



Federatie van de Belgische Elektriciteits- en Gasbedrijven  
Fédération Belge des Entreprises Électriques et Gazières  
Federation of Belgian Electricity and Gas Companies

# FEBELIEC Workshop 'Demand response'

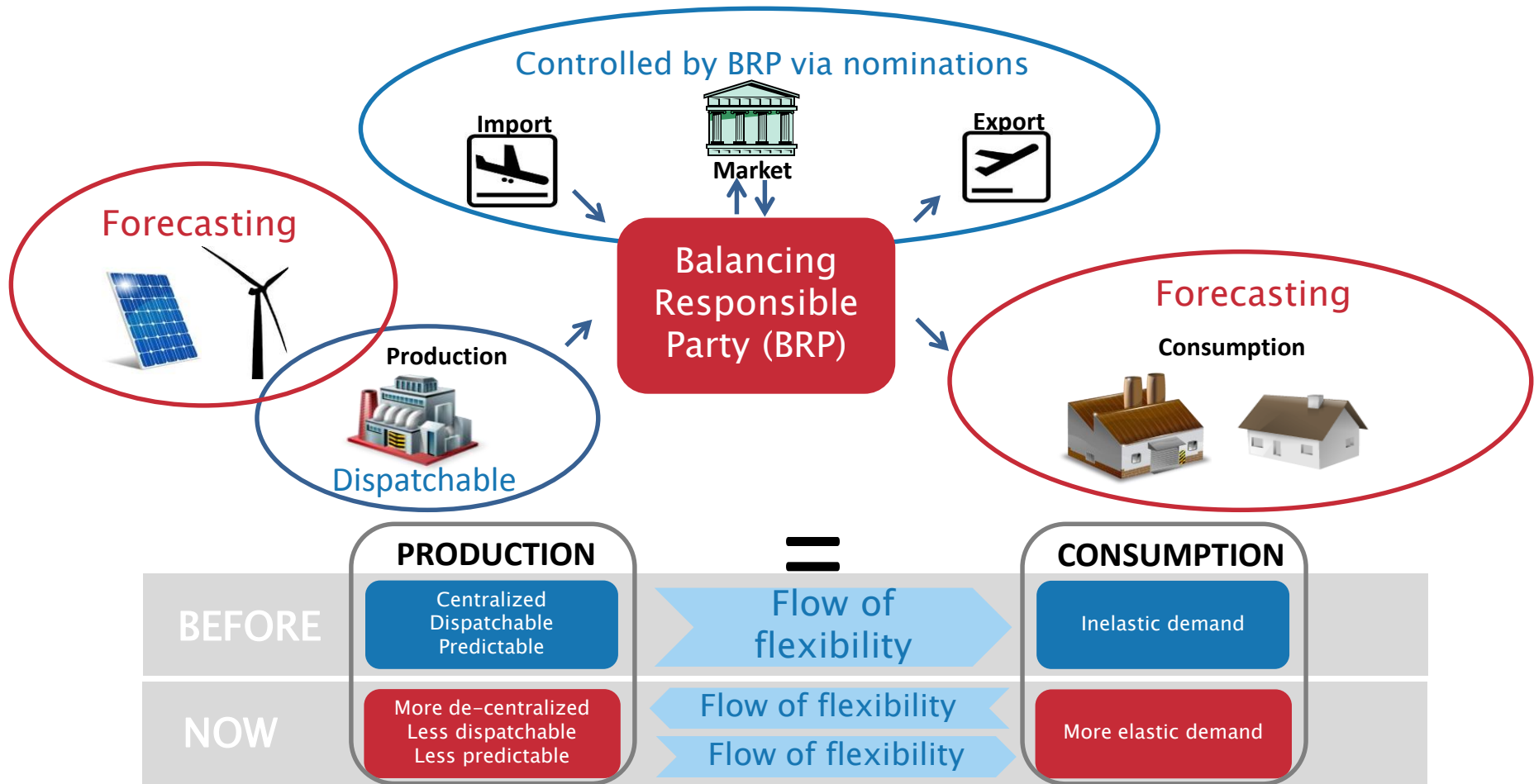
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- New challenges
  - Growing need for flexibility
  - Need to integrate the aggregator in the market
- Balance between principles
- Prerequisites for a good market design
- Difference between ‘diverted energy’ and ‘supply flexibility’
- Impact on the supply contract:
  - Diverted energy
  - Supply flexibility

