

The absence of a common EU view on
balancing is a shame

CIGRE Mini Symposium
The future of balancing markets

Paul Giesbertz – June 16, 2023

1996

1st
package

2003

2nd
package

2009

3rd
package

2019

4th
Package
Clean Energy Package

- Full market opening
- Independent regulator
- Regulated TPA
- Legal unbundling TSO - supply

Brought discussions on design and regulation of the internal energy market at EU level:

- EU network development plans
- EU network codes
- EU target model e.g. with one market coupling concept
- Through:
 - Establishment of ENTSO-E: cooperation of TSOs
 - Establishment of ACER: cooperation of national regulators

?

The 4th package – the Winter package – Clean Energy for EU citizens package (30 Nov 2016)

This is an **unprecedented** step in empowering consumers

Commission proposes new rules for **consumer centred** clean energy transition

Our proposals provide a strong **market pull** for new technologies



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1st
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2019

4th
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2023

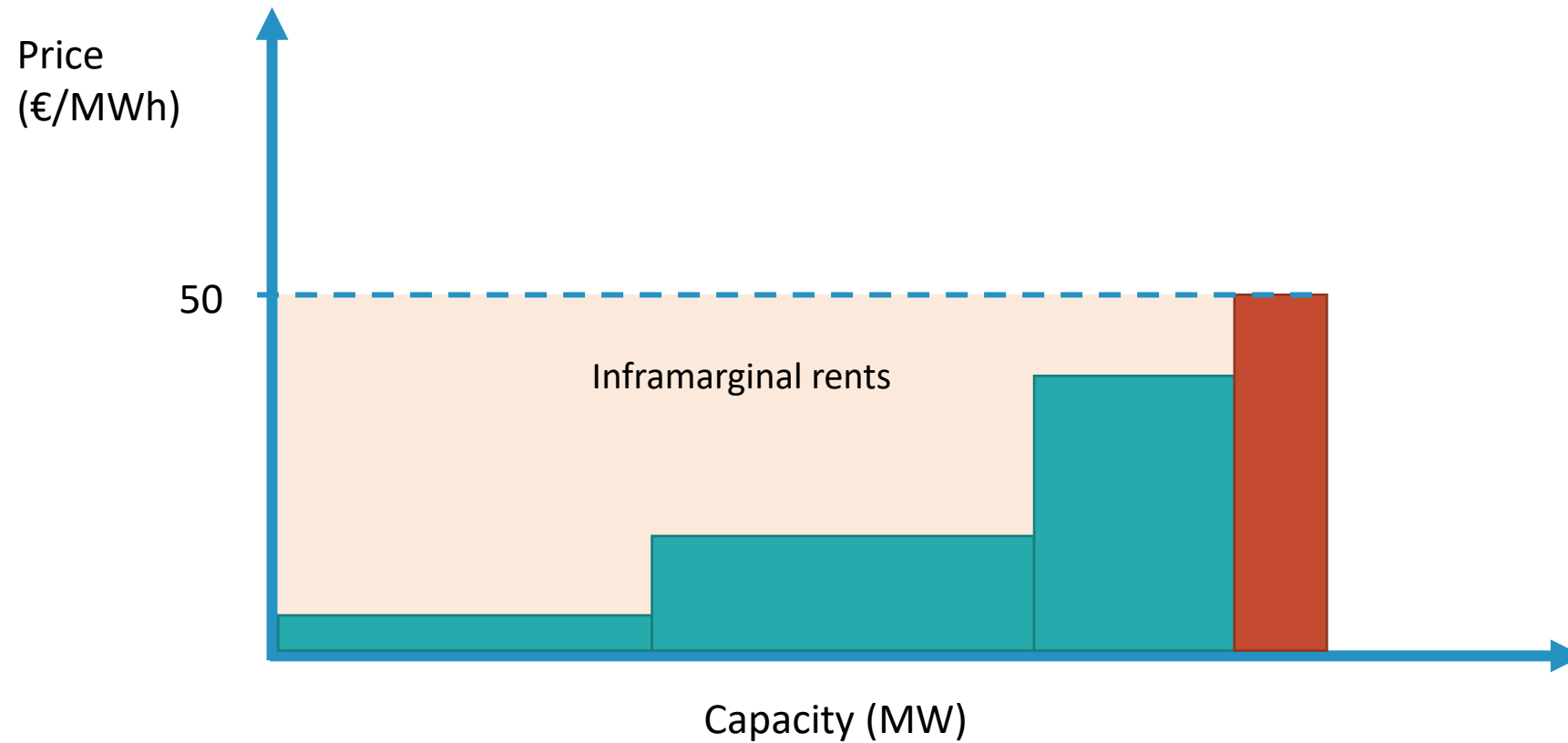
Reform

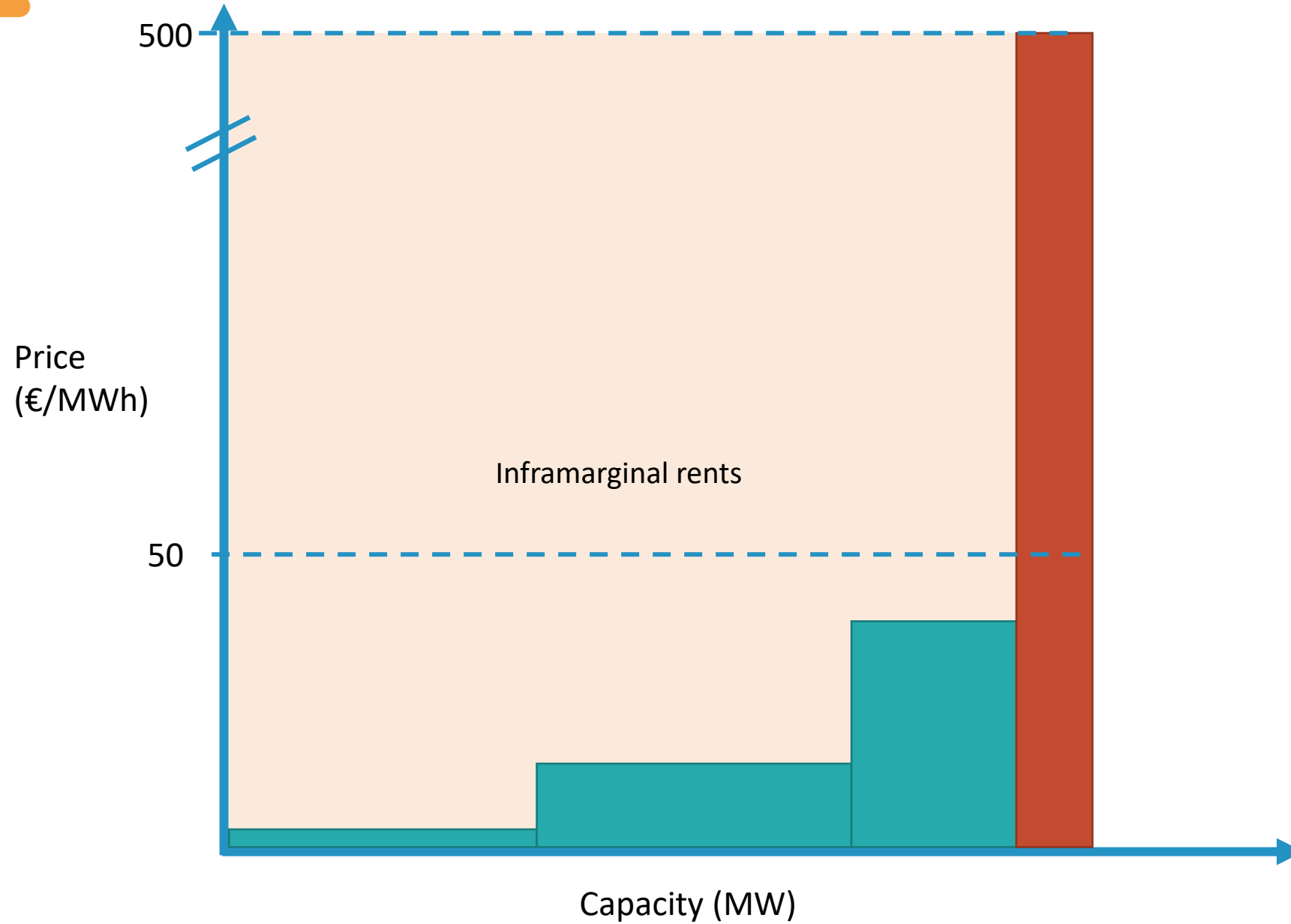
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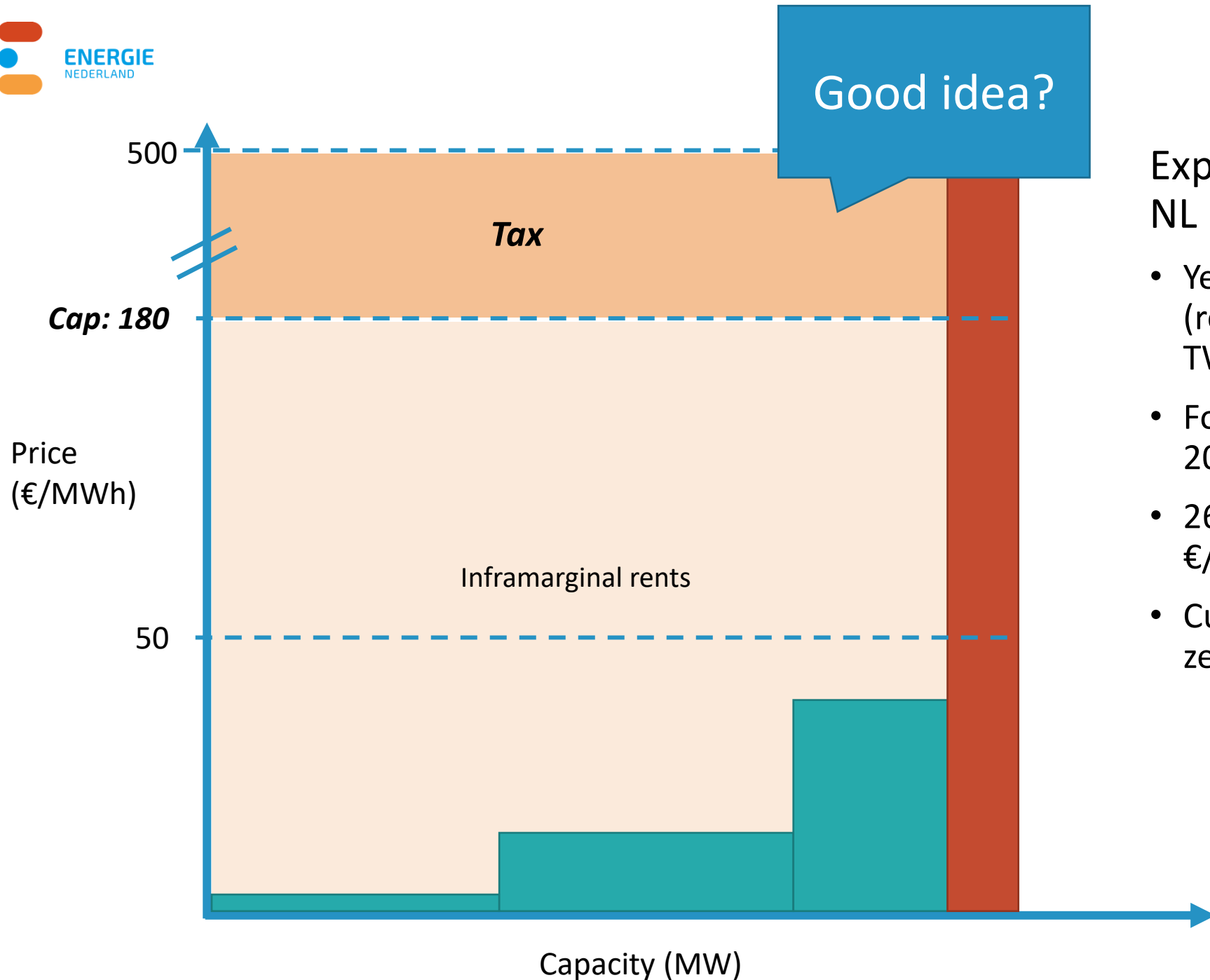
“Profits must be channeled to those who need it most”

In our social market economy, profits are good. But in these times it is wrong to receive extraordinary record profits benefitting from war and on the back of consumers. In these times, profits must be shared and channelled to those who need it the most.









