



MEMORANDUM

TO Authority for Consumers & Markets

CLASSIFICATION

C1 - Public Information

DATE

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REFERENCE

BGD-2022-031

FROM

SUBJECT Report congestion revenues TenneT TSO B.V. for the period January 2021 - December 2021

REPORT

DECISION

1. Introduction

TenneT TSO B.V. ("TenneT") provides this report in order to enable the Authority for Consumers & Markets ("ACM") to comply with the requirements as defined in REGULATION (EU) 2019/943 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019 on the internal market for electricity ("Regulation").

This report contains the following information:

- Realised congestion revenues and withdrawals for the period January 1, 2021 – December 31, 2021.

The withdrawals from the auction proceeds comply with the purposes mentioned in the Regulation.

2. Realised congestion revenues and withdrawals for the period January 1, 2021 – December 31, 2021

2.1 General information

TenneT is certified as transmission system operator (“TSO”) for the Dutch national (extra) high voltage grid and as the interconnector operator for the southern part of the NorNed Cable and the COBRA Cable. TenneT is exclusively authorized to the management of cross-border interconnections with alternating current on the Belgian and German borders. The management includes applying non-discriminatory and transparent transfer capacity allocation mechanisms as prescribed by the EC Electricity Regulations (EC Regulations no. 2019/943, 2019/944), the Electricity Act and implementing regulations. These mechanisms include the auctions performed by Joint Allocation Office S.A. (“JAO”). JAO is a joint service company of twenty-five Transmission System Operators in twenty-two countries. JAO’s principle activity is facilitating the yearly, monthly and daily auctions of transmission rights on various borders in Europe. Furthermore TenneT operates the so-called NorNed Cable, an interconnector with direct current between Norway and the Netherlands. Since September 2019 TenneT also operates the COBRA Cable, an interconnector with direct current between Denmark and the Netherlands.

The Foundation for the Management of Allocated Funds from the National High-Voltage Grid (Stichting Beheer Doelgelden Landelijk Hoogspanningsnet) (“The Foundation”) is a foundation established under Dutch law for the management of the “allocated funds” received from TenneT in its capacity as administrator of the National EHV Grid. These allocated funds comprise proceeds of imbalance settlements (not within scope of this report) and proceeds from market-based allocation of cross-border electricity transfer capacity (including proceeds from explicit or implicit auctions of interconnector capacity). TenneT is not allowed to use the allocated funds for other objectives than set forth in the Regulation. According to the competence agreement (bevoegdheidsovereenkomst) with the ACM of December 15, 2015 (reference: ACM/DE/2015/206388_OV) and the addenda to this agreement of November 19, 2019 (reference: ACM/UIT/523020) and November 24, 2021 (reference: ACM/UIT/566183) the surplus funds of The Foundation will be used for (future) tariff reductions.

In accordance with article 19.2 of REGULATION (EU) 2019/943 congestion revenues shall be used for the following purposes:

2. The following objectives shall have priority with the respect to the allocation of any revenues resulting from the allocation of cross-zonal capacity:

(a) guaranteeing the actual availability of the allocated capacity including firmness compensation; or

(b) maintaining or increasing cross-zonal capacities through optimisation of the usage of existing interconnectors by means of coordinated remedial actions, where applicable, or covering costs resulting from network investments that are relevant to reduce interconnector congestion.

And as stated in article 19.3 of REGULATION (EU) 2019/943:

3. Where the priority objectives set out in paragraph 2 have been adequately fulfilled, the revenues may be used as income to be taken into account by the regulatory authorities when approving the methodology for calculating network tariffs or fixing network tariffs, or both. The residual revenues shall be placed on a separate internal account line until such a time as it can be spent for the purposes set out in paragraph 2.

The allocated funds are invested within the boundaries of the treasury statute of The Foundation when they are temporarily placed on a separate internal account as prescribed in the Regulation. The treasury statute of TenneT Holding B.V. also applies to The Foundation. The statute contains principles which cover specific areas such as interest rate risk, liquidity risk, the use of derivatives, and the investment of excess liquidity. The return on these investments is added to the congestion receipts.

In 2021 the management of the allocated funds was executed by The Foundation. The overview of congestion revenues provided in this report reconciles with the financial administration of TenneT. The figures for the congestion revenues 2021 have been used for the statutory annual accounts of TenneT for the year 2021.

