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Electricity Balancing Guideline

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GSM, 4 juli 2019

Last year …

- … you were promised a EU balancing market
- … you were promised a Clean Energy package in addition

- Did it materialize?

What happened since then?

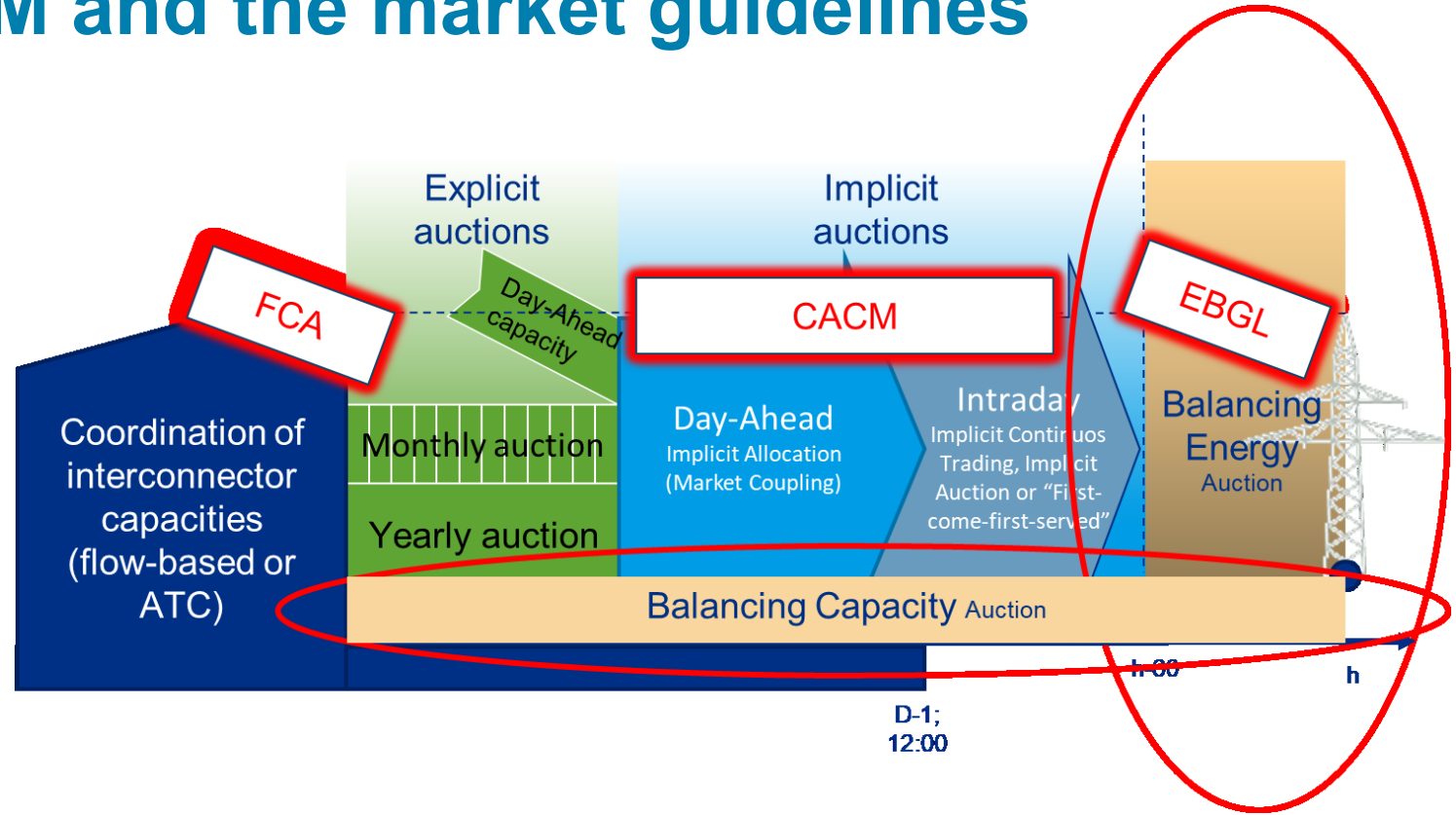
- On EBGL implementation
  - TSOs developed and proposed EU Balancing platform designs until december 2018 when they were submitted to NRAs
  - NRAs had then 6 months to find agreement and approve them (or not)…

- On the Clean Energy Package
  - Negotiations were finalized early 2019
  - Three “elektricity market design” Regulations and the Electricity Directive were published in the official journal on the 14th of June
  - Today – 4th of July – we celebrate the entry into force!