Expected revenues for NL (at that time):

- Yearly generation (renewables & nuclear): 45 TWh
- For period Dec 2022- June 2023: 26 TWh
- $26 \text{ TWh} * (500 - 180 \text{ €/MWh}) = 8 \text{ billion €}$
- Current figures: close to zero

No, not a good idea

- Tax is distortive
 - Merit order is dynamic
- Correct implementation is not possible
 - Transactions are concluded per portfolio, not per plant
 - Number of transactions can be high
- Results are unfair
 - Revenues depend on hedging
 - Profits further in value chain untouched
- Better alternatives

“We will do a deep and comprehensive reform”



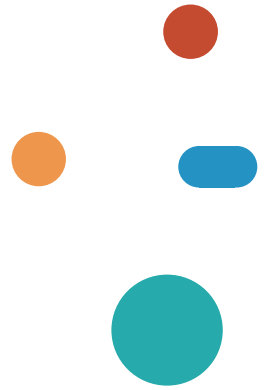
The current electricity market design – based on merit order – is not doing justice to consumers anymore.

They should reap the benefits of low-cost renewables.

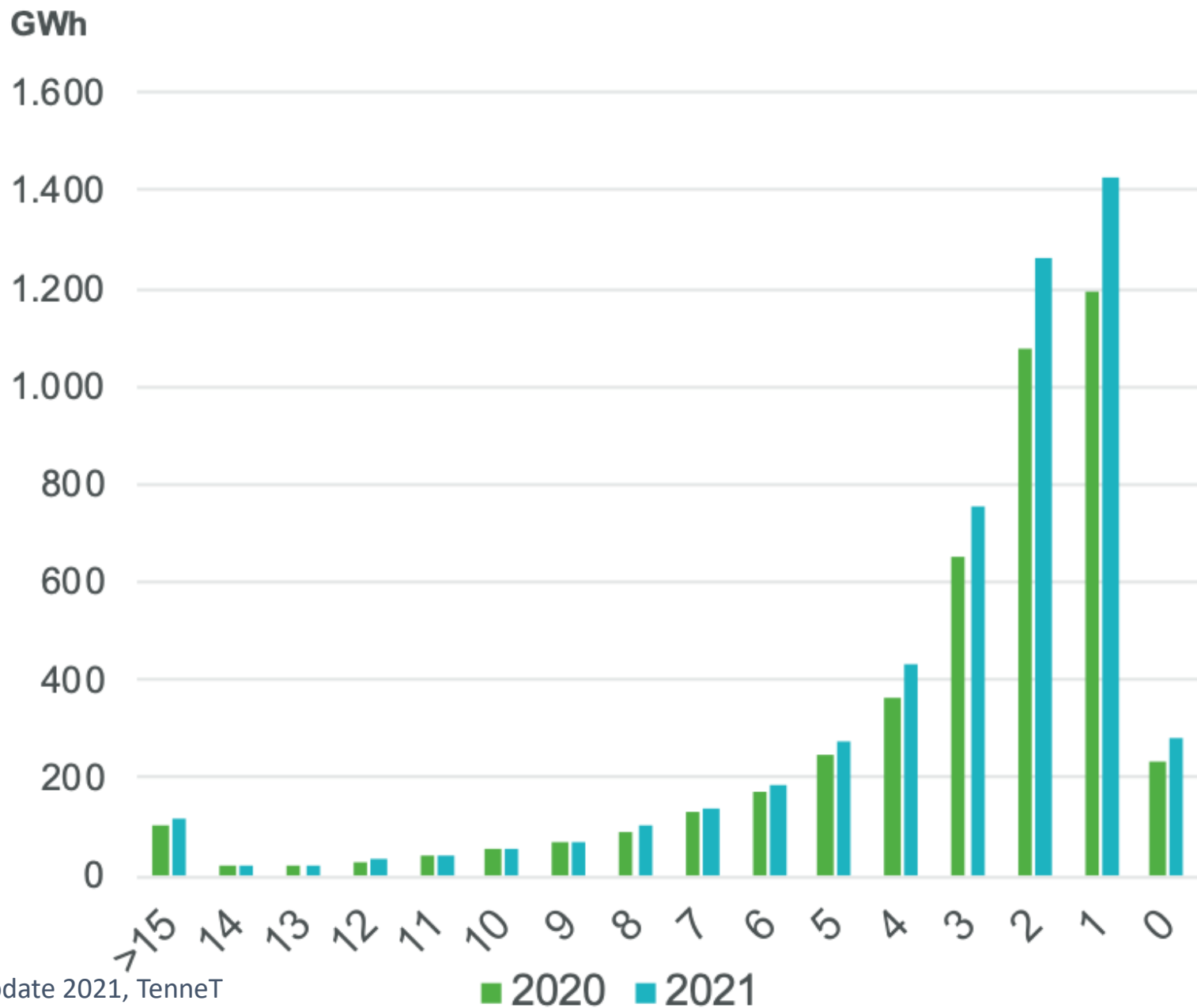
So, we have to decouple the dominant influence of gas on the price of electricity. This is why we will do a deep and comprehensive reform of the electricity market.