## New challenges

# Growing need for flexibility



## New challenges

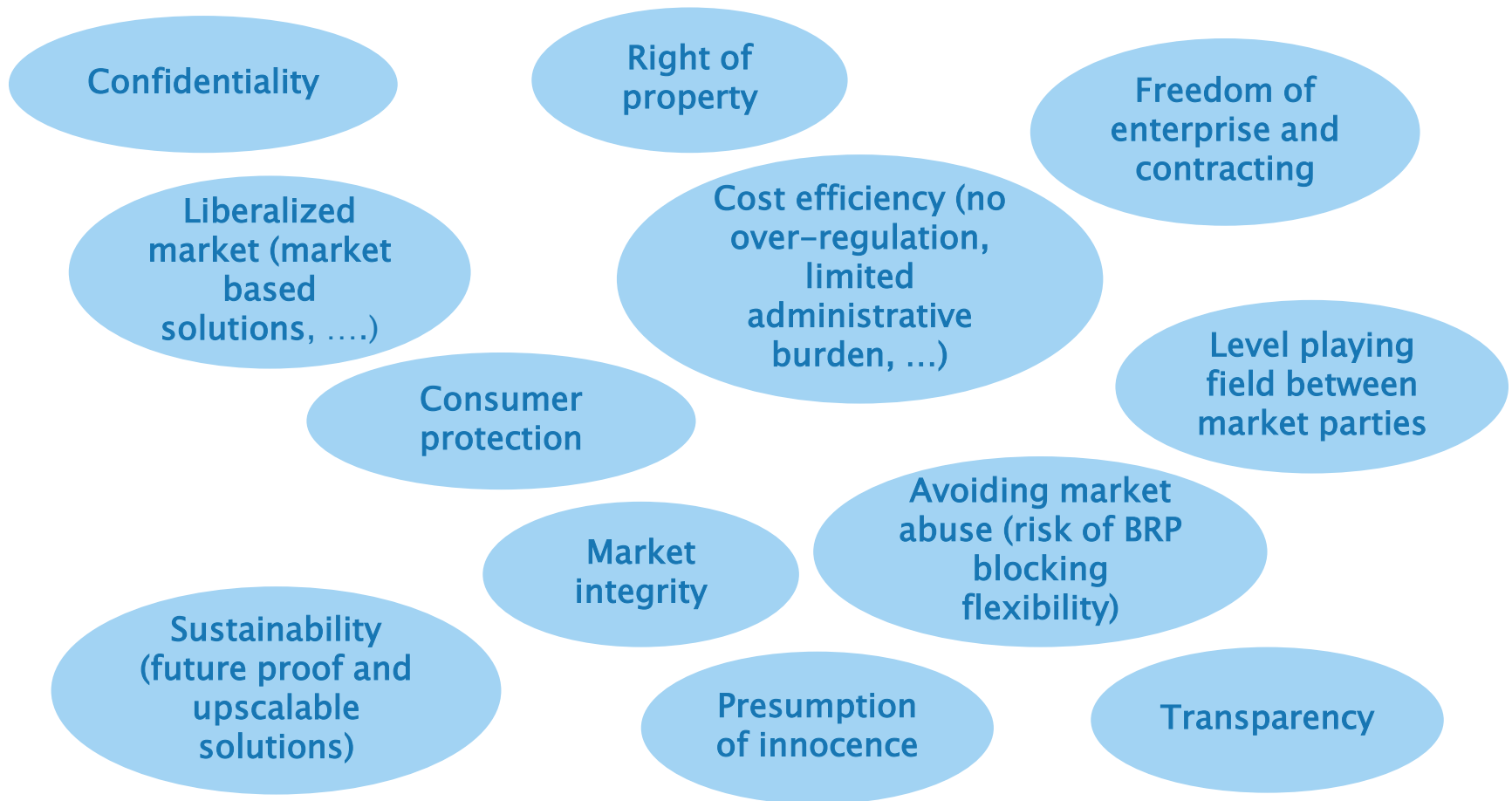
# Need to integrate the aggregator in the market