Content today

- On the EBGL implementation
  - Some background
  - What did the TSOs propose on the EU platforms
  - What was the NRA assessment
  - What's more to come in EBGL
- Balancing in the Clean Energy Package
  - Electricity regulation: Review of relevant Provisions around balancing
  - ACER regulation: what will change in the approval process

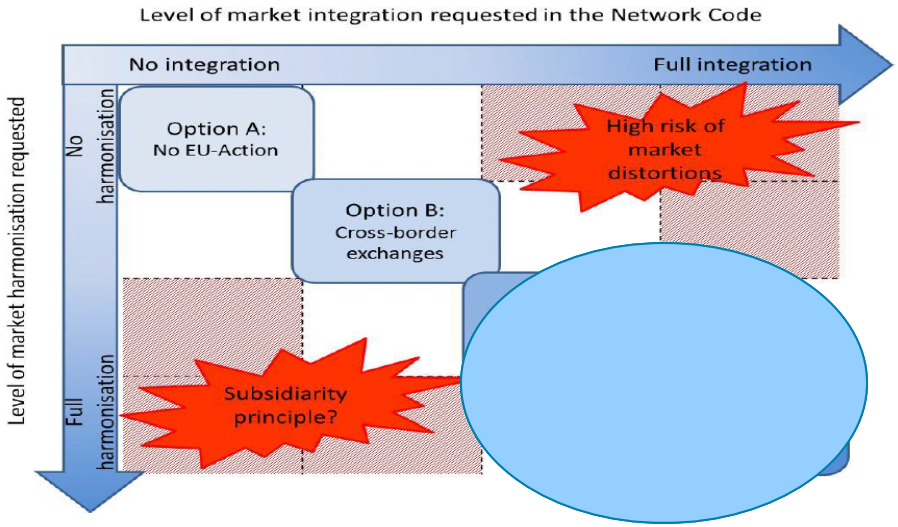
IEM and the market guidelines



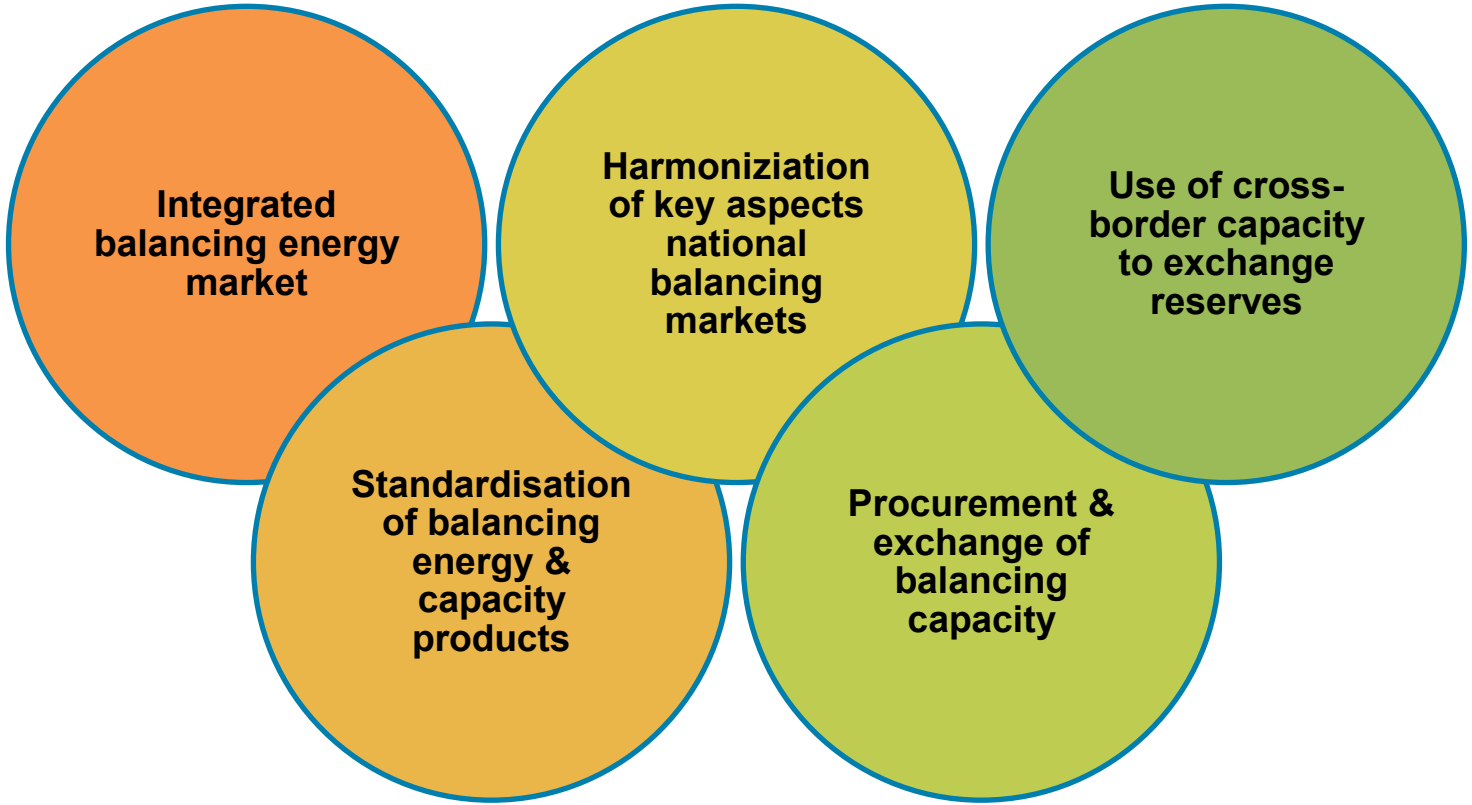
Source: ENTSO-E

What are the objectives of Balancing Market integration?

- Fostering effective competition, non-discrimination and transparency in Balancing Markets;
- Integrating Balancing Markets and promoting the Exchanges of Balancing Services;
- Ensuring Operational Security;
- Facilitating the efficient and consistent functioning of DA, ID and Balancing Market;
- facilitating the participation of Demand Side Response