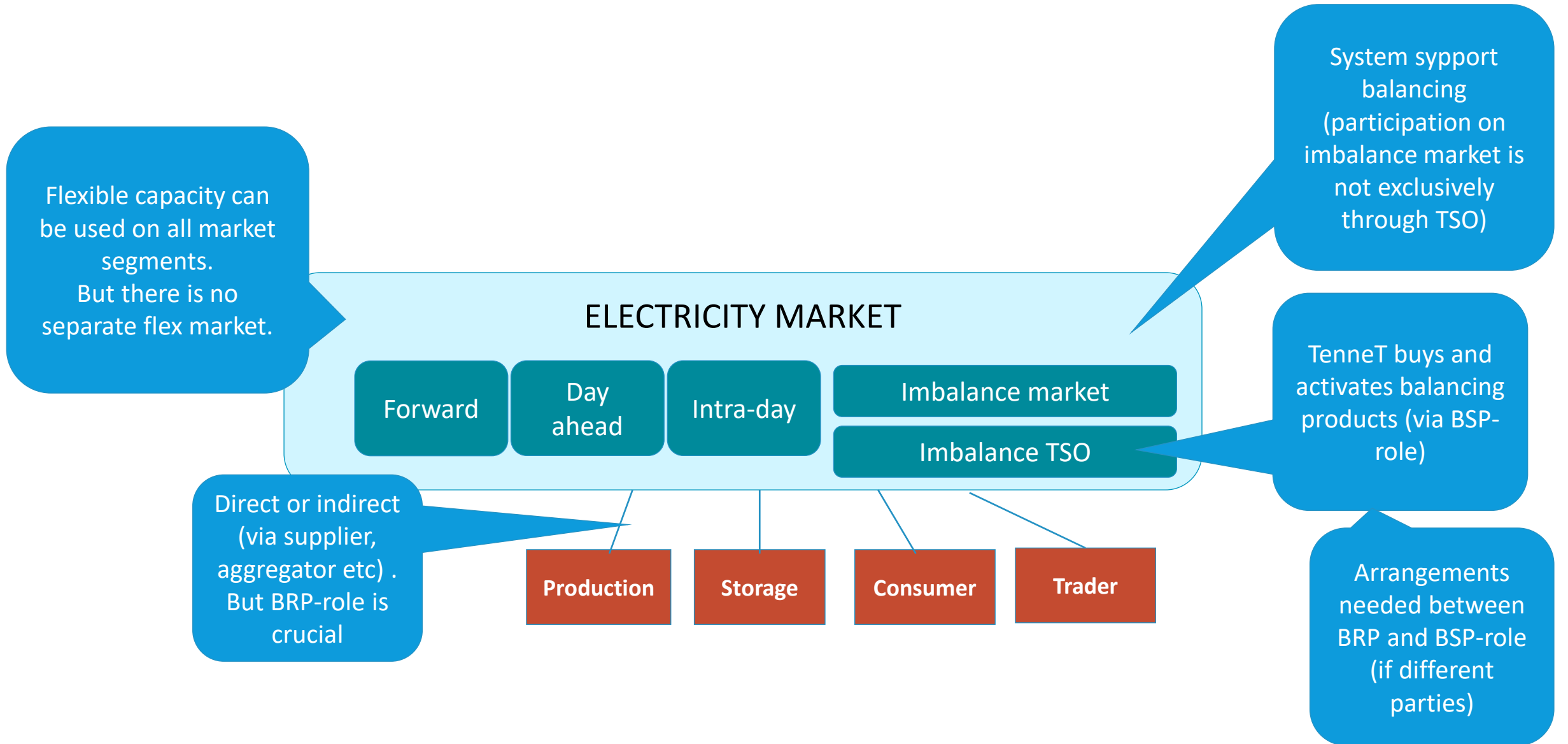
What is in the electricity market reform proposal?

- A national flexibility target
- A flexibility support instrument ✓
- Right to energy sharing
- Peak Load Shaving Product
- Virtual Trading Hub
- Cross-border intraday trading up to 30 minutes before delivery ✓



Total ID continuous volume traded in time before delivery hour





How to set the imbalance price correctly?

There is no EU harmonised approach !

- Although imbalance price is THE basis for price formation in all market segments
- Scarcity prices (signal for improving flexibility) can only materialise if imbalance price can spike up to VoLL
- Still different approaches can give good results
 - If the main principle (reflect the real time value of electricity) is kept in mind

Another challenge is the harmonisation of roles and duties of TSOs and BRPs!

Role and duty of BRPs and TSOs

The role of **BRPs** is laid down in Article 17 of Regulation 2017/195 (EB GL):

- In real time, each balance responsible party shall strive to be balanced or help the power system to be balanced

The role of **TSOs** is laid down in Article 14 of Regulation 2017/195 (EB GL):

- ▶ Each TSO shall be responsible for procuring balancing services from balancing service providers in order to ensure operational security.

Precise duties are laid down in Regulation 2017/195 (SO GL)

- ▶ Activate FCR to stabilise frequency
- ▶ Activate FRR to balance own system and restore FRR
- ▶ Activate RR to restore FRR

No room for
pro-active
balancing
by TSOs !!

Balancing: Some principles

Article 3 of Electricity Market Regulation 2019/944

- ▶ Member States, regulatory authorities, transmission system operators, distribution system operators, market operators and delegated operators shall ensure that electricity markets are operated in accordance with the following principles:
 - (a) prices shall be formed on the basis of demand and supply;
 - (b) market rules shall encourage free price formation and shall avoid actions which prevent price formation on the basis of demand and supply;

Article 14.2 of Regulation 2017 (EB GL)

- ▶ TSOs shall apply a self-dispatching model.

Balancing: Corollary

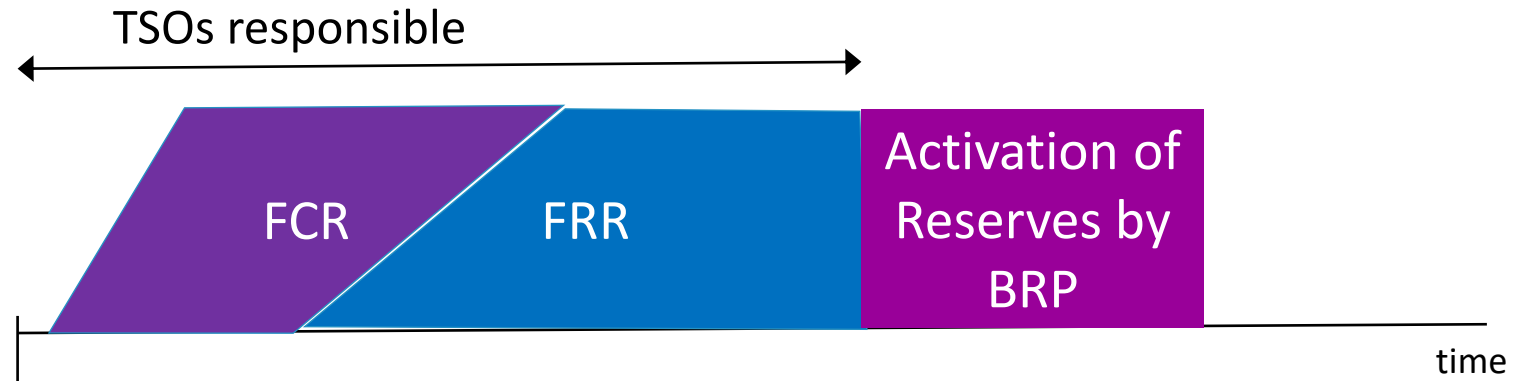
- ▶ Balancing demand and supply is a task of market participants, ...
 - This task is not restricted in time
- ▶ ... that is accompanied with specific responsibilities for TSOs (i.e. balancing actions by TSOs through balancing services provided by BSPs).
 - BRPs look at the energy (MWh) balance per ISP (15 min)
 - TSOs look at the power (MW) balance continuously
- ▶ This interplay of BRP-actions and TSO-actions needs careful consideration.

This interplay of BRP-actions and TSO-actions needs careful consideration. How?

