



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

Grid losses

Elia WG 'Belgian grid' on 21.04.2017

Description

Grid losses

- Active electrical losses correspond to power that is dissipated as heat, either by natural ventilation or by being forced to cool down to keep the equipment's operating temperatures below the limit specified by the manufacturer
- Elia calculates the grid losses for all equipment operating at nominal voltages of 380 kV, 220 kV and 150 kV

Article 161 of the Federal Grid Code

Compensation in kind

- ‘Each BRP compensates the active grid losses for the whole of his access points to the grid’
- In practice:
 - Losses are compensated in kind by the sum of contributions by BRP
 - This contribution is expressed in the form of a percentage of net offtakes linked to the portfolio of the BRP (objective, transparent and non-discriminatory)
 - Elia calculates the percentage on the basis of forecasted losses and estimated future offtakes
 - As of 1 January 2017, the applicable percentages are:
 - Peak hours (weekdays from 8am till 8pm): 1,35%
 - Long off peak hours (weekdays from 8pm till 8am and week-ends): 1,25%
- Grid losses are a cost for BRP’s/suppliers

Several downsides

Evaluation compensation in kind

- Limited transparency of grid costs towards customers
- Operational and contractual burden for BRP's/suppliers
 - Modifications (structure, ...) create IT and operational issues and costs
 - It's not always possible to immediately pass on costs to customers when percentages change, e.g. contract restrictions, safety net regulation, ...
- Belgian supply market becomes less attractive
- Asymmetry between central and decentralized generation
- No netting of grid losses:
 - When two BRP's are active on an access point
 - When several access points on one site

Other examples

Towards tendering of grid losses (1)

- Belgian DSO's tender grid losses on the distribution grid
- Neighbouring TSO's also tender grid losses, e.g. France, the Netherlands, Germany, ...
- In line with European policy, cfr. European Directive (2009/72/EC):

Article 15 lid 6

Transmission system operators shall procure the energy they use to cover energy losses and reserve capacity in their system according to transparent, non-discriminatory and market-based procedures, whenever they have such a function.

Article 17 lid 2 sub d

The activity of electricity transmission shall include at least the following tasks in addition to those listed in Article 12:

(...)

(d) the collection of all the transmission system related charges including access charges, balancing charges for ancillary services such as purchasing of services (balancing costs, energy for losses).

Towards tendering of grid losses (2)

- Elia launches tenders for energy to compensate for grid losses
- Features:
 - Procurement at market conform conditions via competitive process
 - Tender design in function of cost optimization for TSO (liquidity):
 - Open to all market players
 - Frequency tenders
 - Optimal mix of products, e.g. standard products (forward baseload products and peak load products) as well as optional products
 - ...
- Tender creates an incentive for Elia to lower grid losses
- Elia has to pass on costs via tariffs:
 - Grid losses are equivalent to ancillary services (see Directive)
 - Tariff for 'power reserves and black start' in EUR/MWh

Next steps

Towards tendering of grid losses (3)

- Modification Federal Grid Code (~ first badge of modifications)

Flemish Grid Code:

Afdeling IV.4.6 Compensatie van de netverliezen

Artikel IV.4.6.1 In het kader van de levering van ondersteunende diensten compenseert de elektriciteitsdistributienetbeheerder de energieverliezen in zijn distributienet voor elke gebruiker van zijn net.

- Tariff proposal (~ new tariff period 2020–2023?)



thanks

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