- facilitating the participation of Renewable Energy Sources



Five main blocks to reach an Integrated Balancing Energy Market



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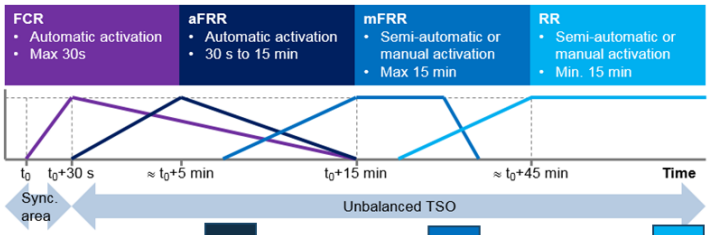
Balancing platforms per process/product

No common platform for FCR foreseen in EB GL



Each process has different specifications

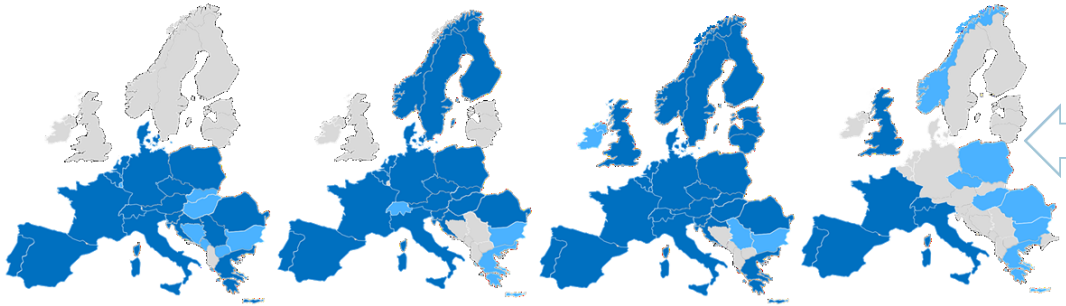
Each process has different timing

Imbalance netting: IGCC

aFRR: PICASSO

mFRR: MARI

RR: TERRE



Each process has different geographical scope

Member Observer

Source: ENTSO-E

Gathering academic views…

- Would like to take the opportunity to get the academic view on some of the most difficult dilemma's encountered in last 1,5 year during the development of the EU platforms…

Dilemma 1:

- Should EB platforms facilitate …

Trade between market participants/BSPs

Procurement by TSOs from market participants/BSPs

Dilemma 2:

- Should balancing energy price be set ....

per ISP/15 min = bidding period

per seconds – minutes = optimisation period

Dilemma 3:

- Should dimensioning rules force TSOs …

to keep bids unavailable for other TSOs and ensure local SoS

To allow wider access and to let the market ensure availability also between TSOs

Dilemma 3:

- Should imbalance pricing provide…

Cost recovery for TSOs for Balancing Energy costs

Provide incentives for Market participants to be balanced

Summary of NRA assessments

mFRR IF	•**Non-agreement between NRAs and Referral to ACER** •NRAs have diverging views on the allowance of scheduled counteractivations via the platform
aFRR IF	•**Non-agreement between NRAs and Referral to ACER** •NRAs have diverging views on whether the proposal proposes a TSO-TSO model with a Common Merit Order
Pricing	•**Non-agreement between NRAs and Referral to ACER** •NRAs have diverging views on the duration of BEPP on aFRR and mFRR cannot agree on approval
APP	•**Agreement between NRAs on a Request for Amendment to all TSOs** •RFA agreed to generalize scope to Balancing Energy bids and include additional layer when possible
SP	•**Agreement between NRAs on a Request for Amendment to all TSOs** •RFA agreed to more generalize the settlement proposal for balancing energy & system constraint
ISHP	•**Agreement between NRAs on a Request for Amendment to all TSOs** •RFA was agreed on main points on Value of Avoided activation & Dual pricing conditions
IN IF	•**Agreement between NRAs on a 2nd Request for Amendment to all TSOs** •**Request to change proposed entity based on legal assessment**

aFRR IF	July ERF referral to ACER		6 months	Jan – ACER decision
mFRR IF	July ERF referral to ACER		6 months	Jan – ACER decision
Pricing	July ERF referral to ACER		6 months	Jan– ACER decision
ISHP	Send RFA to all TSOs	11 Aug NRA deadline	11 Oct TSO resubmit	Dec - NRAs or ACER to decide
APP	Send RFA to all TSOs	11 Aug NRA deadline	11 Oct TSO resubmit	Dec - NRAs or ACER to decide
SP	Send RFA to all TSOs	11 Aug NRA deadline	11 Oct TSO resubmit	Dec - NRAs or ACER to decide
IN IF	Endorse 2nd RFA	19 July NRA deadline	19 Sept TSO new IN IF	Nov - NRAs or ACER to decide

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Balancing in the Clean Energy Package

Balancing

Balance responsibility

All market participants to be balance responsible or to delegate balance responsibility (exceptions for demonstration projects, RES-E below 400★ kW – reducing to 200★ kW for plant commissioned from 2026 – and for existing recipients of feed-in tariff)

Balancing capacity

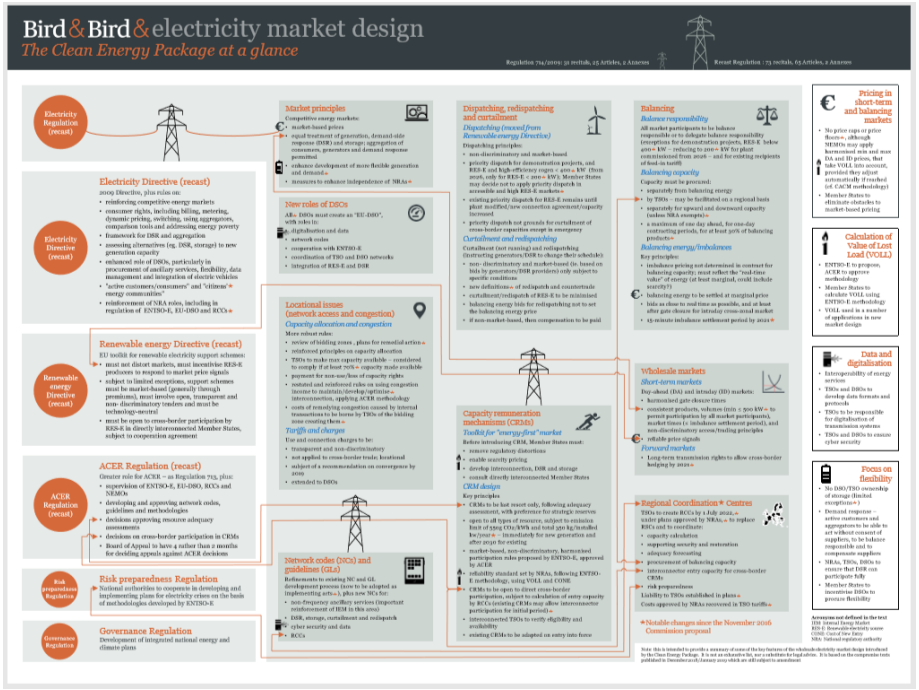
Capacity must be procured:

- separately from balancing energy
- by TSOs – may be facilitated on a regional basis
- separately for upward and downward capacity (unless NRA exempts)★
- a maximum of one day ahead, for one-day contracting periods, for at least 30% of balancing products★

Balancing energy/imbalances

Key principles:

- imbalance pricing not determined in contract for balancing capacity; must reflect the "real-time value" of energy (at least marginal, could include scarcity?)
- balancing energy to be settled at marginal price
- bids as close to real time as possible, and at least after gate closure for intraday cross-zonal market
- 15-minute imbalance settlement period by 2021★



Conclusions

- Implementation of EBGL is a huge EU challenge
  - Not only IT/platform level but also on market design
- National terms & conditions balancing lay basis for the development of this market
- Role of ACER will increase in setting the EU design
  - Important that stakeholders & academia get involved in the discussion

- And… important also to trust the market with Balancing as long as everybody receives the same information

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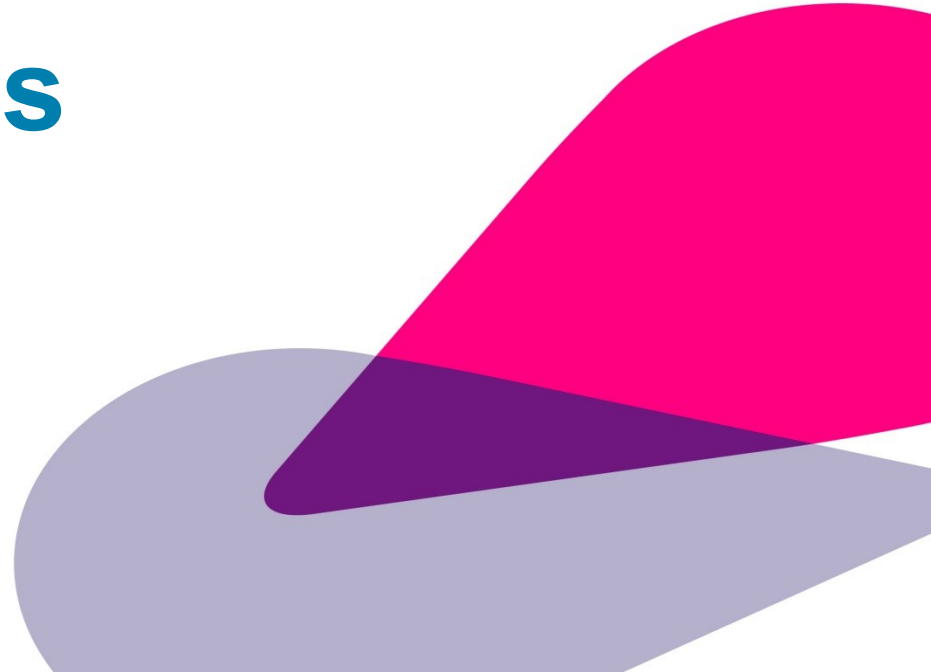
Backup slides



Design principles of the NL Balancing market

Designed to include:

- Imbalance on average less attractive than wholesale market
  - Incentive to self manage Imbalance
  - Reduced Balancing Energy Volumes
- Balancing Energy on average more attractive than wholesale market:
  - Incentive to participate in Balancing Energy Market
- Open Market Balancing Energy
  - Enhanced competition inside Balancing Energy Market

