

# Prosumers and their Role in the Future Power System

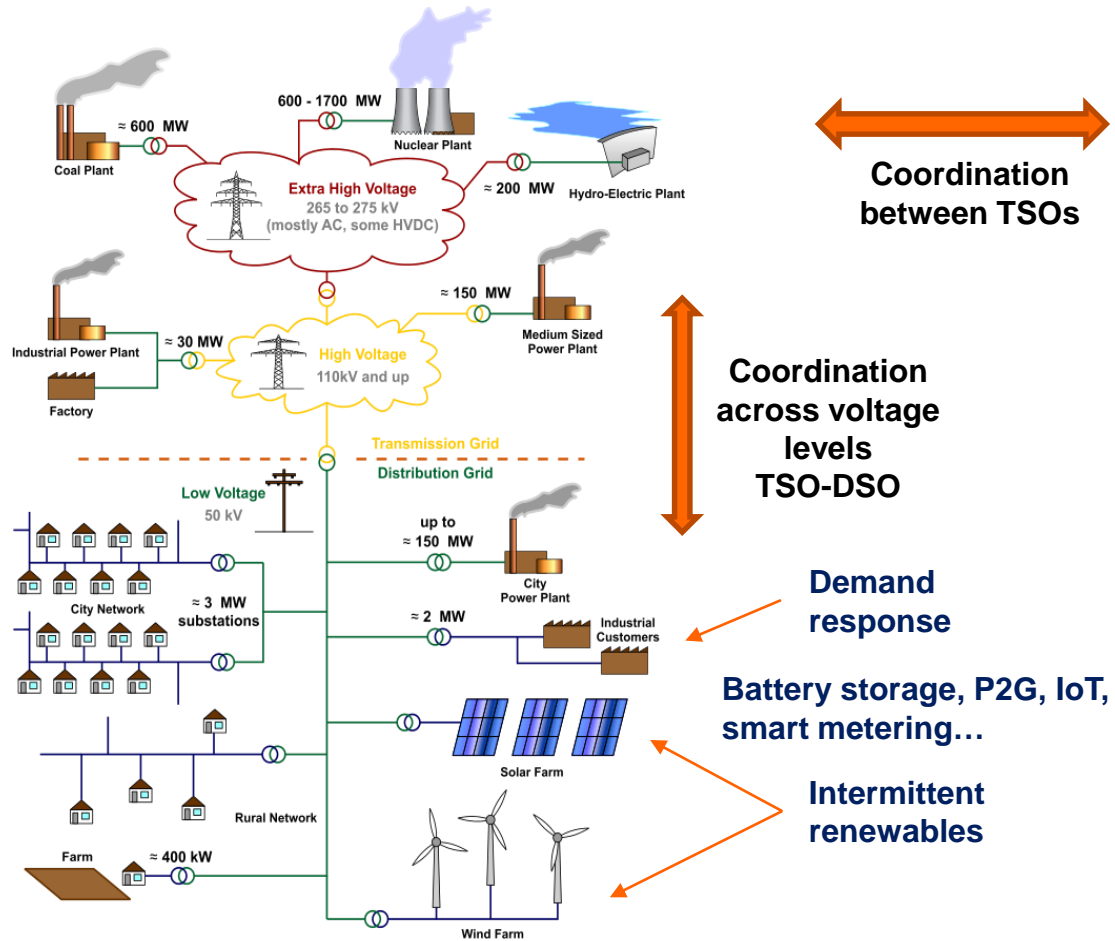
FutureFlow

Vienna, 15<sup>th</sup> of October 2019

# Decentralization creates a need for Vertical Coordination

**Transmission grid**  
 → Management of large-scale flexibility

**Distribution grid**  
 → Decentralization towards digitalized, active system management and usage of flexibility

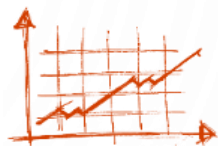


**Important questions:**

- How to foster the coordination between voltage levels?
- What new role for the DSOs?

# Local Flexibility Markets for Congestion Management

## Certified Flexibility Providers



Submit flex offers



## Flexibility Marketplace

Area	CBIT	Cur	Phas	State	BidCo
11-12_RES	EUR	EUR	EUR	EUR	EUR
13-15_RES	EUR	EUR	EUR	EUR	EUR
16-18_RES	EUR	EUR	EUR	EUR	EUR
19-21_RES	EUR	EUR	EUR	EUR	EUR

Procure flexibility



## System Operators



### Flexibility offer from:

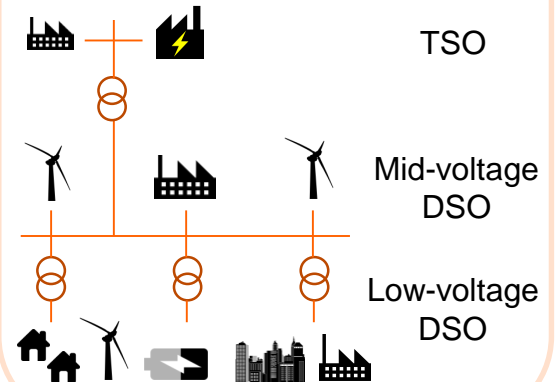
- Power plants
- Storage
- Renewables
- Aggregators
- VPPs