- European Commission, Regulators and System Operators strongly support the development of demand response aggregation
  - E.g. Directive 2012/27/EU: Member States shall promote demand response participation in spot and balancing markets
- Aggregators are already entering the market, but without a clear market model
  - Different market designs in different countries in Europe
- Issues arise when independent aggregators (= third parties) affect the existing business position of other market participants without proper compensation or settlement

How can the independent aggregator be integrated in the market while limiting impact on existing market parties?

Challenges necessitate adjustments to the market design

## Balancing between principles



## Robust market design with correct allocation of costs and benefits

# Prerequisites for a good market design

### ... shall work in congestion, spot and balancing markets

- Coherent market design for different markets
- Keep flexibility available for both market parties as well as system operators

### ... shall put no additional costs on third parties without proper neutralization

- Additional information flows and operational tasks require room for proper pricing by existing market parties
- No seepage of additional costs from demand flexibility aggregator presence to existing markets, e.g. activation by third parties of flexibility services shall not increase balancing settlement prices

### ... shall value flexibility correctly

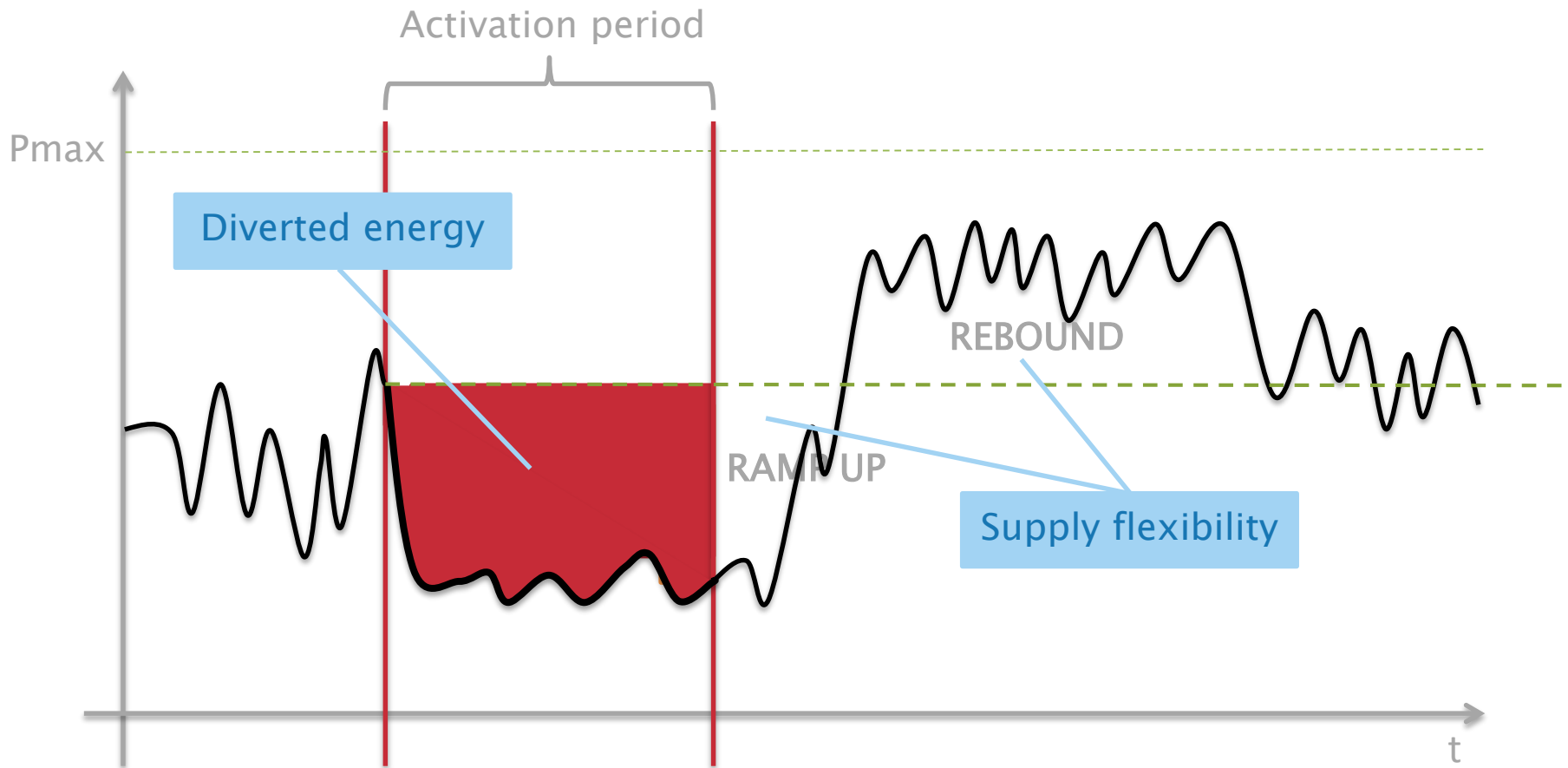
- Aggregator flexibility is not only sourced from the customer, but also from its BRP (balance perimeter)
- The impact on the BRP is not limited to the activation window, e.g. rebound, load shifting, ramp up, ...