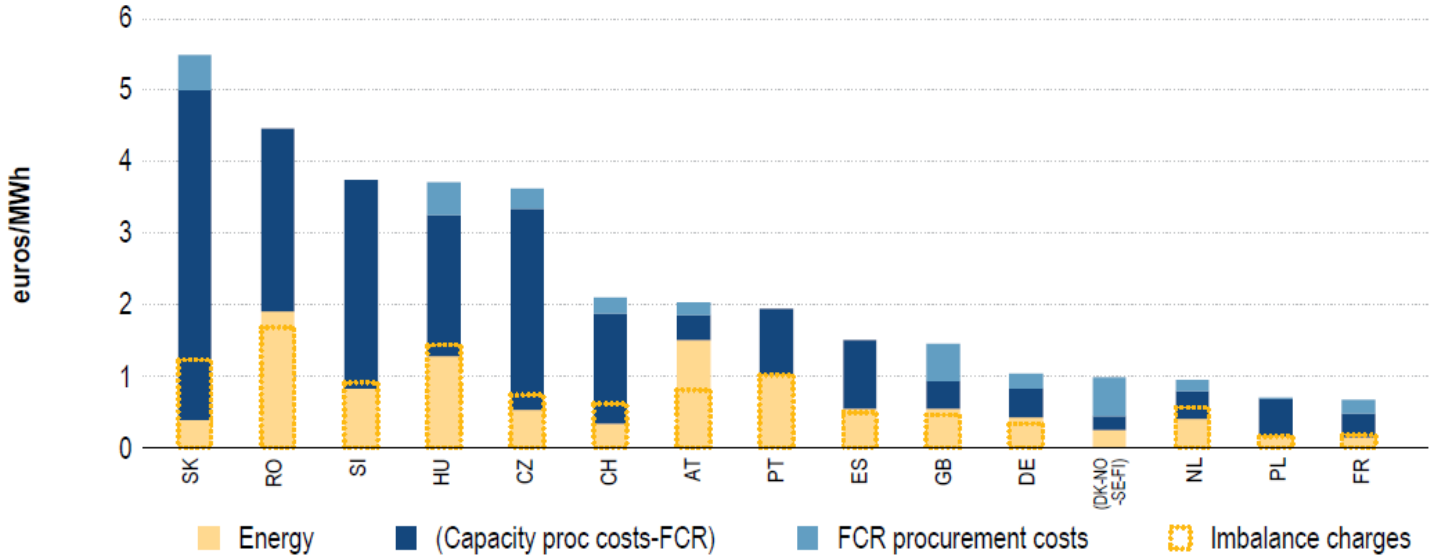
Designed to avoid:

- That balancing energy gain larger than Imbalance loss
  - And no incentive to deliver requested Balancing Energy
- Imbalance never attractive (always 2-price Imbalance)
  - and thus never an incentive to support system outside Balancing Energy Market
  - And reduced competition from outside Balancing Energy Market

Source: Imbalance Pricing System (TenneT)
https://www.tennet.eu/fileadmin/user_upload/SO_NL/ALG_imbalance_pricing_system.doc.pdf

Balancing markets overall costs

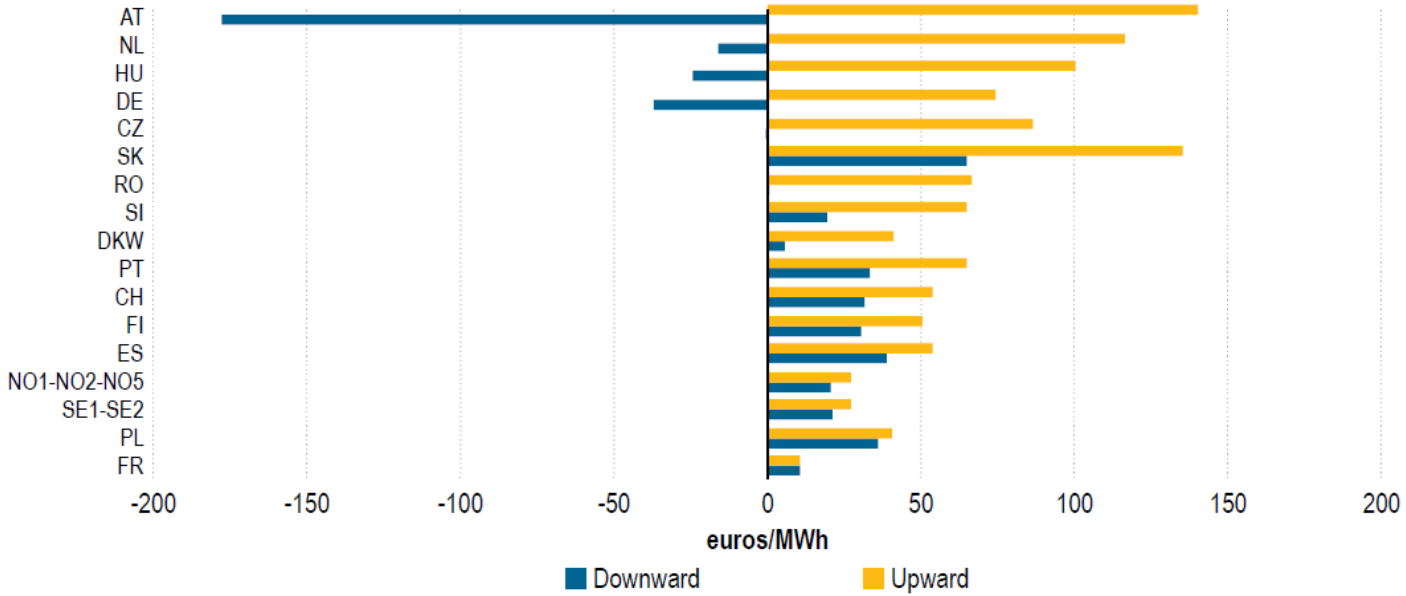
Figure 30: Overall costs of balancing (capacity and energy) and imbalance prices over national electricity demand in a selection of European markets – 2015 (euros/MWh)