2.2 Overview realised congestion revenues and withdrawals

The movement schedule for the congestion revenues during the period January 1, 2021 – December 31, 2021 is included in the overview below:

Description	Unit	Amount	2019/943 reference
Opening balance congestion revenues	EUR	-322.265.141	
NorNed			
Plus: transmission right revenues NorNed auction	EUR	-75.209.003	
Plus: outcome NorNed bonus-penalty scheme relative availability	EUR	-1.569.163	
Minus: contribution TenneT towards auction costs	EUR	88.495	
Minus: costs network losses	EUR	873.258	19.2a
Minus: costs for balancing and reserve power	EUR	3.015.284	19.2a
Net addition NorNed	EUR	-72.801.130	
Cobra-cable			
Plus: transmission right revenues COBRA auction	EUR	-32.663.484	
Minus: contribution TenneT towards auction costs	EUR	32.909	
Minus: costs network losses	EUR	4.718.601	19.2a
Net addition Cobra-cable	EUR	-27.911.975	
Interconnectors NL-DE			
Plus: transmission right revenues interconnectors NL-DE	EUR	-29.296.370	
Minus: contribution TenneT towards auction costs	EUR	594.845	
Net addition interconnectors NL-DE	EUR	-28.701.525	
Interconnectors NL-BE			
Plus: transmission right revenues interconnectors NL-BE	EUR	-23.125.740	
Minus: contribution TenneT towards auction costs	EUR	594.845	
Net addition interconnectors NL-BE	EUR	-22.530.895	
Other additions / withdrawals			
Plus: net income from participation TenneT GmbH & Co. KG	EUR	-31.434	
Plus: net addition interest revenues	EUR		
Minus: overhead costs Stichting Doelgelden	EUR	160.600	
Minus: redispatch critical branches	EUR	298.752.897	19.2a
Minus: interest costs	EUR	912.238	
Net other additions / withdrawals		299.794.300	
Reduction of transmission tariffs			
Minus: congestion revenues used for reduction of allowed revenue for EHS-grid	EUR	120.966.701	
Part attributed to costs resulting from investments that are relevant to reduce interconnector congestion (not subject to external audit, excluded from scope).	EUR	95.878.320	19.2b
Part used as income taken into account for calculating network tariffs	EUR	25.088.381	19.3
Mutation congestion revenues	EUR	268.815.478	
Closing balance congestion revenues	EUR	-53.449.663	

2.3 Disclosures to overview realised congestion revenues and withdrawals

2.3.1 Receipts and withdrawals NorNed

In accordance with the ACM decision dated November 14, 2007 (reference: 102746) the capacity of the NorNed cable becomes available for the market through an auction. The congestion revenues are equally divided between TenneT and its counterpart Statnett SF. The TenneT part of these receipts has been added to the congestion revenues since the start of NorNed.

In accordance with article 19.2a of the Regulation TenneT has withdrawn an amount of EUR 0.9 million regarding grid losses for the NorNed cable in 2021.

In accordance with article 19.2a of the Regulation TenneT has withdrawn an amount of EUR 3.0 million regarding balancing and reserve power for the NorNed cable in 2021.

In accordance with article 19.2a of the Regulation TenneT has withdrawn an amount of EUR 0.1 million regarding operational costs for the execution of the auctions for the NorNed cable in 2021.

In accordance with the ACM decision 101783_2-76 TenneT is obliged to add a malus to the congestion revenues in the situation that the availability of the NorNed cable is below the predefined limits. Based on the proposal of TenneT for the settlement of this bonus/malus for 2021 dated January 31, 2022, TenneT is obliged to add an amount of EUR 1.6 million to the congestion revenues with regard to the availability of the NorNed cable during 2021.

2.3.2 Receipts and withdrawals COBRA

In accordance with the ACM decision dated October 17, 2019 (reference: ACM/UIT/519787) the capacity of the COBRA cable becomes available for the market through an auction. The congestion revenues are equally divided between TenneT and its counterpart Energinet. The TenneT part of these receipts has been added to the congestion revenues since the start of COBRA.

In accordance with article 19.2a of the Regulation TenneT has withdrawn an amount of EUR 4.7 million regarding grid losses for the COBRA cable in 2021.

In accordance with article 19.2a of the Regulation TenneT has withdrawn an amount of EUR 0.0 million (rounded) regarding operational costs for the execution of the auctions for the COBRA cable in 2021.