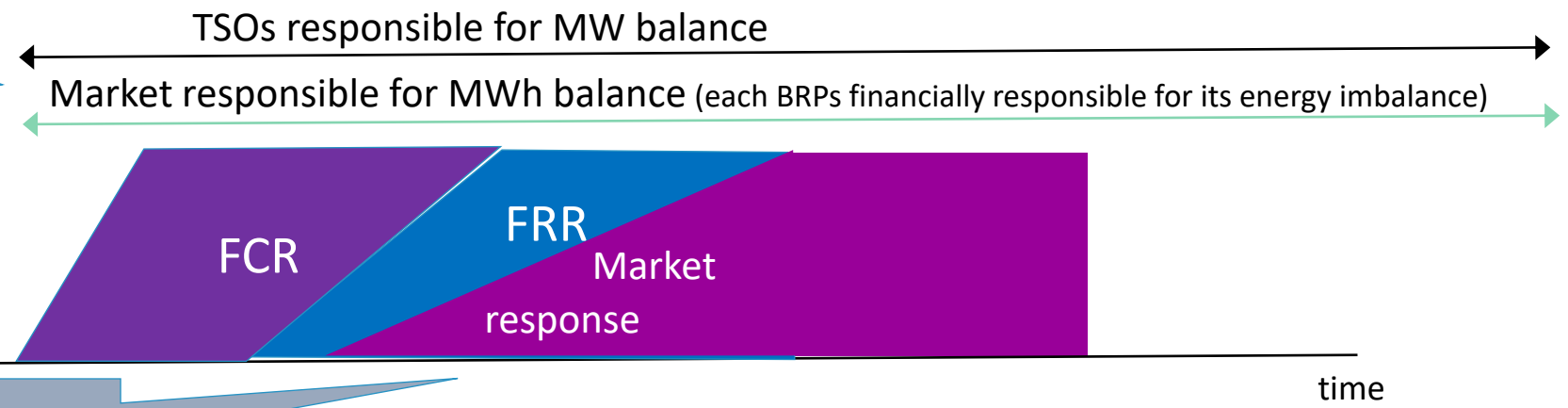
- ▶ Speculation against a wrongly set imbalance price is harmful.
- ▶ But taking positions against a correctly set imbalance price is important to let the market balance demand and supply also in real-time.
- ▶ A correct setting of the imbalance price and transparency on the real-time state of the system will avoid instabilities in the interplay of balancing actions by BRPs and TSOs.

Balancing: *The traditional view & a more complete view*

Correct:
TSO must be reactive,
not pro-active



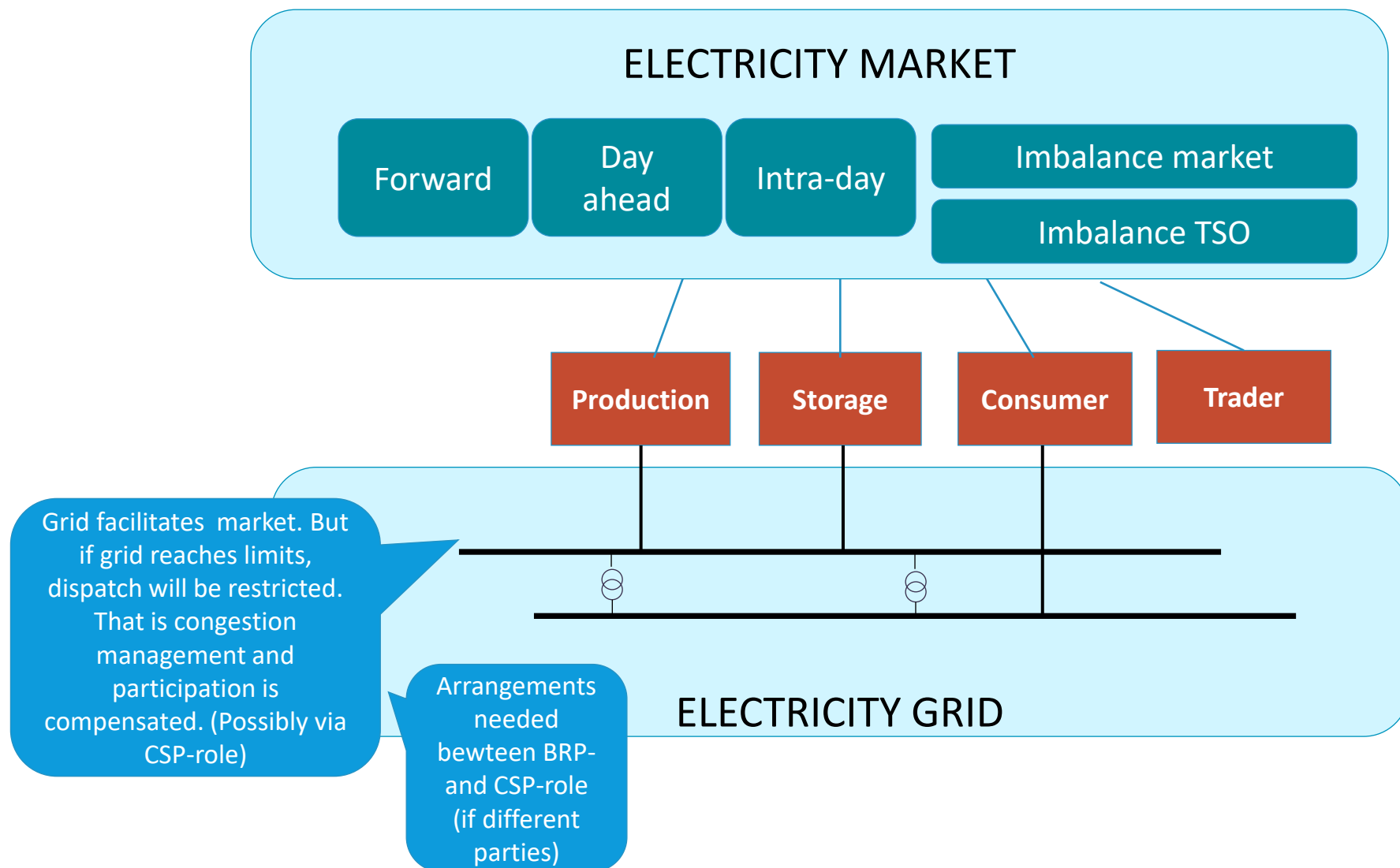
TSOs (balancing MW) and BRPs (balancing MWh) always act together!



The market does not wait!

Flexibility for the market and flexibility for the grid

How does that work?



