

Balancing Network Code development

Objectives, process and challenges

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Start-up kit on Balancing Network Code

Objectives and process



Disclaimer



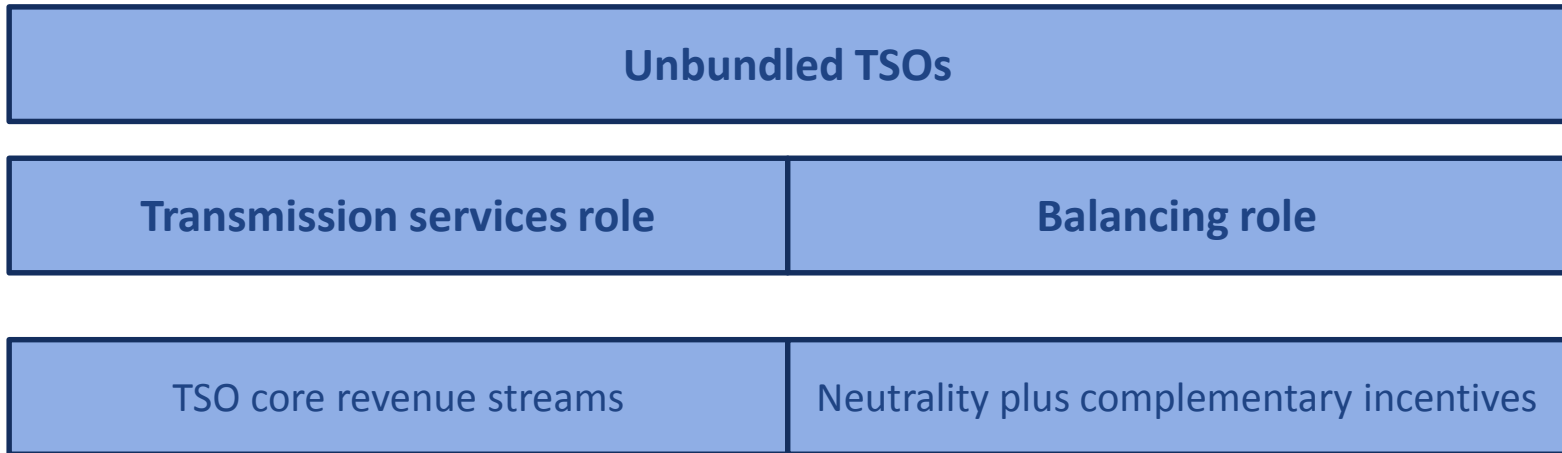
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Context and TSO role development

- **Third Energy Package**

- Breaks up incumbents and enables market facilitation
- Separates balancing and transmission services roles and charging



... TSOs performing a fundamental role of enabling the development of the market without the inherent portfolio hedging abilities of incumbents
... TSOs support market promotion but should not pay for market promotion



Why the Balancing Network Code?

Problems identified in ACER Framework Guidelines

gas markets fragmented, with several balancing zones across EU and different balancing arrangements applying in neighbouring markets

entrenches market power of incumbents and increases the barriers to new entry

TSOs holds flexible gas, which could otherwise be traded in the wholesale market

Remedies provided in ACER Framework Guidelines

market based gas balancing regime

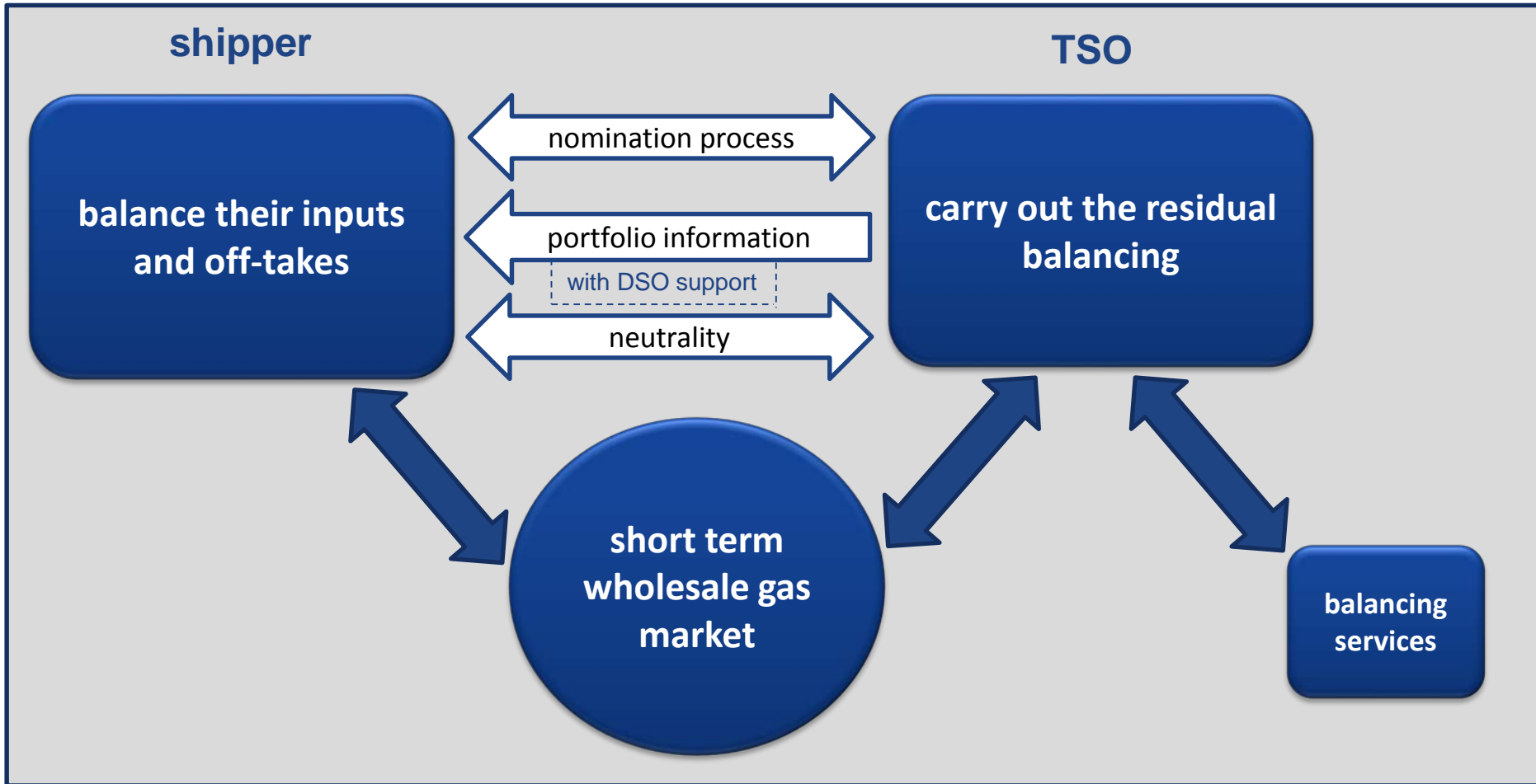
enables network users to trade gas efficiently

access to information

... approach is to promote short term wholesale gas market



Delivering the “Balancing Target Model”



...but the Balancing Network Code is only one of the necessary conditions

What else is required?	By whom?
Customer databases to support the balancing	DSOs
Load profiles/algorithms	DSOs/agents/TSOs
Access to short term flexible gas	Market players
Trading and balancing platforms	Platform operators & TSOs
Transition and interim measure implementation	TSOs and all market players

..NRAs, in particular, have a critical role to deliver sufficient conditions to enable a properly functioning short term wholesale market



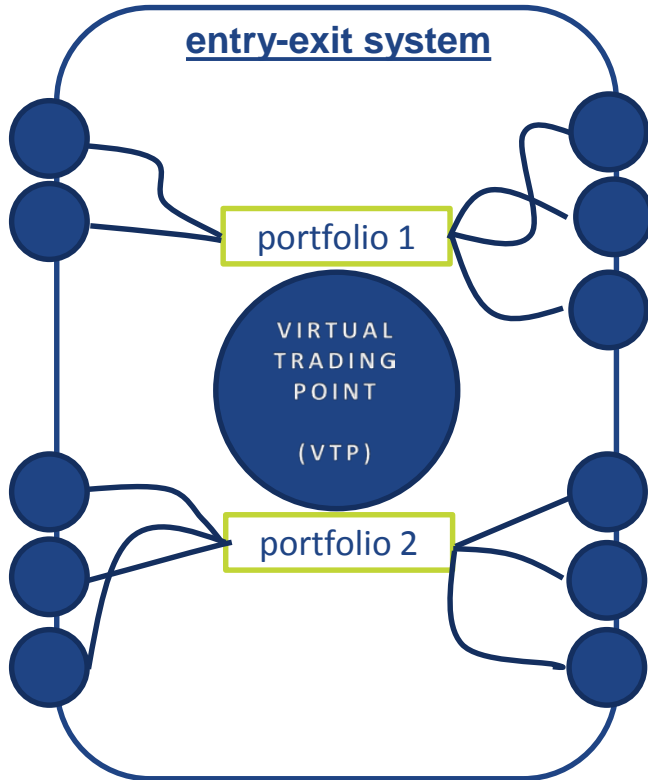
Chapter II

Balancing System

Articles 4 to 5



Balancing System



- A **trade** between two parties is a **transfer** of title to gas from the account of the seller to the account of the buyer
 - this transfer is registered by the TSO to each shipper's account
 - this transfer takes place on a notional point in the "centre" of the system – a VTP
- The Balancing Network Code describes the underlying features of trading at the VTP – **trade notification process**



Chapter III

Operational Balancing

Articles 6 to 11



Operational Balancing



TSO's undertaking balancing actions

aims at

- to maintain the transmission network within its operational limits
- to achieve an end of day linepack position different from the one anticipated, consistent with economic and efficient operation of the transmission network

is performed through

- the buying and selling of short term standardised products
- the use of balancing services

