Tariffs for maintaining and restoring the residual balance of individual access responsible parties[1]

Period 2020-2023

The tariff terms and conditions established by the CREG decisions dated 7 November 2019 and 3rd of February 2022 shall apply from 1 January 2020 to 31 December 2023 inclusive.

The tariff for maintaining and restoring the residual balance of individual access responsible parties is based on the costs incurred by Elia for maintaining balance between generation and consumption in the Belgian control area for the quarter-hour in question and is intended to appropriately incentivise grid users to balance their injection and offtake levels, as per Article 12(5)(10) of the Electricity Act of 29 April 1999 and as per paragraphs 4.2(2), 4.4, 4.5 and 4.6 of Annex 2 to the Tariff Methodology of 28 June 2018.

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[1] Access Responsible Party = balance responsible or Balance Responsible Party (BRP)

1. Definitions

The **imbalance** of a given balance responsible party is the quarter-hourly difference between its total injections at the balance responsible party's perimeter for the given quarter-hour, and total offtakes at the balance responsible party's perimeter for the given quarter-hour, including active grid losses attributable to and compensated by said access responsible party. The concepts of 'injection' and 'offtake', as well as the imbalance perimeter are stipulated in the balance responsible party's Contract.

The **Net Regulation Volume** (NRV), as defined in the functioning rules of the market governing compensation for quarter-hourly imbalances, reflects, for a given quarter-hour, the net control volume of energy (upward and downward) which Elia applies in order to maintain balance in the Elia control area. A plus or minus sign in front of the NRV indicatives, respectively, an overall energy shortage or energy surplus in the Belgian control area. If the NRV is zero, the control area is assumed to have a deficit.

The NRV is adjusted to take into account, where applicable, activations of the strategic reserve, in accordance with the principles described in the functioning rules governing the operation of the strategic reserve.

The **Area Control Error**[2] (ACE) is the current difference between the scheduled values ('program') and the actual values ('measurements') of power exchanged in the Belgian control area, taking into account the impact of frequency deviations.

The imbalance of the system or the Control Area Imbalance (hereinafter the 'System Imbalance' or 'SI') is, during a given quarter-hour, equal to the Area Control Error minus the NRV:

System Imbalance = ACE – NRV

The marginal price for upward activation reflects, for a given quarter-hour, the price of the most expensive energy for upward regulation in order to compensate for imbalance in the Belgian control area during that quarter-hour.

The marginal price for upward activation is determined in the the functioning rules of the market governing compensation for quarter-hourly imbalances that Elia has established in accordance with the Federal Grid Code.

The marginal price for downward activation reflects, for a given quarter-hour, the price of the most expensive energy for downward regulation in order to compensate for imbalance in the Belgian control area during said quarter-hour.

The marginal price for downward activation is determined in the the functioning rules of the market governing compensation for quarter-hourly imbalances that Elia has established in accordance with the Federal Grid Code.

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[2] Defined in Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation

2. Tariff for maintaining and restoring the residual balance of individual access responsible parties

In accordance with Article 55.1 of the directive on electricity system balancing, the plus or minus sign in front of the imbalance of a given balance responsible party determines whether the tariff for maintaining and restoring the residual balance of the individual access responsible party reflects a purchase tariff or sale tariff. A positive imbalance corresponds to an excessive injection of energy by the balance responsible party. The tariff that applies to this type of situation is a feed-in tariff for surplus energy, which is therefore paid by Elia to the balance responsible party if the residual balance tariff is positive. A negative imbalance, on the other hand, corresponds to an insufficient injection by the balance responsible party. The tariff that applies to this type of situation is a loss-making tariff for the sale of energy, which is therefore paid by the balance responsible party to Elia if the residual balance tariff is positive.

The tariff for maintaining and restoring the residual balance of the individual access responsible party is generally positive. However, it is possible, especially in the event of a downward adjustment, that the tariff will be negative, with the result that reverse payments are made between Elia and the relevant balance responsible parties.

