

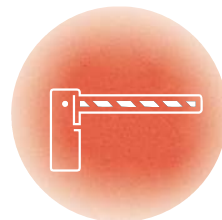
# VALUING FLEXIBILITY TO TRANSFORM POWER SYSTEMS

## POLICY RECOMMENDATIONS



### INCENTIVISE FLEXIBILITY

Incentivise system operators to engage in market-based flexibility procurement.



### AVOID BARRIERS

Avoid barriers for small-scale and demand-side flexibilities to participate in market processes.



### ARBITRATE GRID INVESTMENTS

Arbitrate grid investments with other “soft” solutions, notably making use of local flexibility markets, to foster cost efficiency of the energy transition.



### RELY ON NEUTRAL PLATFORMS

Rely on neutral platforms and operators for a transparent matching of orders and emergence of meaningful price signals.

### The potential of local flexibility markets for the energy transition

Tackling grid congestions and unlocking the potential of demand-side flexibility are key challenges of the energy transition. Due to the development of renewable energies, such congestions have been rising in recent years on the transmission level and will further grow on both transmission and distribution levels. New regulatory guidelines such as the EU Clean Energy Package, will contribute to this trend.

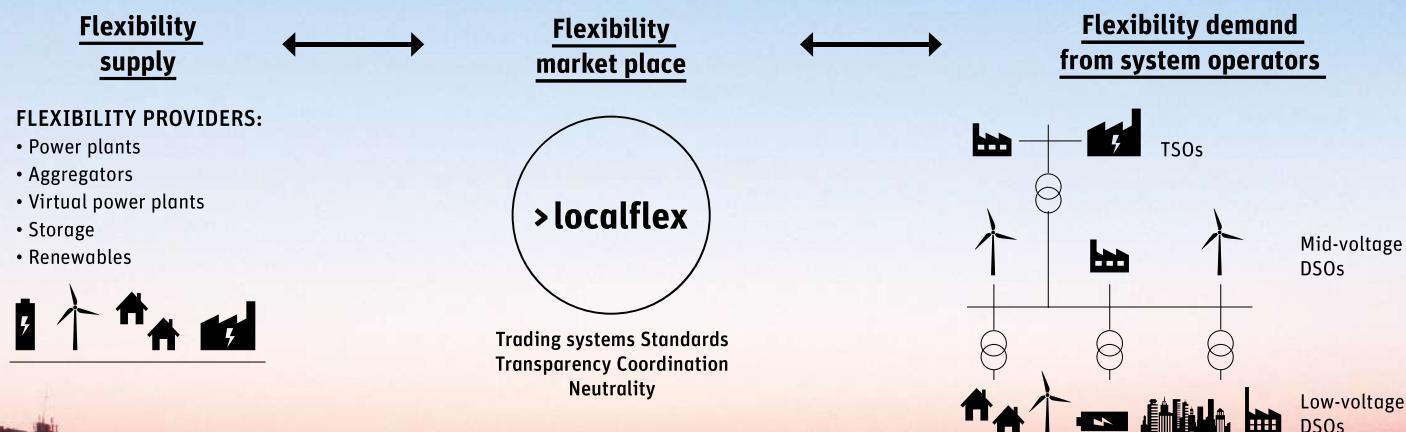
Local flexibility markets for market-based congestion management represent a “soft” and cost-efficient solution. They complement grid development to tackle the challenge of grid congestions by making best use of system flexibilities. Flexibility markets efficiently centralise local flexibility offerings. On the one side, network operators are enabled to resolve physical congestions. On the other side, flexibility providers benefit from an additional revenue opportunity.

### How flexibility markets can be designed

The enera project in Germany, where energy group EWE and EPEX SPOT developed a pilot for a flexibility market, showed that it offers real added value for congestion management.

The enera project demonstrated that a key success criterion is a clear separation of roles between a) the system operators managing the grid, b) the power exchange handling neutral market operations, and c) the flexibility providers managing the optimisation of their assets.

The separation of roles is:



The way forward: what benefits a market platform for flexibility can bring

Transmission and distribution system operators are responsible for the security of supply and therefore need to alleviate any congestions before they occur. Traditionally, TSOs have used flexibility in regulated environments via redispatch, while DSOs have mostly worked on grid reinforcement. Bringing the energy transition to the next level will require a change of paradigm and a cultural shift to more “flexibilisation” of the grid and power system in Europe.

The EU Clean Energy Package sets the pace for a renewed approach to congestion management, all for the sake of a cost-efficient energy transition:

- Congestion-management has to be market-based (Regulation (EU) 2019/943 Art. 13);
- DSOs need to consider alternative options to grid investment such as market-based flexibility procurement (Directive (EU) 2019/944 Art. 32);
- TSOs and DSOs need to coordinate their operations (Regulation (EU) 2019/943 Art. 57).

The EU Commission estimates that **up to €5 billion** of distribution grid investments per year can be avoided with flexibility capacities. Yet, across Europe, there are miscellaneous national frameworks that are not always incentivising system operators to use new flexibility resources in a smart way.

EPEX SPOT has acquired a Local Energy Market (LEM) platform from Centrica in October 2021.

The LEM auction platform provides a market-based solution for energy flexibility trading. It was developed and tested to allow system operators to use flexible assets to manage grid congestions. It offers an end-to-end process for system operators including pre-trading, flexibility registry and post-trading.

Flexibility market platforms are a market mechanism to

- increase the efficiency over bilateral agreements by creating a shared explicit economic space,
- reduce entry barriers for smaller market participants,
- allow for standardisation of products while keeping agility to adapt to local constraints,
- maximise the efficient use of the existing grid and therefore reducing costs in grid extension,

- while finding the most cost-efficient solution through competition of assets, and
- lead to a significant overall increase of social welfare.

Redispatch 2.0

In Germany, the introduction of Redispatch 2.0 is a first step towards the integration of smaller flexibilities. However, Redispatch 2.0 does not make it possible to integrate flexibility on the load side or to develop further flexible capacities.

One transitional solution acknowledging the challenges with current structural congestions would be a hybrid model in which the market-based redispatch is limited to small-scale flexibilities while existing, generation-based assets are kept in the cost-based redispatch.