Source: Data provided by NRAs through the EW template (2016) and ACER calculations.

…balancing energy price is among the highest…

Figure 53: Weighted average prices of balancing energy activated from aFRR (upward and downward activation) in a selection of EU markets – 2015 (euros/MWh)



Source: Data provided by NRAs through the EW template (2016).

… because it achieves an efficient cost level through incentives

Figure 31: DA price duration curve during periods of negative system imbalance, ID and imbalance prices (charged to 'short' BRPs) in Great Britain – 2015 (euros/MWh)

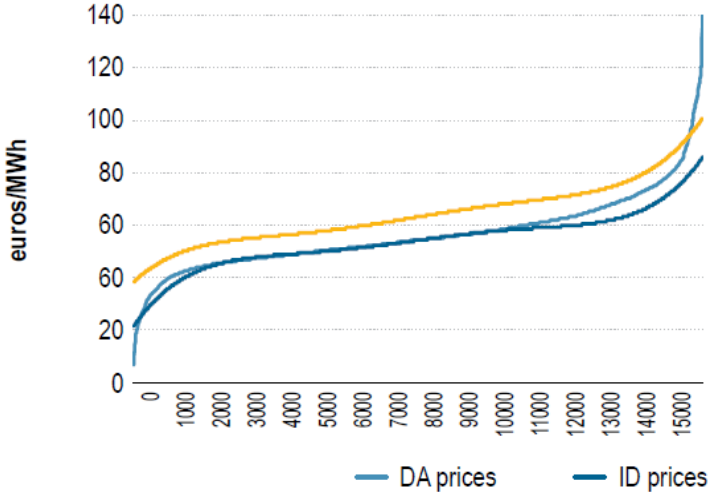
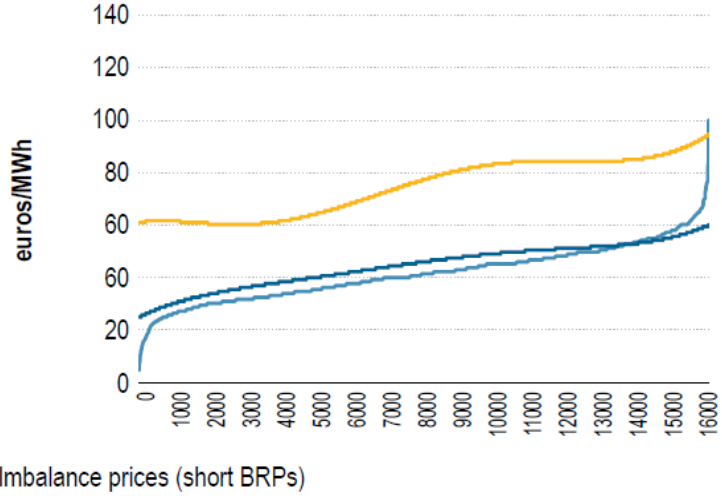


Figure 32: DA price duration curve during periods of negative system imbalance, ID and imbalance prices (charged to 'short' BRPs) in the Netherlands – 2015 (euros/MWh)



Source: NRAs, EMOS, Platts (2016) and ACER calculations.