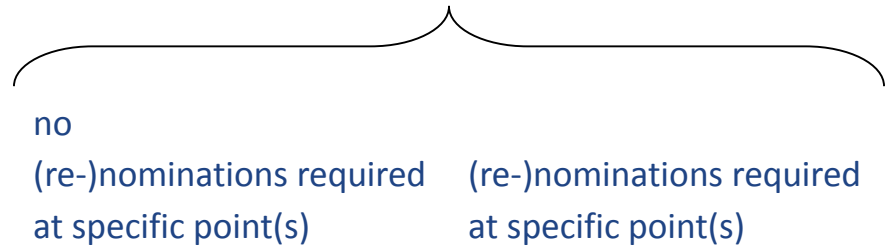


Operational Balancing

Short term standardised products

- are to be traded at VTP
- TSO may not establish all the products

Locational aspects



Temporal aspects

during the gas day (up to its end)

during a specific time period within the gas day

title product	locational product
temporal product	temporal locational product



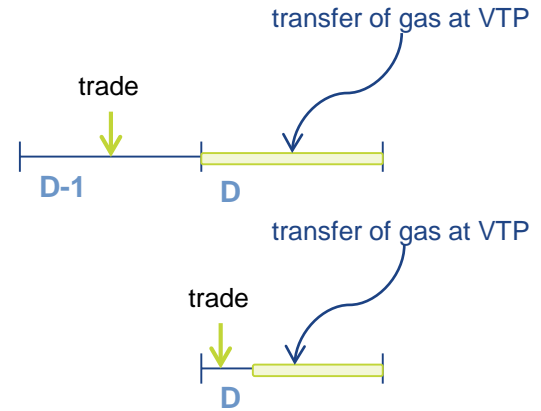
Operational Balancing



•Title product trade:

transfer of a title to gas at VTP

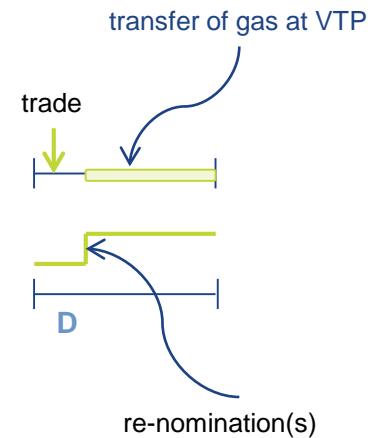
- applied to portfolio from the beginning of gas day D – if the trade is made on gas day D-1; or
- applied to portfolio from the time of the confirmation of the trade – if the trade is made during gas day D



•Locational product trade:

•transfer of a title to gas at VTP

- = title product; and
- the originating trading participant to make (re-)nomination(s) at specified point(s)



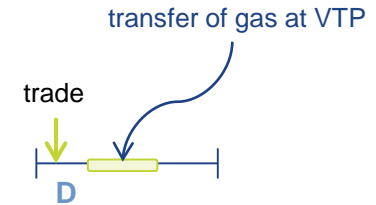


Operational Balancing

•Temporal product trade:

transfer of a title to gas at VTP

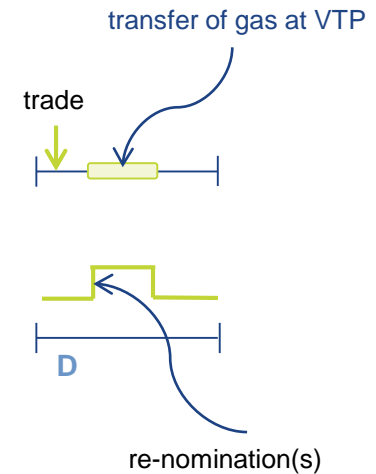
- applied to portfolio during a certain time period within gas day D



•Temporal locational product trade:

transfer of a title to gas at VTP

- = locational product; and
- (re-)nomination(s) to be made for a certain time period within gas day D



Operational Balancing

Balancing service

➤ **Definition:**

- a service provided to a TSO via a contract for flexible gas which is not a short term standardised product

➤ **Situations for procurement:** if short term standardised products

- do not provide the response necessary to keep the transmission network within its operational limits; or
- are not liquid

➤ **Way of procurement:**

- in a market based manner
- through a transparent and non-discriminatory procedure

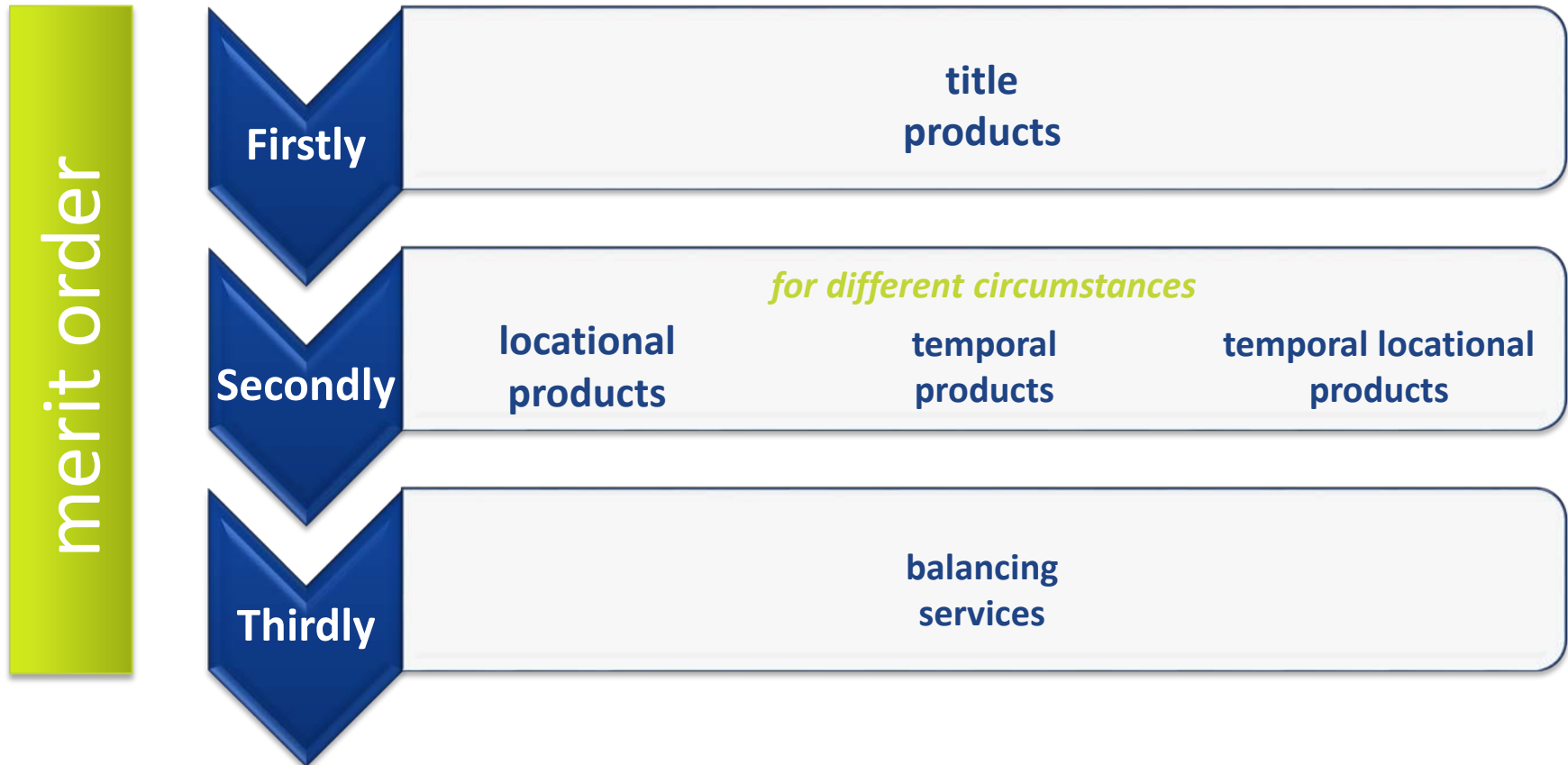
➤ **Annually TSO shall:**

- review the use of balancing services
- publish information on procured balancing service and incurred related costs



Operational Balancing

To decide on which balancing action to undertake, the TSO is **to follow the merit order**:

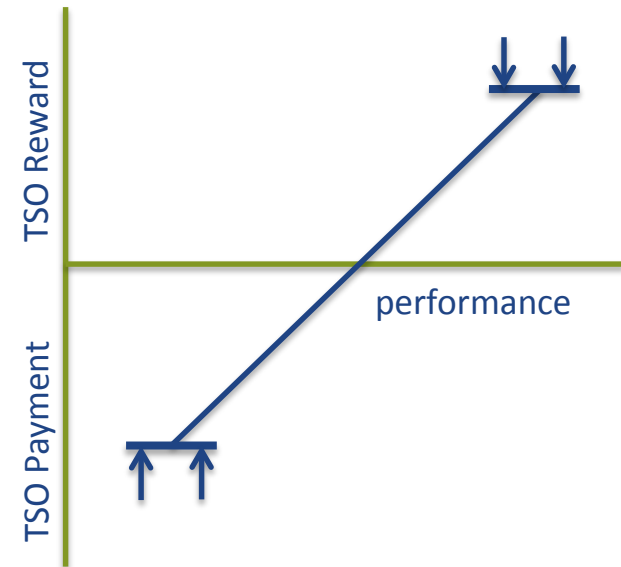


Operational Balancing Incentives

Key features of incentive mechanisms

- are related to TSO performance:
 - reward for outperformance and penalty for underperformance, with caps applying
- take into account TSO means to control performance
- their application reflects the responsibilities
- are adapted to the current state of market
- are subject to regular review

