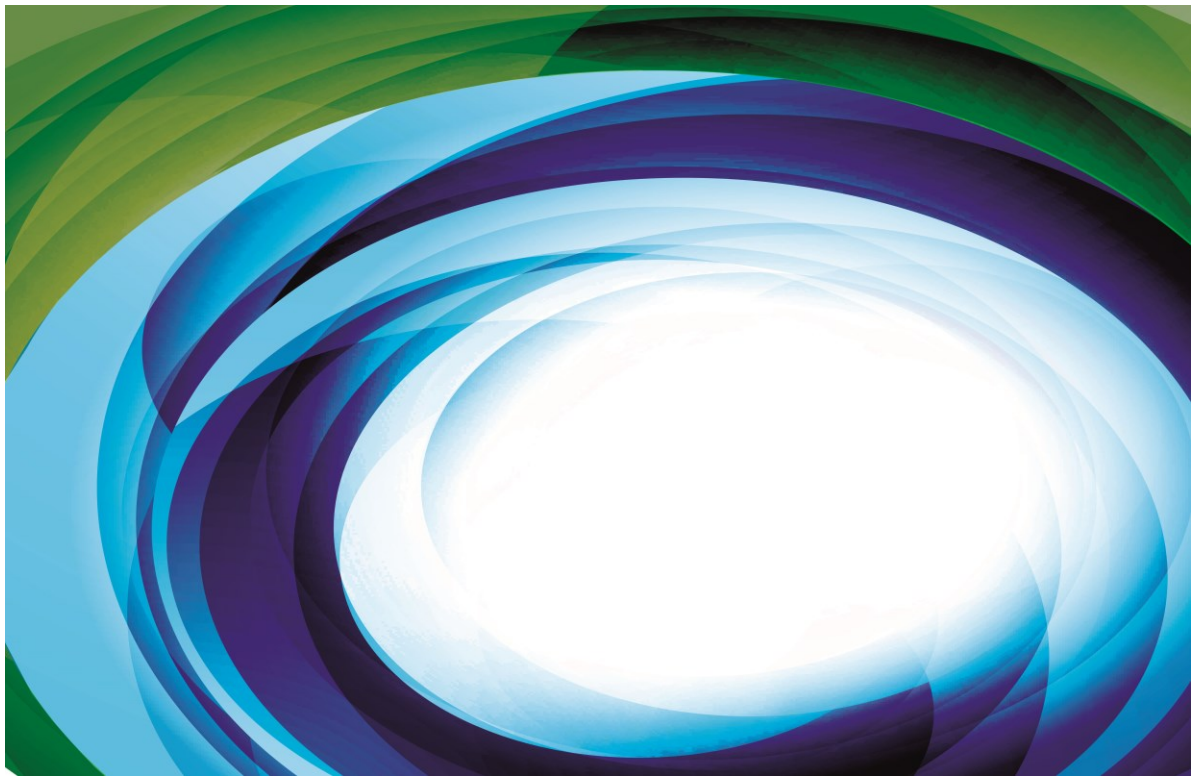
GEODE Position Paper on Electricity Market Design and Capacity Mechanisms in Europe



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Electricity Market Design and Capacity Mechanisms in Europe

Executive summary

GEODE believes that a fully functioning internal electricity market will provide a sound basis for the achievement of the three major goals of EU energy policy (security of supply, affordability and suistainability) in the context of the European energy transition. GEODE is convinced that the uncoordinated introduction of national capacity markets, by contrast, cannot provide for a sustainable electricity market in Europe. Should the need for a capacity market arise in some regions, a harmonized framework should be established at the European level so as not to hamper the completion of the internal electricity market.

There is an urgent need for measures which are able to stabilise the power grids, e.g. flexible renewable energy and demand response. With the balancing activity of the Balance Responsible Parties (BRPs), positive results can be achieved in both these areas – purely through market mechanisms.

Therefore, in GEODE's view, the power traders and suppliers play a pivotal role: It is through their trading activity – and not on the basis of governmental or regulatory provisions – that the flexibility potential on both the generation and the demand sides can be fully exploited and remunerated.

GEODE calls for:

- **The completion of the internal energy market and full integration of renewables:** A functioning internal market can solve many of the current problems of the European electricity market. Therefore, the full implementation of the 3rd energy package needs to be followed through in all EU Member States. All types of renewable energies should participate in the market. The removal of regulated prices has to be carried out effectively. Interconnection capacity throughout Europe has to be increased in order to facilitate cross-border trade. Obstacles to the full use of cross-border transmission capacity must be removed.
- **The strengthening of balancing regimes:** Through the activity of BRPs working under

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competitive conditions the flexibility potential on both the generation and demand sides are further exploited and appropriately remunerated. This will create an growing demand for new capacity products in combination with instruments already proven to be effective for balancing purposes.

- **Strategic reserve as a back-up for security of supply:** A strategic reserve at the European, national or regional level can help to maintain grid stability and security of supply at all times. It is important the strategic reserve is not part of the market and does not interfere with the market. On this basis a strategic reserve is the appropriate complement for the completion of the internal market.