Summary

- The imbalance price is corner stone of all price formation
- Still no common EU rule on how to set the imbalance price
- But EU rules on principles for balancing are OK
- Although no common EU view on “self balancing” and common understanding of different roles of TSOs and BRPs
- And no clear view on “flexibility” and interaction between flex for market and flex for grid
- Instead of tackling this challenge, EU Commission is complicating things further with concepts like *flexibility targets*, *peak shaving product* and *energy sharing*

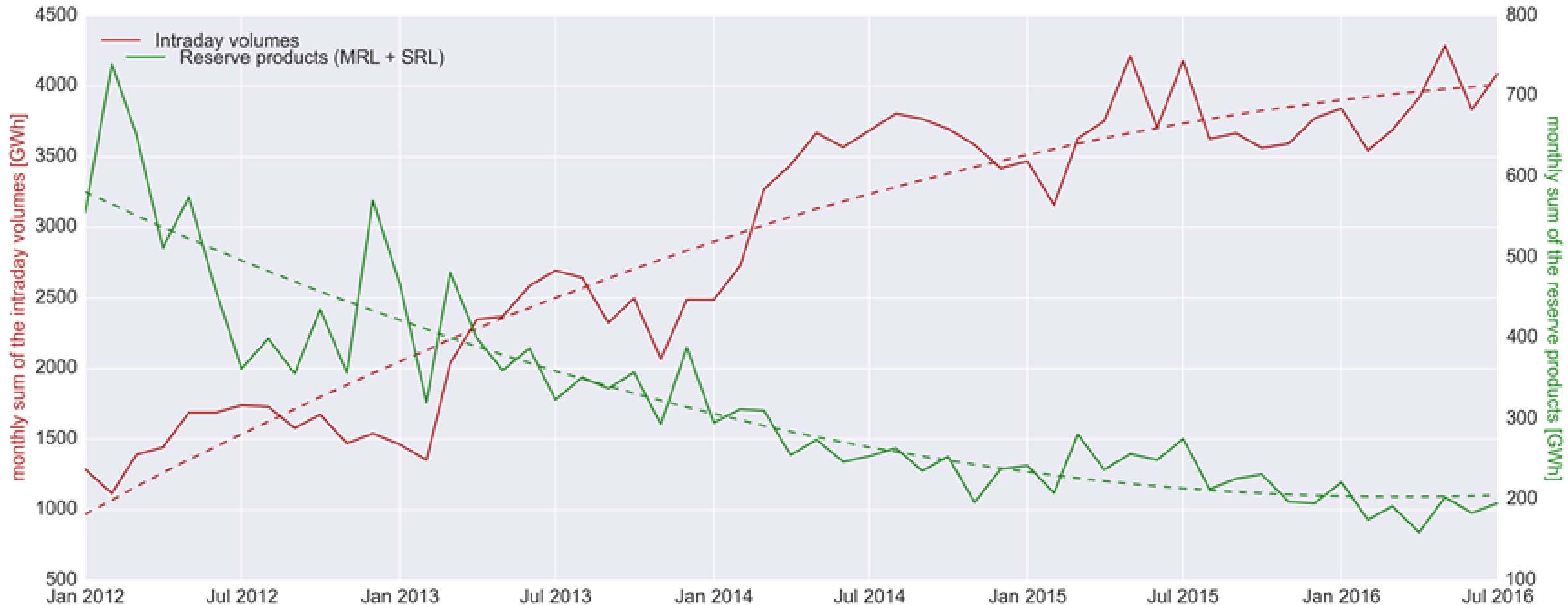
BACK UP SLIDES



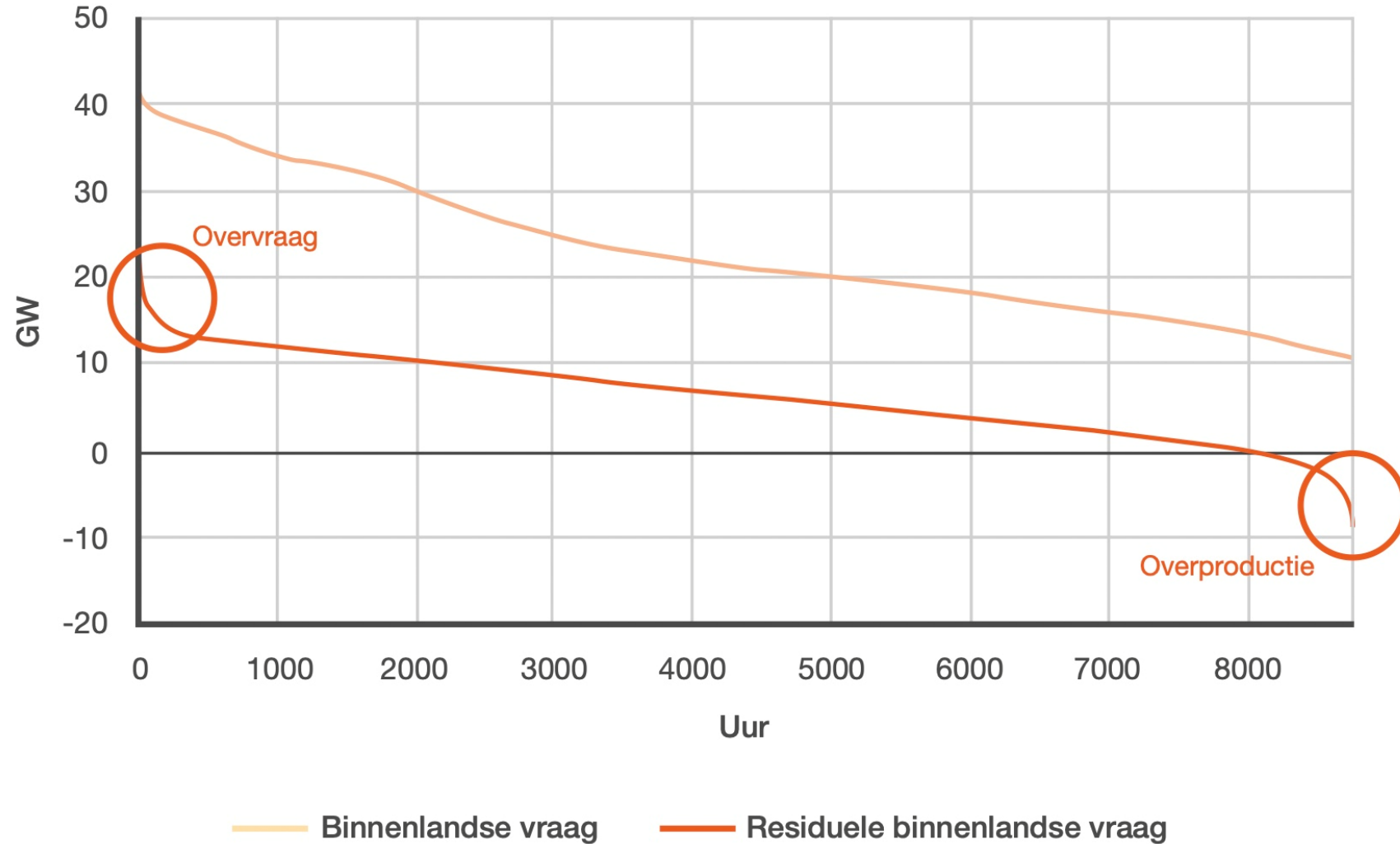
- Correct imbalance pricing is crucial
 - Reflect the value of electricity in real-time
 - Allow for scarcity prices & back-propagation
 - All forward prices reflect expectations of the imbalance price
 - TSOs' interventions may not dampen imbalance price
 - Clarify role/duty of BRPs and of TSOs
 - Tackle the grey zone between normal operation and emergency system operation
- Market must be allowed to optimise their portfolios across all segments of the market
 - Speculation against a wrongly set imbalance price is harmful, ...
 - but taking positions against a correctly set imbalance price is important to let the market balance demand and supply also in real-time.
 - A correct setting of the imbalance price and transparency on the real-time state of the system will avoid instabilities in the interplay of balancing actions by BRPs and TSOs.
- Do not forget the (long term) forward markets
 - Merchant investments in large scale wind/solar benefit from liquid forward market