For the period 2020-2023, the tariff for maintaining and restoring the residual balance of the individual access responsible party is calculated according to the following table:

		System Imbalance	
		Positive	Negative or zero
Imbalance of the balance responsible party	Positive	MDP – α	MIP + α
	Negative		

Table 1. Tariffs for maintaining and restoring the residual balance of individual access responsible parties

where:

- MDP = marginal price of downward activation
- MIP = marginal price of upward activation
- α

From 1st of January 2020 till 13nd of February 2022:

- α (EUR/MWh) = 0 if si ABS(SI(t)) ≤ 150 MW
- $\alpha(t)$ (EUR/MWh) $= \left(a + \dfrac{b}{1+\exp\left(\frac{c-x}{d}\right)} \right)$ if ABS(SI(t)) > 150MW

with the values for parameters a, b, c, d, x:
a = 0 EUR/MWh
b = 200 EUR/MWh
c = 450 MW
d = 65 MW
x = Average [(ABS (SI (t)); ABS (SI (t-1))], namely the moving average of the absolute value of the quarter-hour system imbalance qh (t) and qh (t -1)

As from 14nd of February 2022 till 31st of December 2023:

- α (EUR/MWh) = 0 if si ABS(SI(t)) ≤ 150 MW

- $\alpha(t) \ (EUR/MWh) = \left(a + \dfrac{b}{1+\exp\left(\frac{c-x}{d}\right)} \right) * \mathbf{cp}$ if ABS(SI(t)) > 150MW

  with the values for parameters a, b, c, d, x:
    a = 0 EUR/MWh
    b = 200 EUR/MWh
    c = 450 MW
    d = 65 MW
    x = Average [(ABS (SI (t)); ABS (SI (t-1))], namely the moving average of the absolute value of the quarter-hour system imbalance qh (t) and qh (t -1)

  The **cp** is determined by the value of MIP and MDP according to:

  - If SI (t) ≤ 0 ;
    - If MIP (t) > 400 €/MWh; 0
    - If 200 €/MWh < MIP (t) ≤ 400 €/MWh; $(400 - MIP(t))/200$
    - If MIP (t) ≤ 200 €/MWh; 1

  - If SI (t) > 0 ;
    - If MDP ≥ 0 €/MWh; 1
    - If -200 €/MWh ≤ MDP(t) < 0 €/MWh; $(MDP(t) + 200)/200$
    - If MDP(t) < -200 €/MWh ; 0

- System imbalance = ACE – NRV
- NCV = Net Control Volume
- ACE = Area Control Error
- ABS (SI (t)) = the absolute value of the quarter-hour system imbalance qh (t)
- ABS (SI (t-1)) = the absolute value of the quarter-hour system imbalance qh (t-1)

To provide effective incentives for the balance responsible parties in specific situations, in particular when the size of the imbalance in the control area approaches or exceeds available reserves[3] (incompressibility) or in the event of supply problems, special rules may apply for determining the value of the tariff for maintaining and restoring the residual balance of individual access responsible parties. These rules will be described in:

- the functioning rules of the strategic reserve, more specifically in the event of:
  - activation of the strategic reserves, as stipulated in points 4.2 and 4.6 of Annex 2 to the Tariff Methodology;
  - pursuant to Article 7 *septies §2* of the Electricity Act;
- the functioning rules governing the operation of the market with respect to compensation for quarter-hourly imbalances (e.g. in the event of insufficient compressibility).

If necessary, relevant additional rules proposed by Elia and approved by the CREG will also be taken into account.

⇨ Setting the α parameter

The α-parameter offers an additional incentive that is applicable in the event of a structural imbalance in the Belgian control area, both for balance responsible parties with an imbalance in the same direction as the overall imbalance of the Belgian control area, and for balance

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[3] For example, in the event of the need to activate backup contracts concluded with neighbouring system operators in export mode.

responsible parties with an imbalance in the opposite direction as the overall imbalance of the Belgian control area.

An adjustment to the α parameter during the regulatory period does not constitute a change to the tariff mechanism.