Simple illustration of an incentive model





Chapter IV Nominations

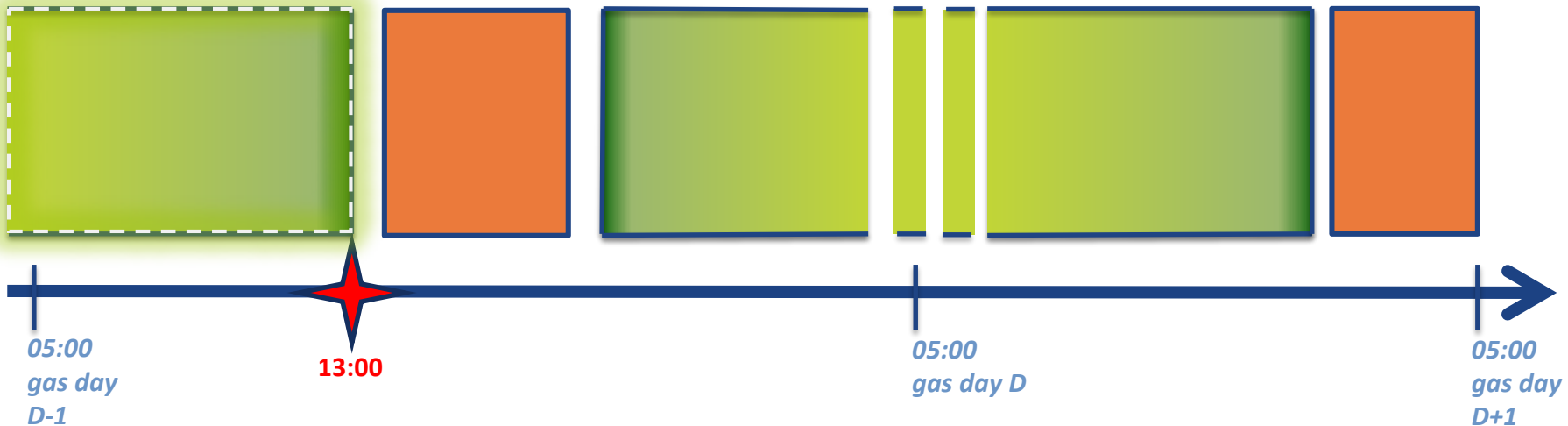
Articles 12 to 18



Nominations at IPs

- The Balancing Network Code standardises the nomination procedure at IPs

Shippers submit nominations to TSO no later than the **nomination deadline**: 13:00 UTC (12:00 UTC when daylight saving time is applied)

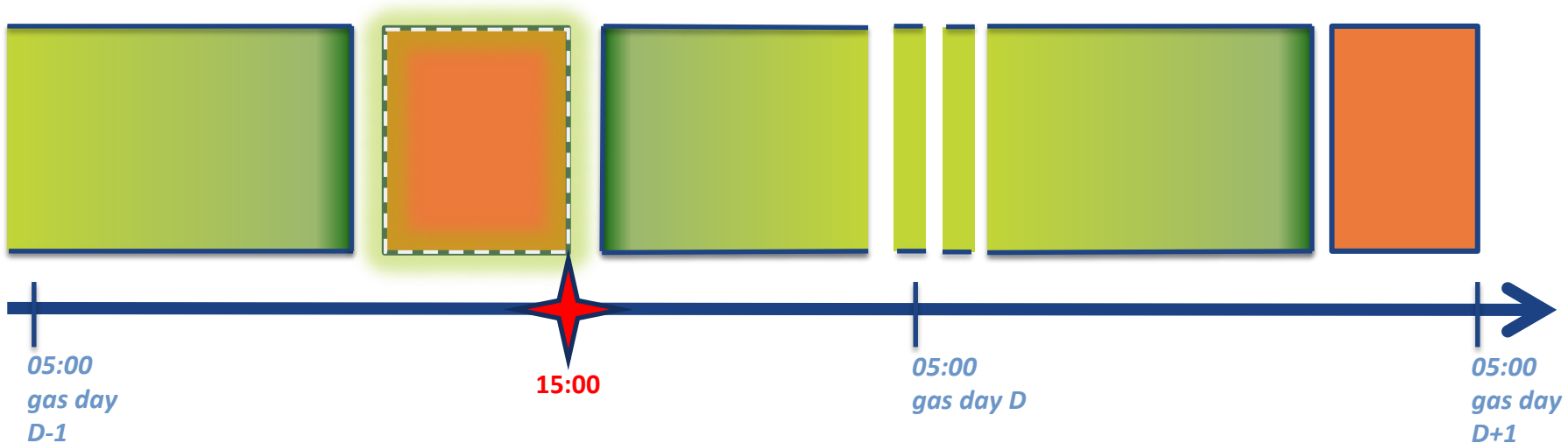




Nominations at IPs



TSO sends the confirmation notice to shippers no later than the **confirmation deadline**:
15:00 UTC (14:00 UTC when daylight saving time is applied)

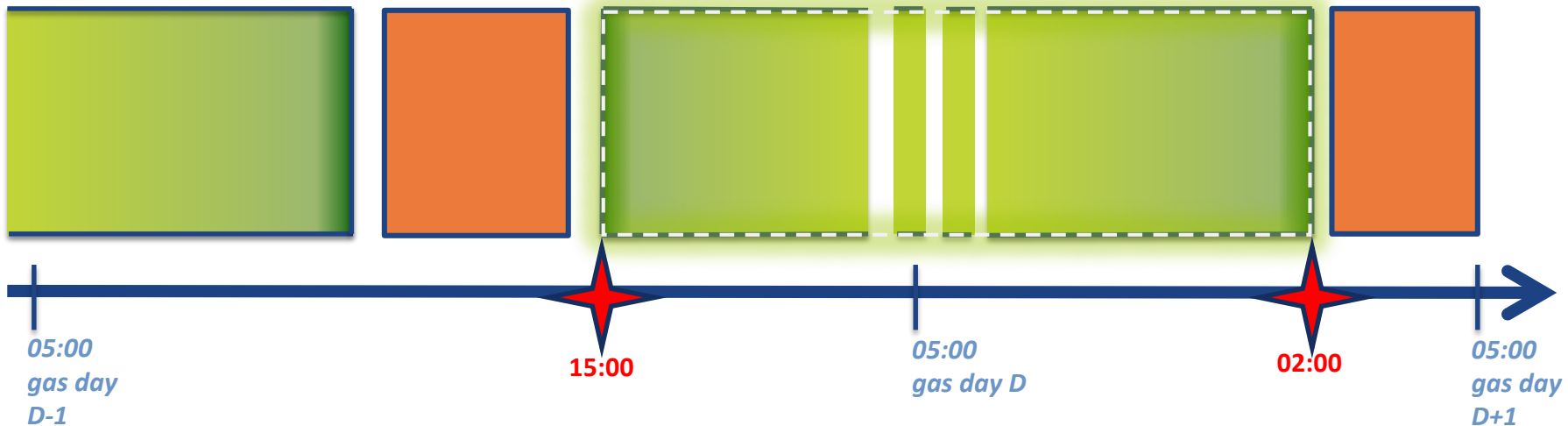




Re-nominations at IPs

- The Balancing Network Code standardises the re-nomination procedure at IPs

Shippers submit re-nominations to TSO within the **re-nomination period**: starts immediately after the confirmation deadline, ends no later than 3 hours before the end of gas day D





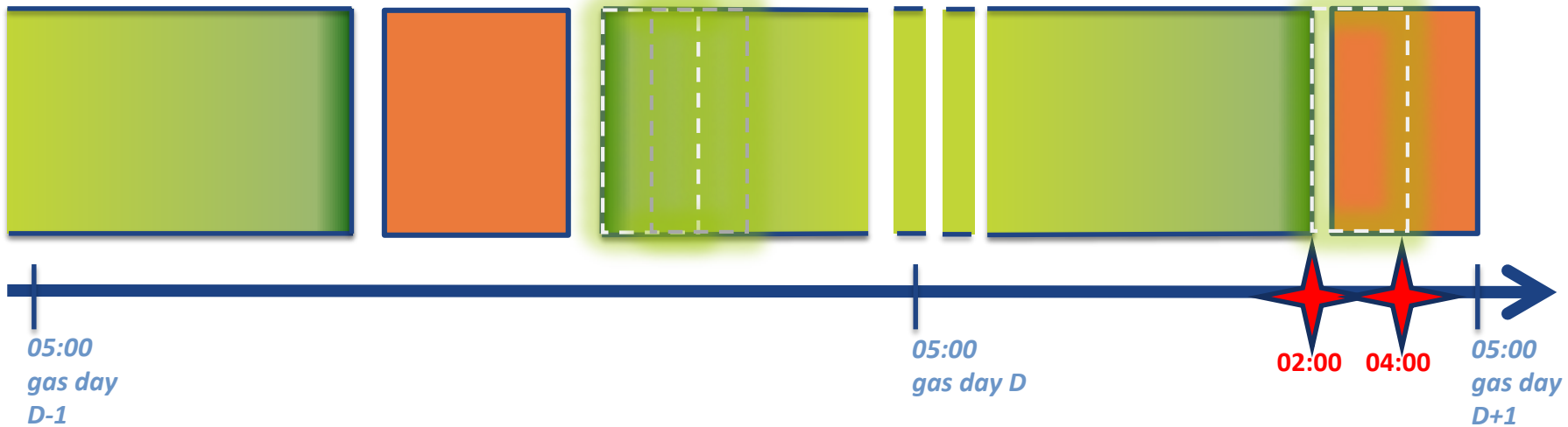
Re-nominations at IPs

TSO starts the **re-nomination cycle** every hour within the renomination period

TSO sends the confirmation notice to shippers within 2 hours
Effective gas flow change starts 2 hours

} from the start of each re-nomination cycle

*(e.g. for the last re-nomination cycle starting at 02:00 UTC:
the confirmation notice is to be sent between 02:00 UTC and 04:00 UTC and the effective gas flow change starts at 04:00 UTC)*