**Market platform**  
**Standards**  
**Transparency**  
**Coordination**  
**Neutrality**

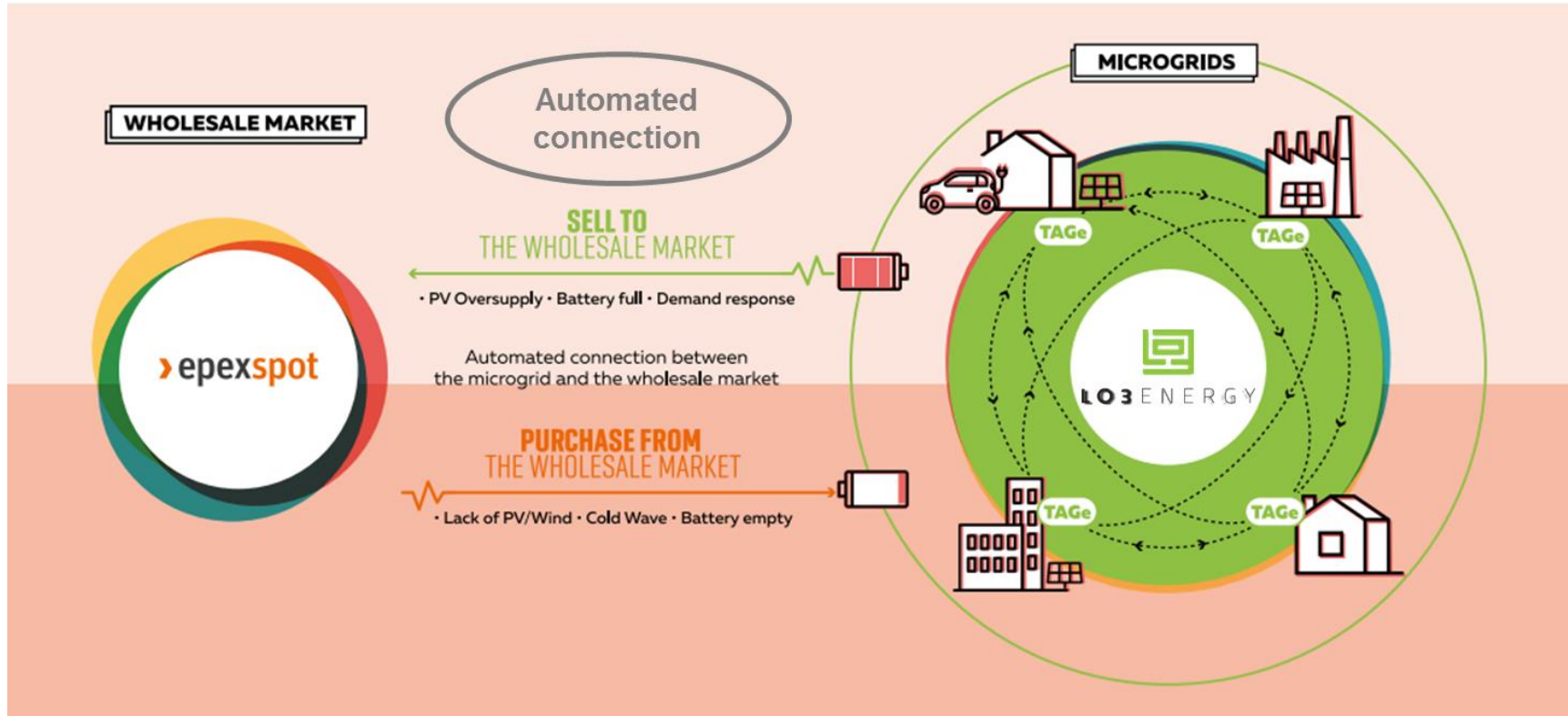
- Defines market rules and product specifications
- Admits participants on the market
- Operates the markets by matching flexibility offers and demand from SOs continuously
- Monitors the markets

### Flexibility demand from:



# Valuing surpluses and flexibility on the market

Example of LO3 Energy as a microgrid enabler



- ✓ Wholesale market
- ✓ Local flexibility markets, when and where relevant

- ✓ New technologies: smart meters, IoT, blockchain
- ✓ New market players: microgrids, smart devices, batteries, electric vehicles, etc.

# Appendix

# Enera 1.0

*which members are participating ?*

- **Already admitted**

- EWE Netz (SO)
- EWE Trading (CFP)
- Volkswagen (CFP)
- Statkraft (CFP)
- Baywa Re (CFP)
- Tennet (SO)
- Quadra Energy (CFP)
- Alpiq (CFP)
- Avacon (SO)

- + Other asset owners in the membership process



# A complementary marketplace to alleviate congestions and value flexibility

The Flexibility Providers can bid the same asset on both the zonal Intraday market and a locational order book (when certified by the relevant SO for this local market area).

The Local Flexibility Market (LFM) is complementary to the zonal Intraday and the balancing markets.