... I did not talk
about the grid

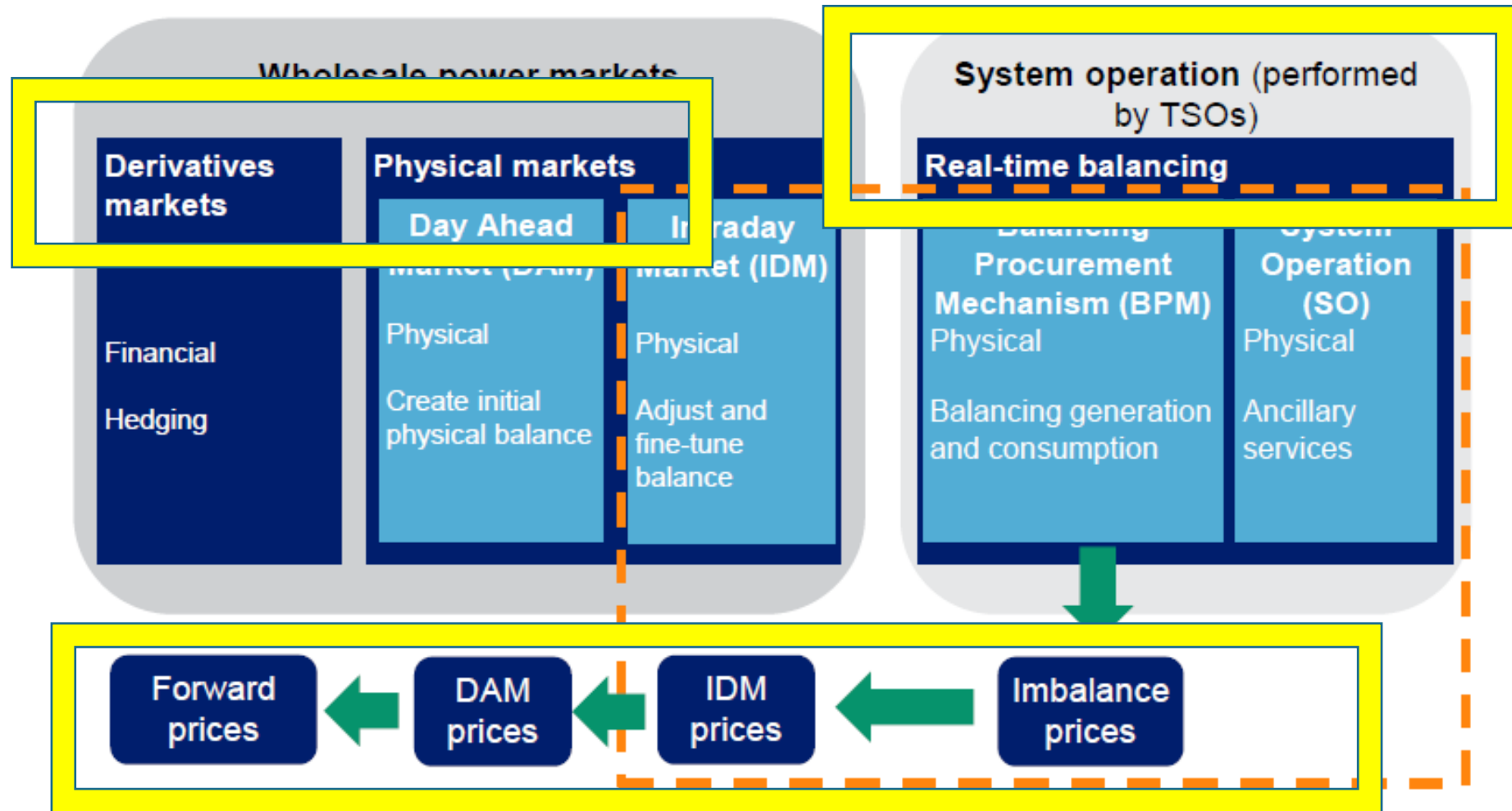
The German paradox



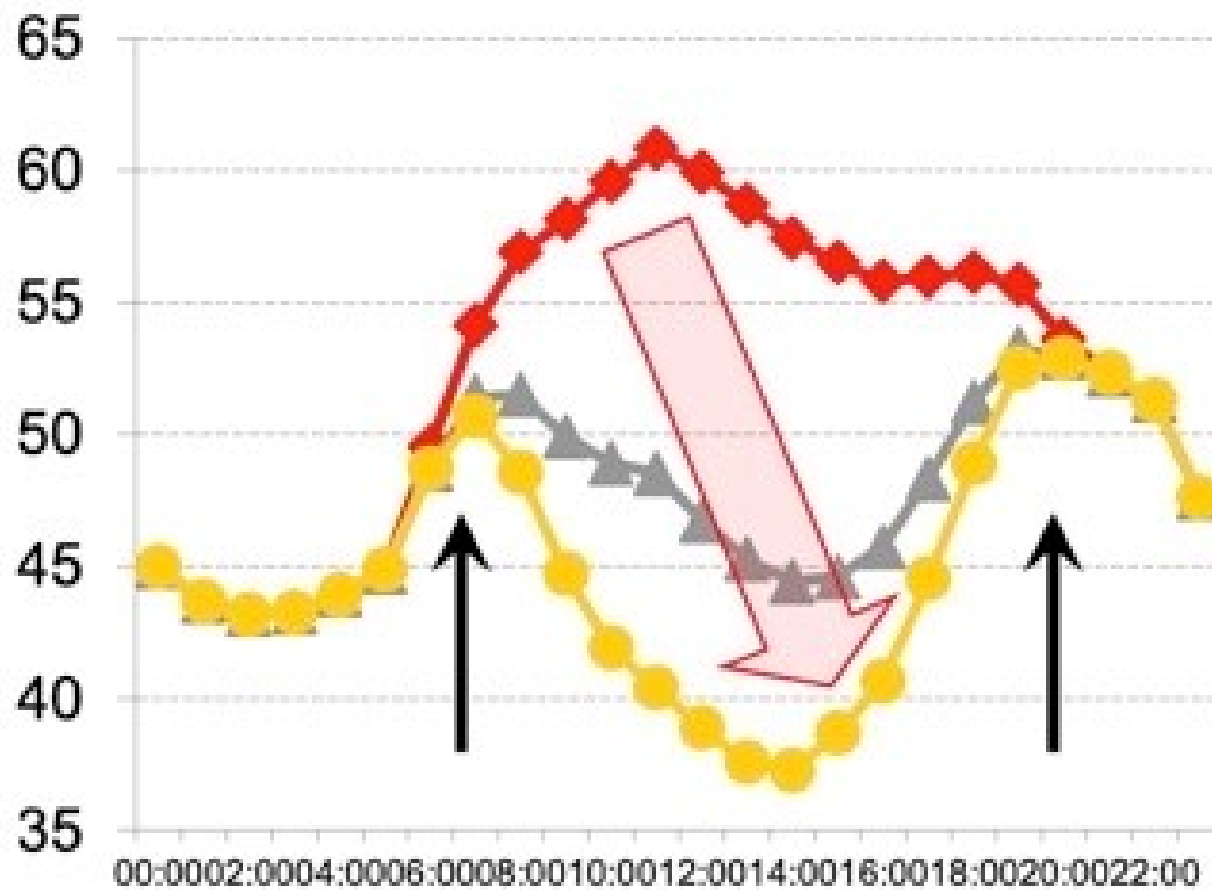
The challenge (2030)



PRICE FORMATION IN THE BALANCING TIME FRAME INFLUENCES PRICES IN OTHER TIME FRAMES



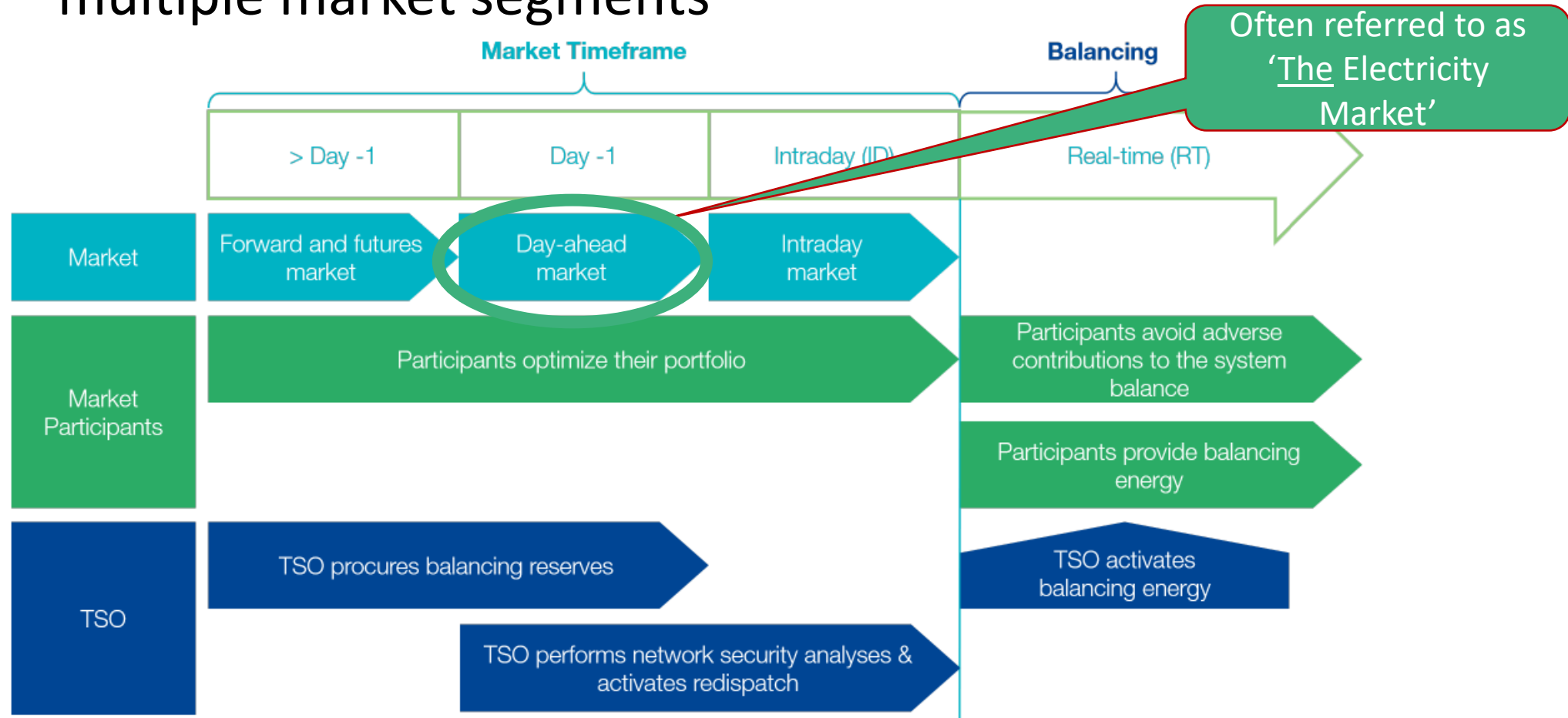
The duck curve



- Juli 10, durchschnittl. Last
- ▲— Last - PV Juli 12 (29 GW Kapaz.)
- Last - PV Juli 16 (52 GW Kapaz.)

Wholesale electricity market

The wholesale market actually consists of multiple market segments



Source: TenneT Annual Market Update