Chapter V

Daily Imbalance Charges

Articles 19 to 23

Daily Imbalance Charges

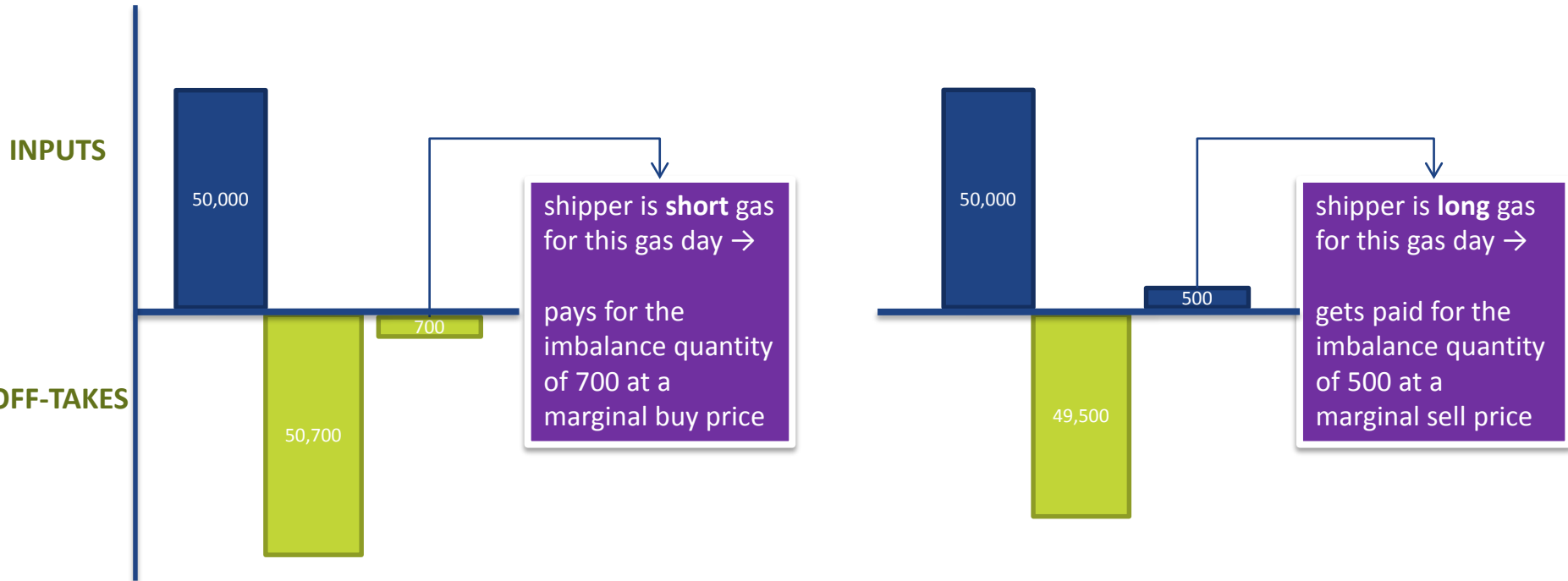
- **Mechanism** is a daily imbalance charge calculation methodology:
 - process: TSO proposal → NRA approval → publication on a relevant website
 - parameters: daily imbalance quantity, applicable price, other parameters
 - calculation of charges as follows: daily imbalance quantity * applicable price

- **Daily imbalance quantity:**
 - is calculated by TSO for each shipper for each gas day according to the formula:
 - daily imbalance quantity = inputs – off-takes
 - daily imbalance quantity $\neq 0$ → daily imbalance charge is applied

- **Applicable price:**
 - inputs < off-takes → shipper is short → marginal buy price is applicable
 - inputs > off-takes → shipper is long → marginal sell price is applicable



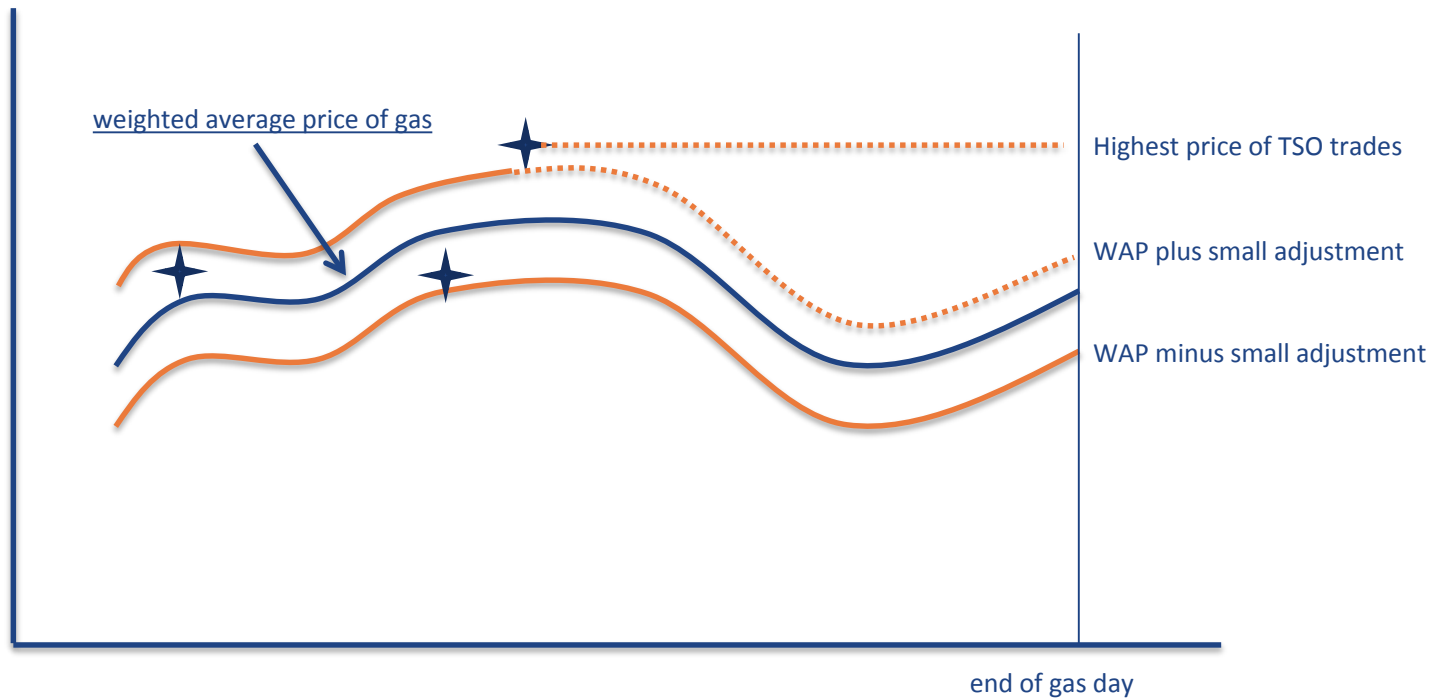
Daily Imbalance Charges





Daily Imbalance Charges

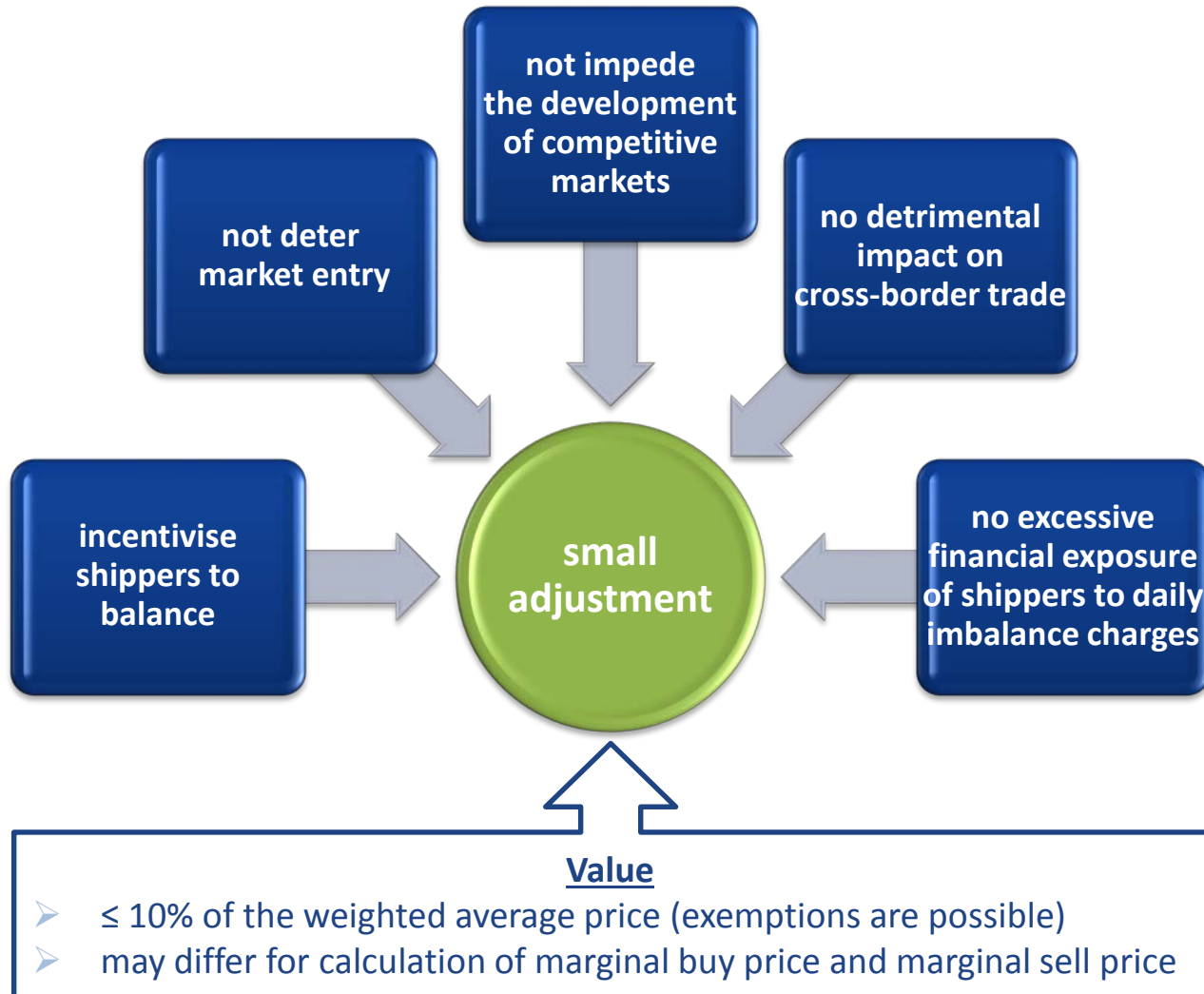
Simple illustration of marginal buy price and marginal sell price derivation