### ... should be scalable

- Current market models are created ad-hoc and based on a limited number of customers/aggregators
- Large-scale-roll-out requires operational processes and contracts that can be automated or standardized

## Difference between diverted energy and supply flexibility

# Impact of activation of flexibility on supply contract





## Impact on supply contract

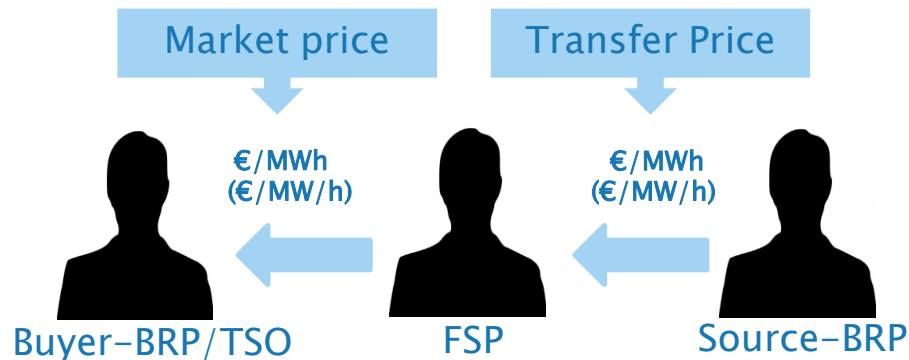
# Supply flexibility

- How is the price in a supply contract determined?
  - An agreed profile is used as reference in the supply contract
  - Price is bilaterally set based on commodity and reference profile
- Unilateral differentiation from this reference profile impacts pricing and should therefore be included in the supply contract
- Therefore the BRP/Supplier needs to be compensated for the different flexibility cost
  - Irrespective of market in which aggregator is active
  - At an agreed price between the customer and the BRP/Supplier
  - Feasible on a large scale, without disproportionate costs for market parties

FEBEG prefers ex ante inclusion of aggregator activity in supply contract (like any other change in the consumption profile)

## Impact on supply contract

# Diverted energy



- Respect for supply contract is of utmost importance
- No regulated price for the transfer of energy!

### Bilateral model

- Bilateral contract between FSP and source-BRP
- Transfer at **commercially negotiated price**
- Can be implemented at a short term:
  - Putting contracts in place
  - Using existing tools, e.g. Elia HUB
  - Low implementation costs, flexible system, allows tailor-made solutions, ...

FSP's are already providing services to BRP's based on bilateral contracts

### Model via client

- FSP buys energy from client and suppliers bills diverted energy to client
- Transfer at **price in the supply contract**
- Solution at longer term?
  - Market facilitation by system operators to provide correct allocation data to supplier
  - Is this feasible (costs, complexity, e.g. taxes and contributions, rigidity, implementation time, ...?)



thanks