Main problem of the European electricity market: lack of long-term incentives

In GEODE's view the main problem of the European electricity market is the structural underfunding of energy infrastructure and the lack of market based long-term investment. This problem is aggravated by the current overcapacity of power generation.

Different priority access regimes and feed-in tariffs have meant that an increasing amount of generation is out of the market, which is distorting price formation. The essential 'price dependent' part of the market is

- being reduced in terms of quantity and;
- in terms of prices;
- without losing its maximum output capacity.

The declining wholesale electricity prices result in conventional power plants having less operating time and ceasing to be profitable. Moreover, low CO_2 emission costs and falling prices for coal due to the use of shale gas in the USA are also contributing to the decrease in electricity prices. Today, even the operation of fully depreciated conventional power plants (especially gas-fired power plants) is barely profitable anymore, which renders the construction and operation of new conventional power plants an economic impossibility. This holds true, above all, for those power plants that are particularly important in the context of the energy transition: flexible, efficient and low-emission gas-fired power plants. Investments in power plant projects are turning into a heavy burden for their owners.

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This results in anxiety about the security of supply on the part of the general public. Several EU Member States have resorted to governmental action to support security of supply by introducing capacity markets or planning similar interventions in the market. This gives rise to uncertainties for investors and reduces the willingness to invest in capital-intensive projects, thus depriving the market of an essential means of stability.

The subsidy-based expansion of intermittent renewable energy exacerbates these problems. The increasing decentralisation of energy generation and the lack of an appropriate expansion of grid infrastructure at the distribution and transmission system level result in grid congestion.

Markets (and not governmental actions) are the solution

Despite these problems, there is a basically functioning and efficient market – the electricity spot market. Analyses of the spot market prices have proved that the market operating on the basis of fundamental data is really working. The market has been operating without disruptions despite the financial crisis and the expansion of renewable energy. All the prices can be explained by the same rules and dependences. Hence, the spot market is a powerful and well-established instrument to independently balance the supply of and demand for capacity and energy.

The main reason for the constantly decreasing spot market prices is, above all, overcapacity in the market. At the moment there is too much subsidy-based capacity and capacity benefiting from different priority access regimes on the market. Falling electricity prices are a natural consequence of this excess supply, proving that the electricity market is indeed working. It is only after a period of reduction of overcapacities that wholesale prices will go up again.

First and foremost, this requires a functioning internal electricity market. Hence, the complete implementation of the 3rd energy package is the basic requirement for healthy market conditions throughout Europe. Only if all Member States fulfil their obligations in this regard can a true internal market emerge. All energy sources, including renewables, must participate in this market on equal terms and need to be incorporated into the traders' balancing groups. This will increase balancing tasks considerably. Yet, the market will find

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solutions for BRPs. Thus, the BRPs can choose between different products such as storage products, flexible back-up capacity or combined products (combinations of renewable and conventional power plants). Other options include interruptible load agreements or scheduling agreements with operators of renewable energy installations, interruptible electricity supply contracts and other controllability agreements with end customers (by which means the potential of flexible loads can be fully exploited). As a result, the provision of conventional capacity, the controllability of power generation facilities and loads will be given a price and thus become tradable. Meeting the demand for secure capacity this way will – without governmental intervention – lead to an implicit pricing of capacity provision (option trading).

Thus, in GEODE's view it is in most cases not necessary to rely on a government body evaluating and determining the capacity required, but focusing on the demand side as a a dynamic market driver.

This means that the market will solve the current problems if further government interventions are avoided.

Instead of new capacity mechanisms, we need:

- a spot market free of disruption;
- to avoid new surcharges;
- to avoid capacity certificates;
- to avoid the doubling of the balancing group system by requiring a new capacity-based component.

Strategic reserve for emergency cases

Given the importance of a stable and reliable electricity supply for the economy as a whole, it could, however, be necessary to safeguard the electricity market with an additional "emergency measure". In this regard, the balancing energy market is the appropriate instrument for compensating short-term capacity imbalances. However, the balancing energy market only addresses specific time periods (of too short duration) and cannot safeguard the system over longer periods of time. Therefore, GEODE recognises that an additional measure may be needed to safeguard the electricity market in the long run: A

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strategic reserve will meet the needs and expectations of TSOs and all market actors in terms of system security – and ensure planning security for power plant operators at the same time.

However, the installations contracted for the strategic reserve should only dispatched by the TSOs if system security is threatened. Installations that have been contracted for the strategic reserve must be barred from participating in the regular electricity market for the duration of the contracting period. This is because the installations used for generating reserve capacity must be available to respond to the TSOs' instructions at all times. In addition, it has to be ensured that the remuneration paid to the installations contracted for the strategic reserve does not distort competition on the regular electricity market. The essential purpose of the strategic reserve is to safeguard system security in the event of an emergency. Therefore, both segments – electricity market and strategic reserve – must be kept strictly apart.

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