★ price of TSO trades



Daily Imbalance Charges





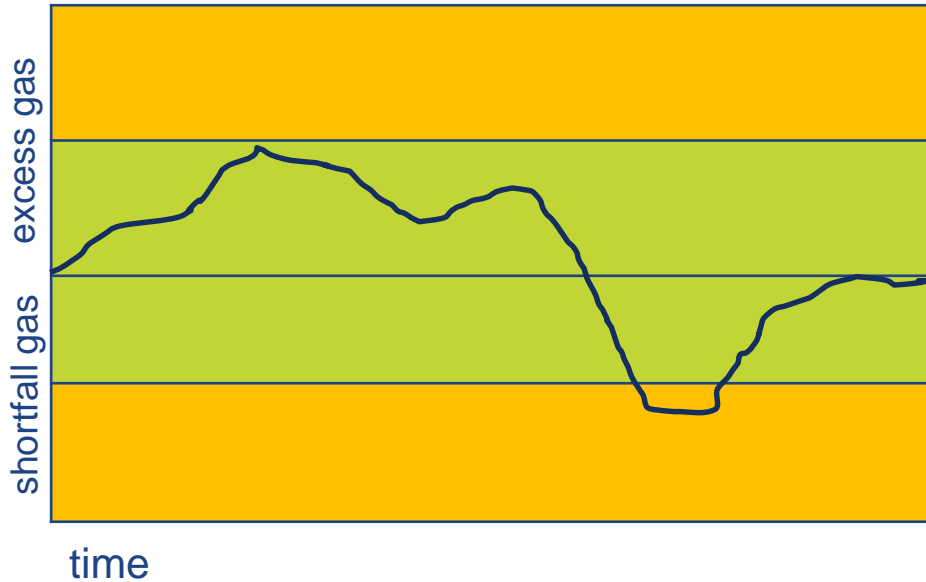
Chapter VI

Within Day Obligations

Articles 24 to 28



Within Day Obligations



Within day obligation

Represents:

- a set of rules imposed by a TSO on its shippers with regard to their inputs and off-takes within the gas day

Can be applied to:

- system position
 - to keep it within its limits
- a shipper's position
 - to keep it within the range
- specific entry-exit points
 - to limit the flow/its variation

Within day charge

Results from a within day obligation as:

- a charge levied by a TSO on its shipper; or
- a payment made by a TSO to its shipper.



Within Day Obligations



assessment criteria

Not pose undue barrier to cross border trade and new shippers' entry



Shippers are provided with adequate information and have reasonable means to manage exposure



Main costs for shippers for balancing relate to end of day position



Within day charges reflect to the extent possible costs of the TSO for taking balancing actions



Shippers are not financially settled to a position of zero during the gas day



The benefits of the WDO outweigh the negatives in terms of economic and efficient operation of the network



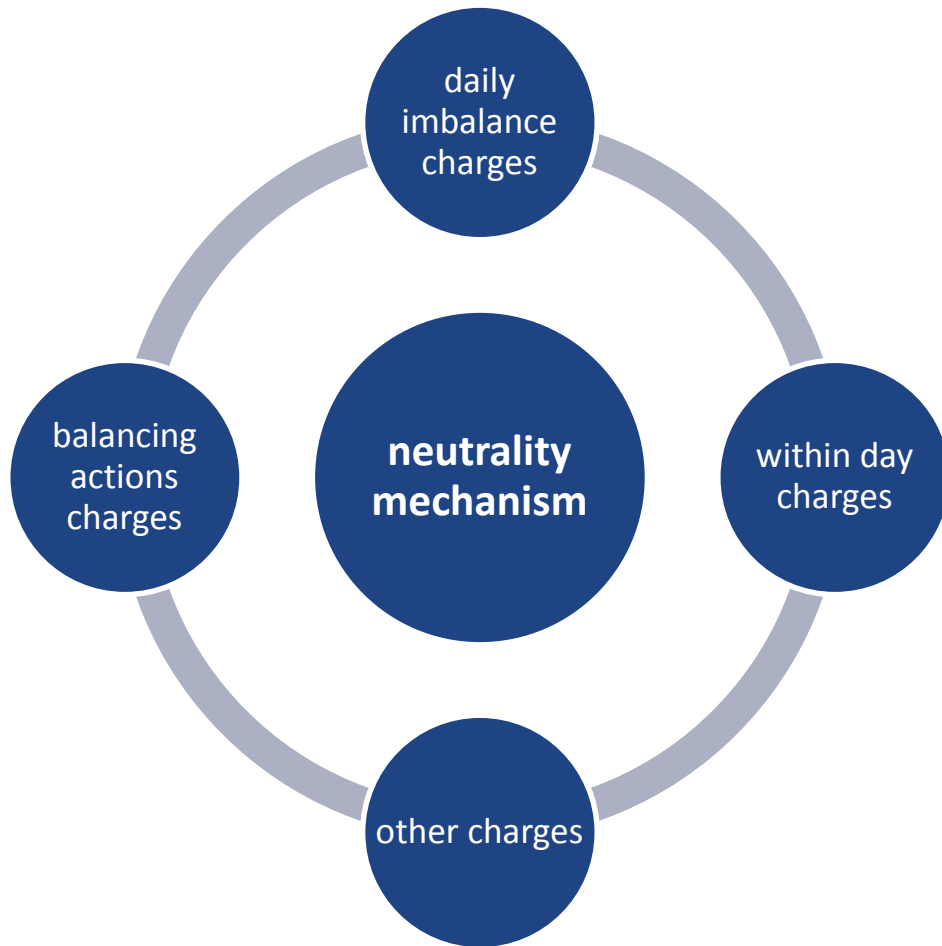


Chapter VII

Neutrality Arrangements

Articles 29 to 31

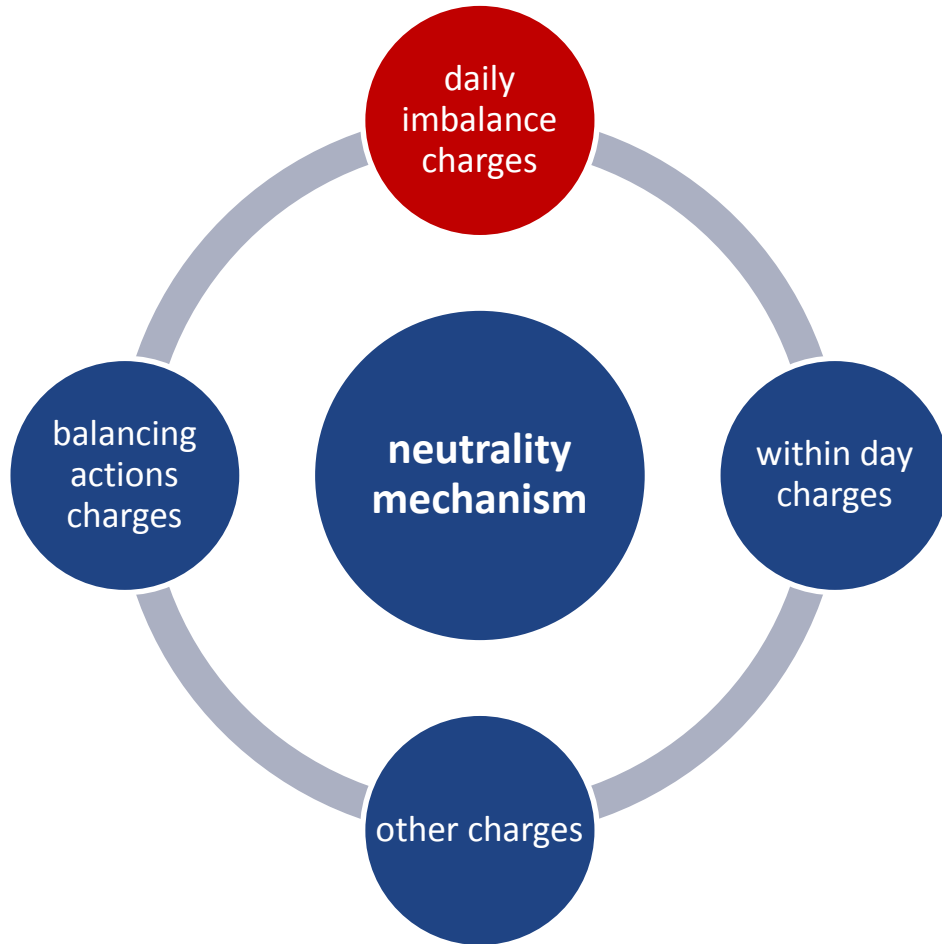
Financial Elements of Balancing Activities



- The Balancing Network Code establishes four main financial streams
- The TSO does not gain or lose from the balancing activities
- Balancing neutrality charges will be paid by or to the shippers concerned



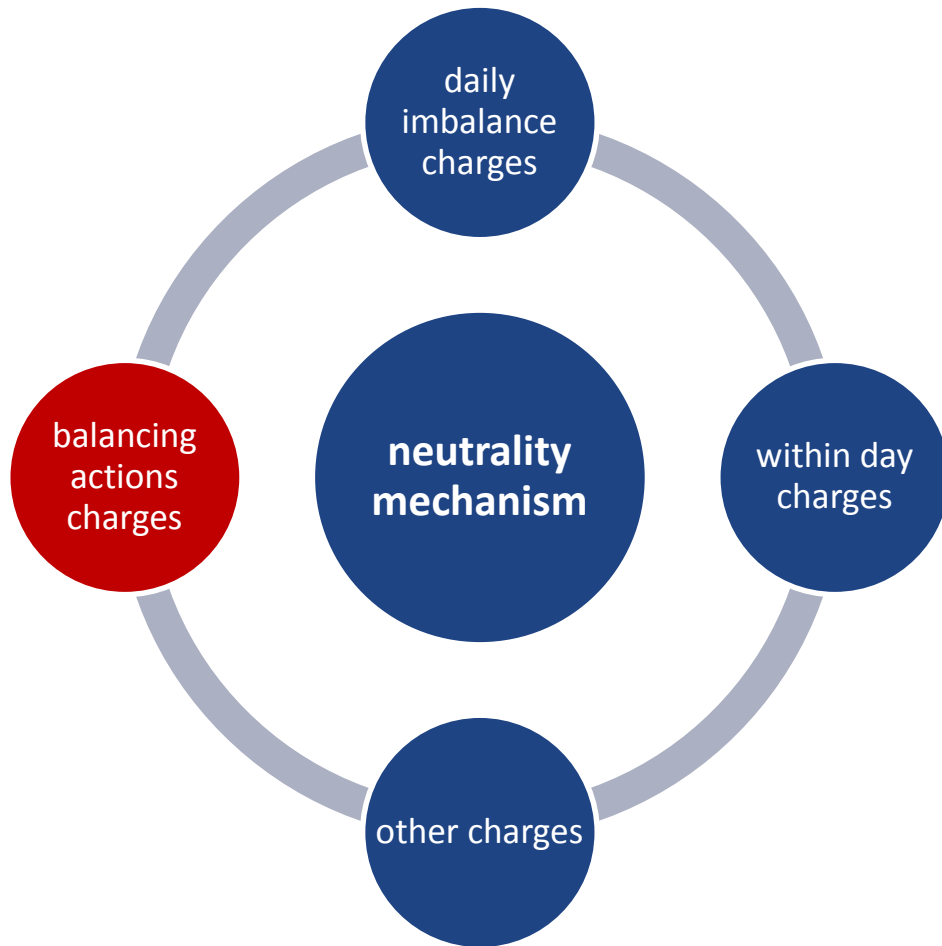
Financial Elements of Balancing Activities



- Each shipper is bound to pay or entitled to received for its daily imbalance quantity
- This pot may be net income or outgoing for TSO



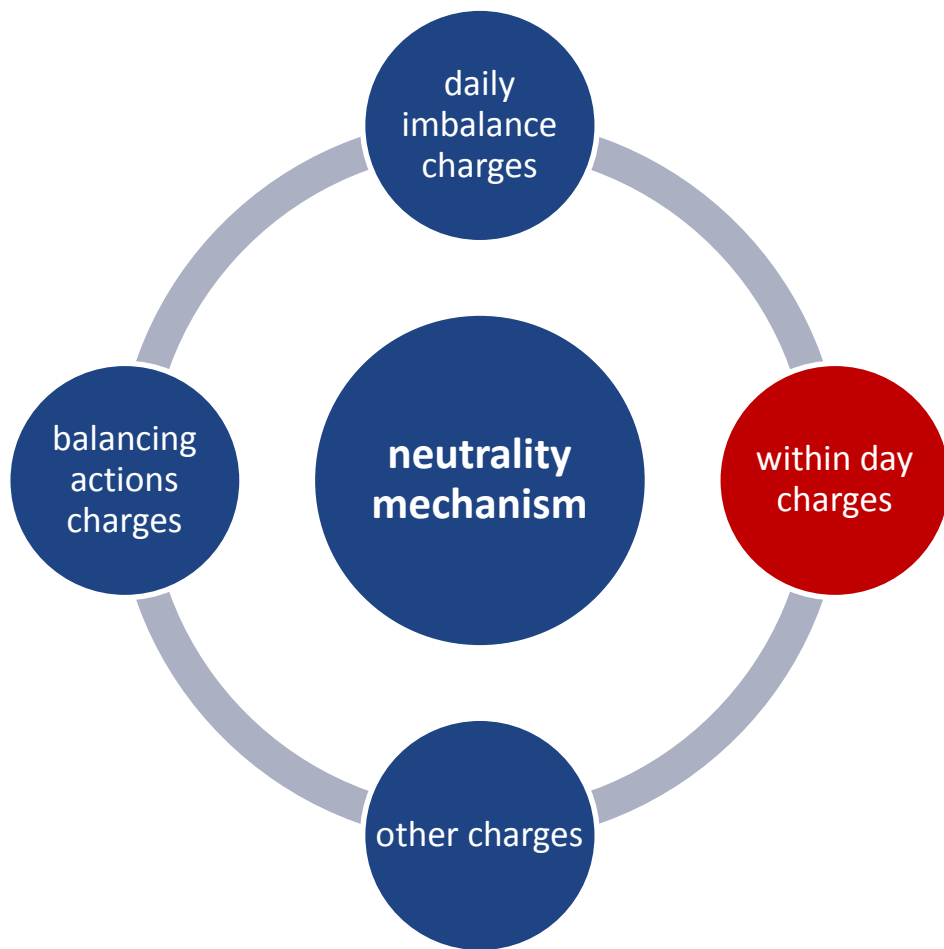
Financial Elements of Balancing Activities



- Covers the TSO's balancing actions:
 - trade in short term standardised products
 - use of balancing services
- Can include fixed costs
- This pot may be net income or outgoing for TSO



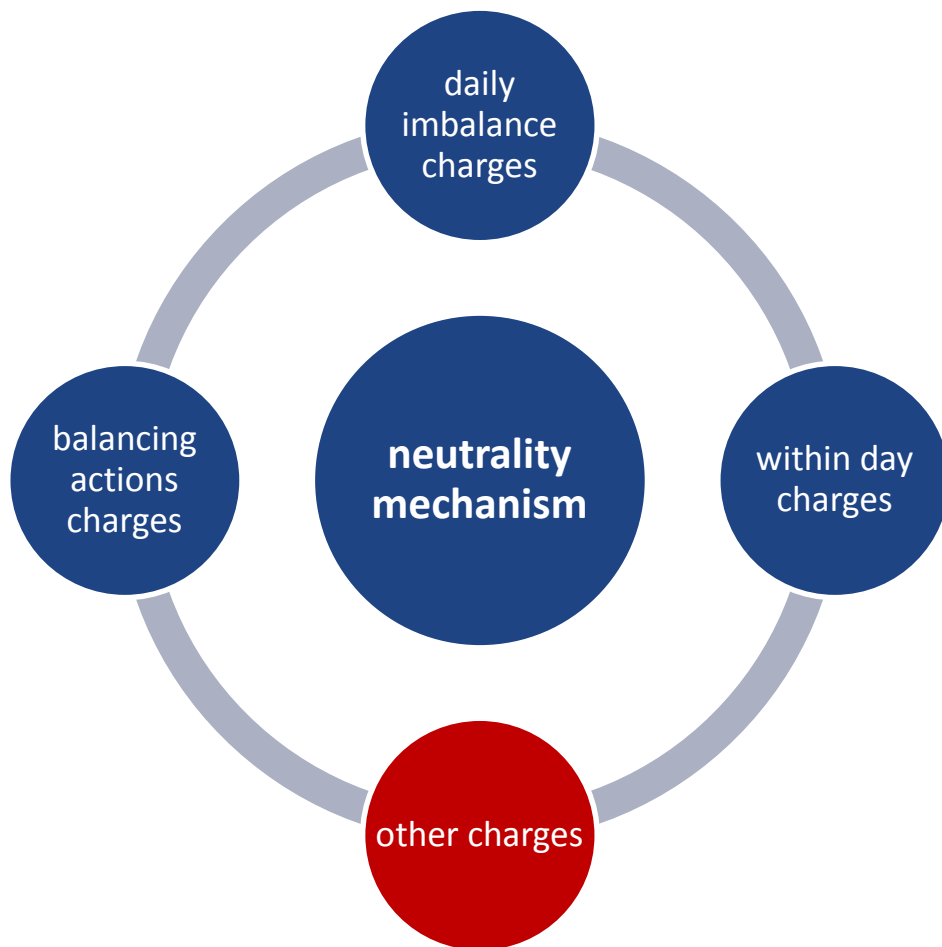
Financial Elements of Balancing Activities



- WDOs not a feature of all regimes
- This pot may create different financial consequences for TSO if a shipper doesn't follow a within day obligation



Financial Elements of Balancing Activities

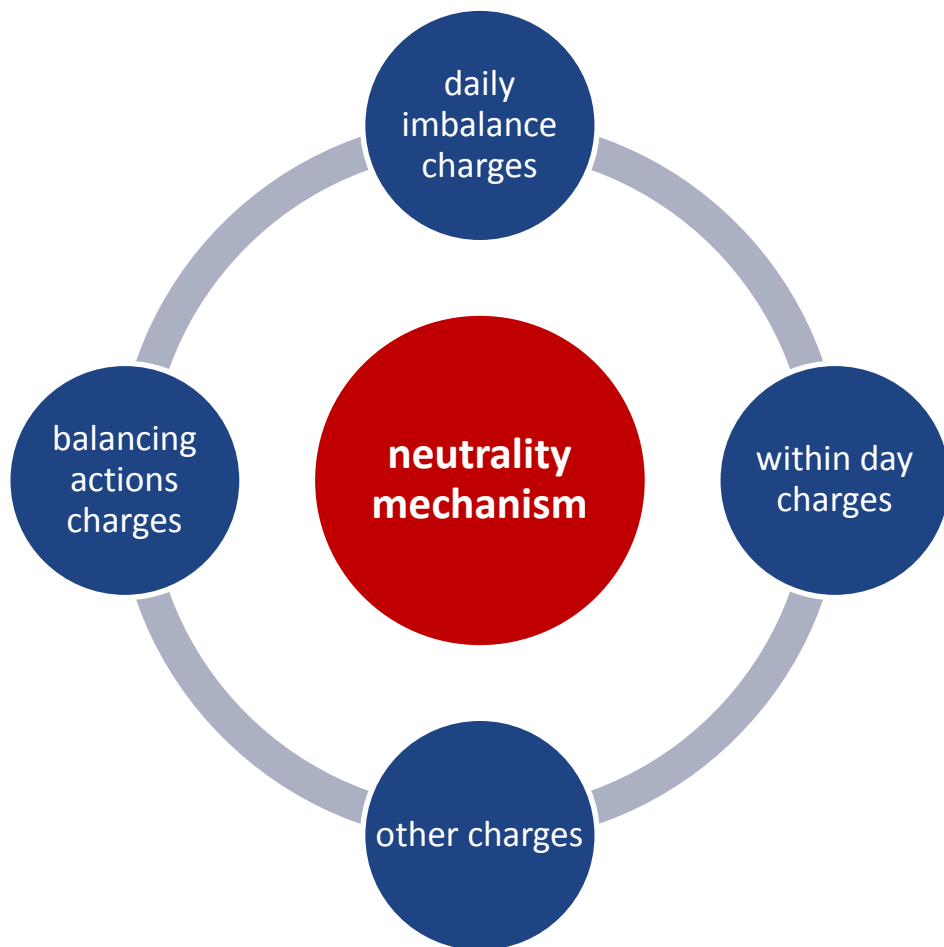


➤ This pot is an outgoing for TSO and is intended to capture other financial flows arising from TSO's undertaking of balancing activities, e.g.:

- Administration costs
- Financing costs



Financial Elements of Balancing Activities



➤ The Balancing Network Code prescribes:

- The costs that TSOs can recover
- Transparency measures
- Shippers charged based on their use of transmission network
- Credit risk management rules



Chapter VIII

Information Provision

Articles 32 to 42



Information Provision



- To allow the shippers **to balance their portfolios**, information is provided to them regarding their inputs and off-takes

- **Allocation** information provided in order to calculate daily imbalance quantity
 - reconciliation between the allocations is out of scope

- **3 classes of information** available
 - intraday metered
 - daily metered
 - non daily metered

- One of **3 information models** must be applied within each balancing zone:
 - base case, variant 1 and variant 2



Information Provision



day ahead

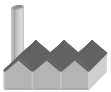
within day

after the day

intra day metered

not applicable

daily metered



non daily metered



Chapter IX

Linepack Flexibility Service

Articles 43 to 44



Linepack Flexibility Service



A service provided by a TSO to shippers to balance their inputs and off-takes over a period longer than a gas day

provision
criteria

TSO shall not need to enter into any contracts in order to provide this service



Revenues generated by TSO should at least cover the costs



Offered on a transparent and non-discriminatory basis



TSO cannot charge any costs relating to service for shipper not contracting for it



TSO shall prioritise the reduction of a WDO over the provision of this service



Shall not have a detrimental impact on cross border trade





Chapter X Interim measures & Chapter XI Final and Transitional Provisions

Articles 45 to 53



Implementation Timeline

no interim measures



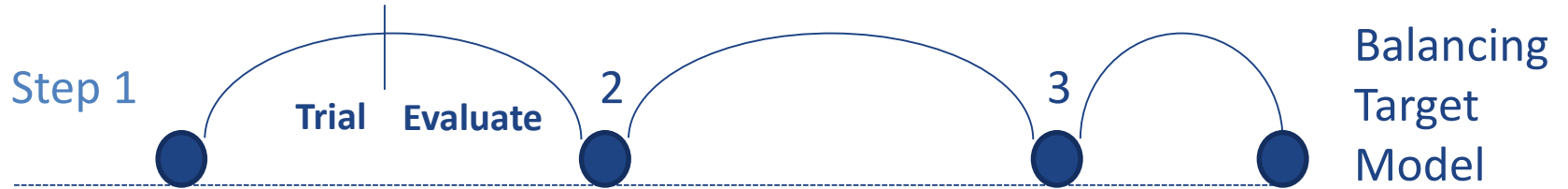
interim measures



Balancing target model implementation within 1 or 2 years, or up to 5 years



Managing the transition



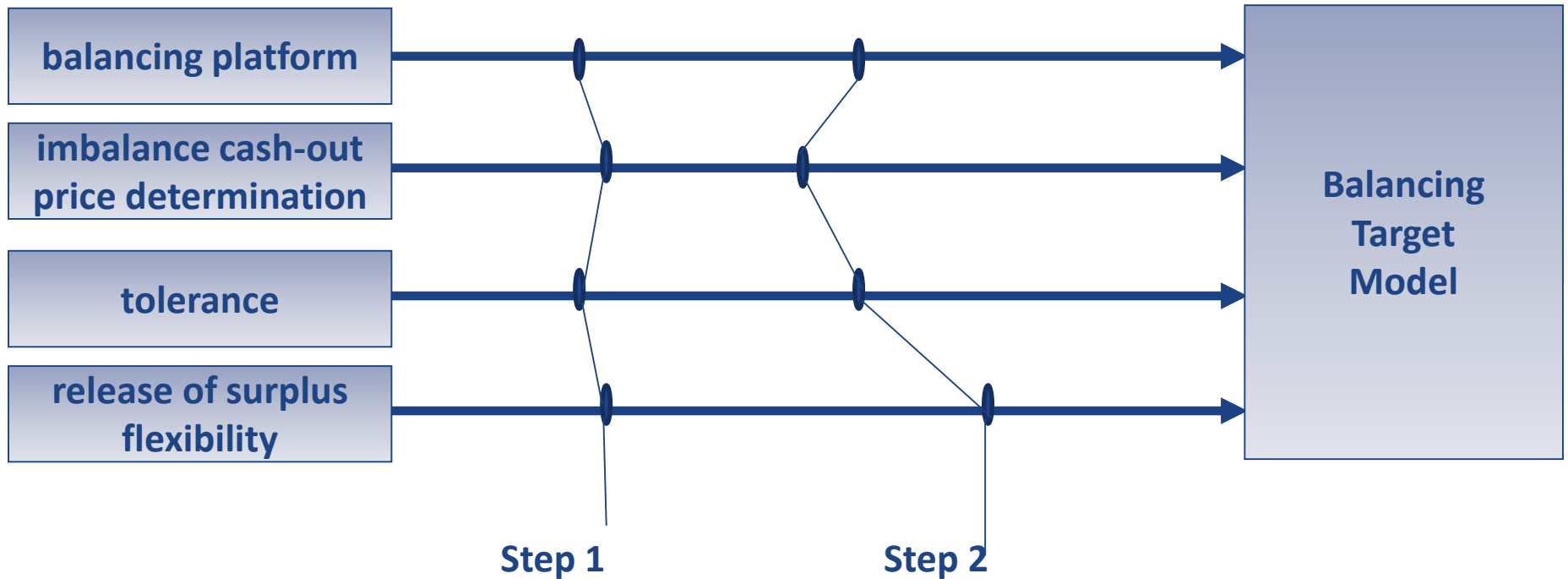
interim measures



Being ready to start requires NRA, TSO, stakeholder and wider actor action



Planning the implementation



The best way forward may be the development of packages of changes



Implementation challenges



BAL Implementation monitoring 2016

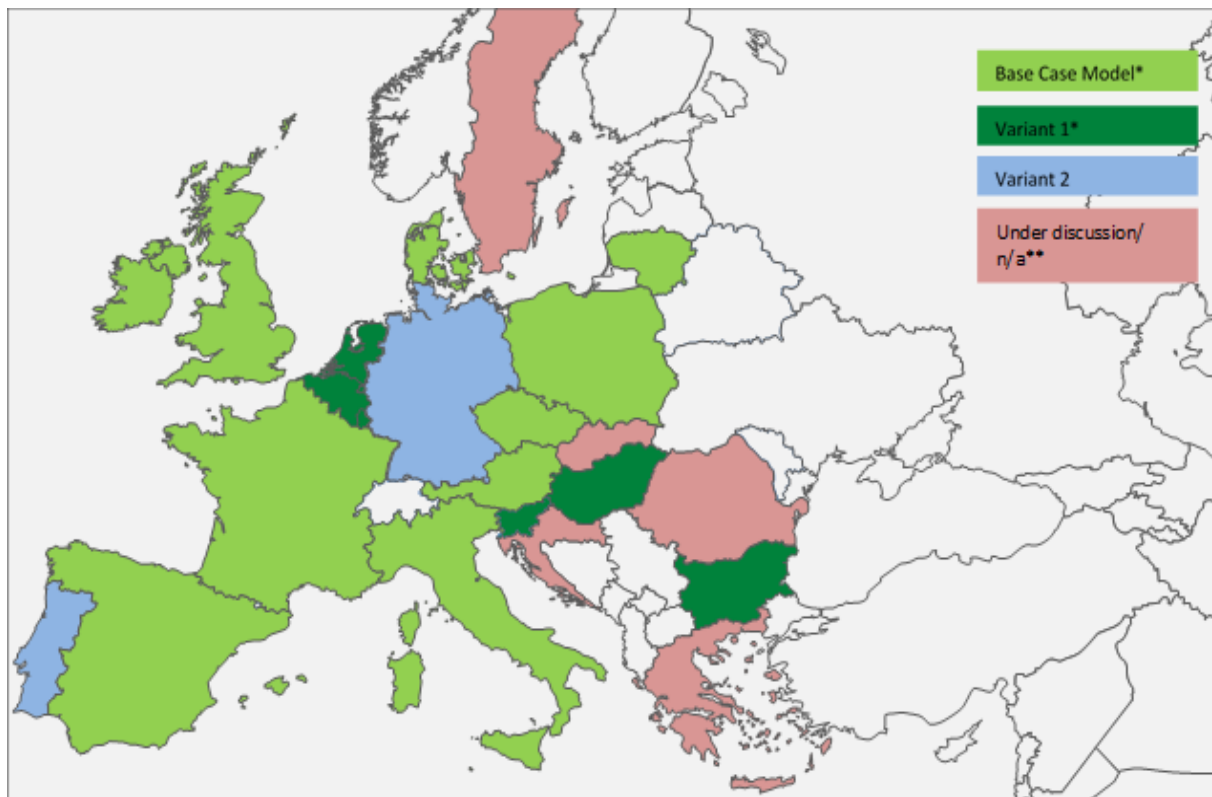


- **Balancing implementation status by 1 October 2016:**
 - **Implementation deadline by 1 October 2015 applicable for 10 countries**
 - 9 countries (AT, BE/LU, DE*, DK, FR, NL, SI and UK-GB) have implemented the BAL NC.
 - 1 country (HU) has most of the provisions in place.
 - **Implementation deadline by 1 October 2016 applicable for 5 countries (transitory period option)**
 - 2 countries (ES and IT) have implemented the BAL NC.
 - 3 countries (CZ, HR, PT) still have to perform further implementation steps.
 - **Implementation deadline by 16 April 2019: 11 countries (with interim measures)**
 - **Interim measures:**
 - 8 countries (DE*, IE, LT, PL, RO, SE, SK and UK-NI) have interim measures in place.
 - 2 countries (EE** and EL) partially implemented the interim measures.
 - 1 country (BG) is planning to implement the interim measures during 2017.
 - **All other provisions (with implementation deadline by 1 October 2015):**
 - 3 countries (DE*, IE, and UK-NI) have also all other provisions in place.
 - 8 countries (BG, EE**, EL, LT, PL, RO, SE and SK) partially implemented the other provisions.

*Germany is doubled categorized as it applied in addition to its implemented trading platform an additional balancing platform under interim measures.

**Estonia, holding derogation, provided partially data on a voluntary basis.

Information model and forecasting party



- 19 countries have already chosen one of the three information models.
- **Model chosen per country:**
 Base Case: 11 countries
 Variant 1: 6 countries
 Variant 2: 2 countries
- In 5 countries no information model has been chosen.
- In 18 countries a **forecasting party** is established or is planned to be established:
 TSO: 10 countries
 DSO: 4 countries
 Third Party: 4 countries
- In 7 countries the forecasting party is under discussion/ not foreseen.

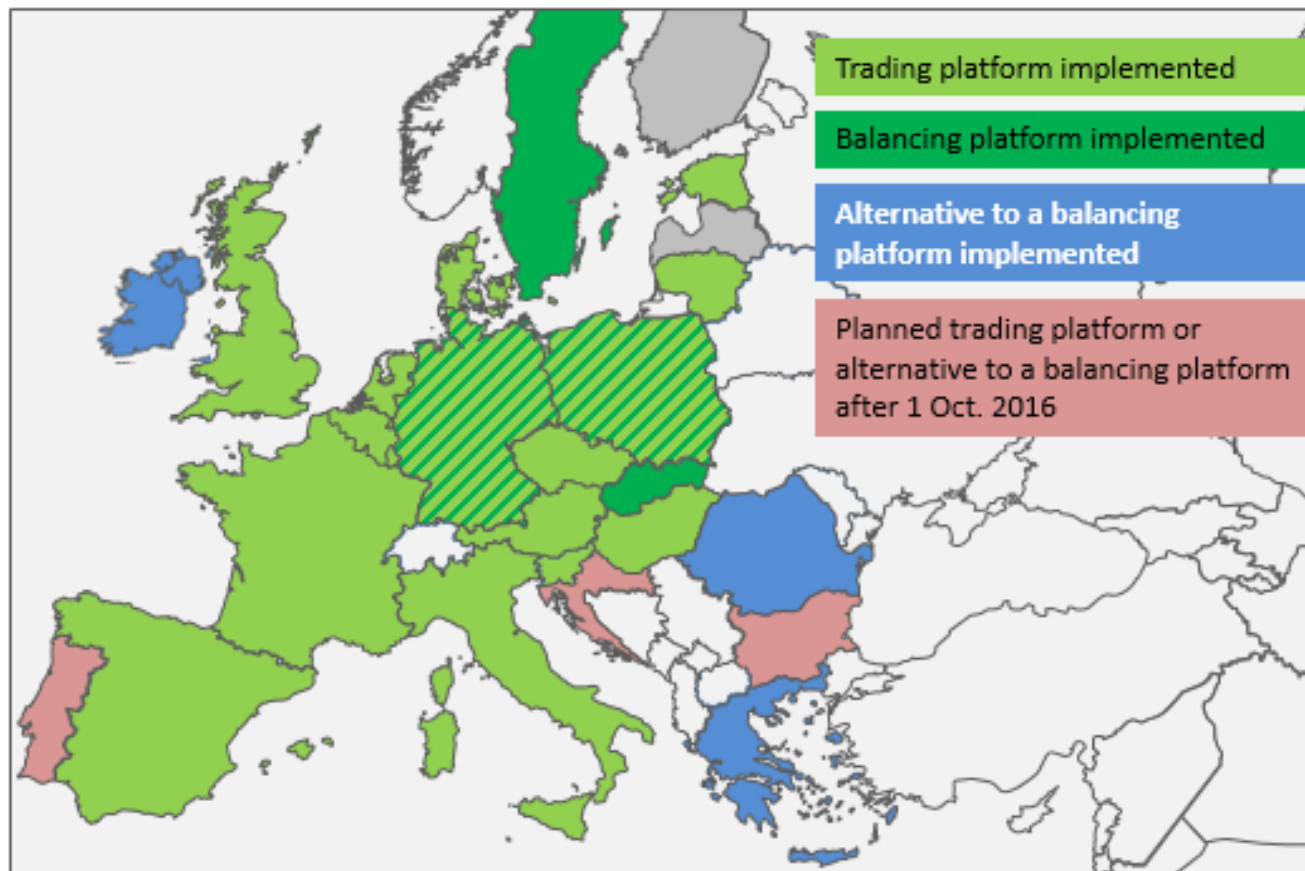
Forecasting party

TSO	DSO	Third party	Under discussion	No forecasting party foreseen
BE, DK, FR, IE, IT, LU, PT, SI, UK-GB, UK-NI (10)	DE, HU*, LT, PL (4)	AT, CZ, ES, NL (4)	HR*, RO* (2)	BG, EE, EL, SE, SK (5)

* Countries planning to establish a forecasting party.

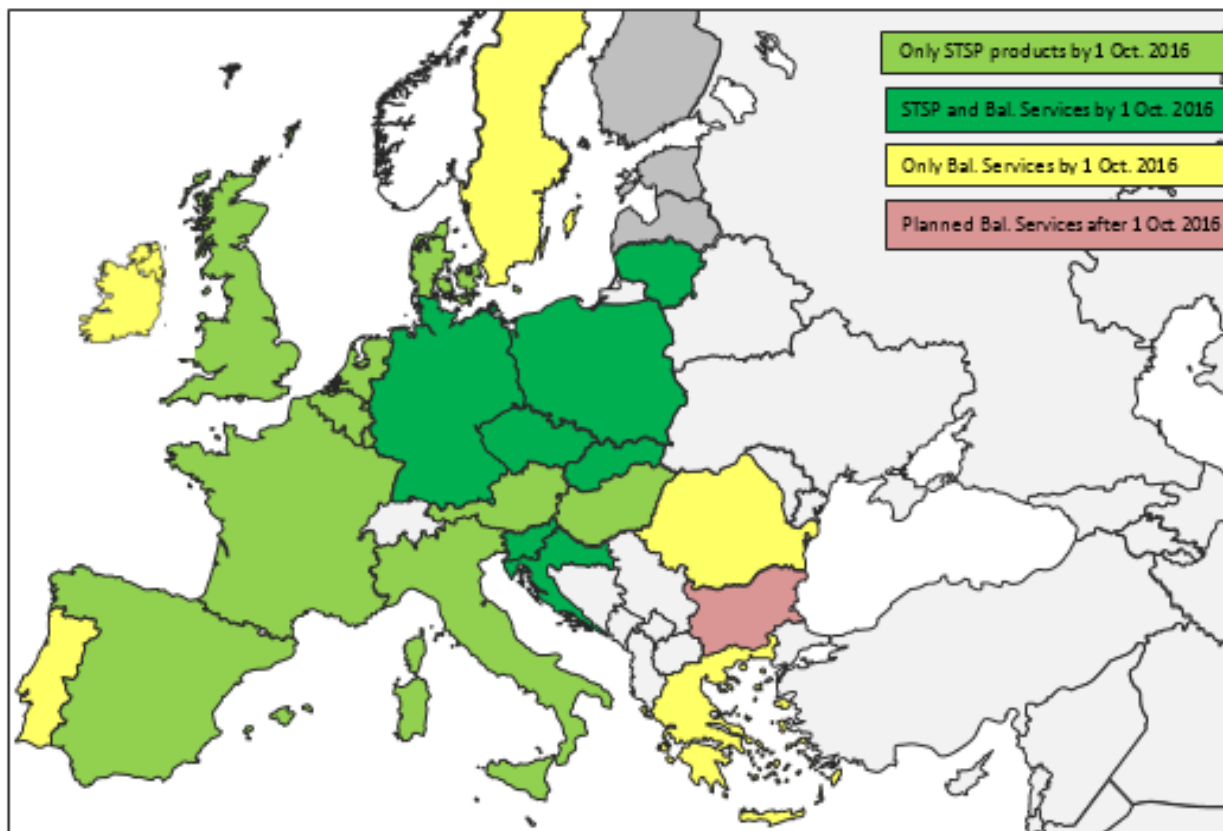


Trading vs. Balancing platform vs. Alternative to a Balancing platform by 1 Oct. 2016



- 15 countries (AT, BE, CZ, DE, DK, ES, FR, HU, IT, LT, LU, NL, PL, SI and UK-GB) have a trading platform in place.

STSPs and Balancing services by 1 Oct. 2016



Type of STSP product	Country where it is offered on a trading platform or balancing platform
Title products	AT, BE/LU, CZ, DE, DK, ES, FR, HU, IT, LT, NL, PL, SI, SK, UK-GB (16)
Locational products	DE, ES, FR, HR, HU, IT, UK-GB (7)
Temporal products	DE, HU, NL (3)
Temporal locational products	DE (1)



Next balancing monitoring



- ***Next balancing monitoring report is planned to be published June 2018***
 - Implementation status of BAL NC by 1 Oct. 2017

- ***Cluster 2016 countries will be included in effect monitoring (GY2016/2017)***

- ***Suggestions for development of indicators***
 - More information on STSP e.g. on title products
 - Evolution from GY 2015/2016 to GY 2016/2017



Do you have any questions?



Thank You for Your Attention

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