2.3.3 Receipts and withdrawals interconnectors NL-DE and NL-BE

The yearly and monthly auctions of transmission rights for the interconnectors NL-DE and NL-BE are performed by JAO. The annual and monthly capacity is allocated by means of explicit auctions. At such auctions, the market party acquires long term transmission rights. The European transmission system operators have created shared rules governing the explicit auctions for allocating annual and monthly capacity. TenneT receives 50% of the congestion revenues on the Belgian and German borders.

The daily auctions are performed by EPEX Spot SE and the NEMO's as of July 3, 2019. The daily capacity is allocated to market parties through an implicit allocation mechanism. The power exchanges and the involved TSO's organise this by means of day-ahead market coupling and intraday market coupling. Per May 21, 2015 flow based market coupling was introduced in the CWE region. As a result the distribution of the auction proceeds between the involved TSO's has also been changed.

In accordance with article 19.2a of the Regulation TenneT has withdrawn an amount of EUR 0.6 million for the interconnectors NL-DE and an amount of EUR 0.6 million for the interconnectors NL-BE regarding operational costs for the execution of the auctions for the other interconnectors in 2021.

2.3.4 Participation in TenneT Germany

Per February 2020 the funding structure for the participation of The Foundation in TenneT GmbH & Co KG has been restructured. As a result the invested amount has been reduced and per year end 2021 The Foundation has 2,000 Class B shares and a share premium of EUR 47 million in TenneT TSO Duitsland B.V. As part of this restructuring the existing call and put option agreements are amended in order to protect the allocated funds and to ensure their immediate availability to The Foundation. All proceeds and costs related to the above mentioned structure have been added / withdrawn from the congestion revenues. In 2021 the total net proceeds that are added to the congestion revenues amount to EUR 0.0 million (rounded).

2.4 Other additions / withdrawals

2.4.1 Tariff reduction

In accordance with article 19.3 of the Regulation and the competence agreement (bevoegdhedenovereenkomst) with ACM of December 15, 2015 (reference: ACM/DE/2015/206388_OV) and the addendum to this agreement of November 19, 2019 (reference: ACM/UIT/523020) TenneT used the congestion revenues for tariff reductions in 2021. The calculation method for the annual withdrawal from the congestion revenues for this purpose is included in this agreement. Based on this calculation method TenneT used an amount of EUR 121.0 million to reduce its tariffs for 2021.

2.4.2 Operational costs of The Foundation

An amount of EUR 0.2 million (rounded) has been withdrawn in 2021 for operational costs of The Foundation for the management of the allocated funds. This withdrawal is in accordance with article 19.2a of the Regulation.

2.4.3 Redispatch costs related to critical branches

The Regulation requires TSOs to optimise cross-border capacity of the interconnections and the transmission networks affecting cross-border flows, while complying with safety standards of secure network operation.

As a result guaranteeing the actual availability of allocated capacity and maintaining or expanding capacity of the interconnections and of the transmission networks affecting cross-border flows contributes to the purposes laid down in the EU legislation. In accordance with article 19.2a of the Regulation these activities can be funded from the revenues resulting from the allocation of interconnection (hereinafter cross-border congestion revenues). TenneT has withdrawn an amount of EUR 298.8 million regarding redispatch costs related to critical branches in 2021. Recent developments since September 2021 lead to a significant increase in these costs related to critical branches. The redispatch costs related to critical branches increased from EUR 67 million in 2020 to EUR 299 million in 2021. This increase is mainly due to the required outage periods for the execution of projects for the increase of the capacity of critical branches in combination with costs for safeguarding security limits in the Netherlands.

The interconnectors and relevant parts of the transmission network that are affected by cross-border flows are identified as 'critical branches' in accordance with the implemented Flow Based Allocation Methodology.

In the following situations TenneT is using cross-border congestion revenues to fund the costs of solving congestions on critical branches (both upward and downward adjustment of transported volumes by means of redispatch and/or countertrade):

- I. If planned non-availability of a critical branch is required to enable the increase of capacity of the critical branch.
- II. If the critical branch is temporarily not available.
- III. If there is an unplanned outage of a critical branch.
- IV. If the scheduled transport on the critical branch exceeds security limits.

These situations are further explained in the following sections:

- I. Expansion of capacity of critical branches

TenneT is planning to increase the capacity of a significant number of critical branches. It is expected that these capacity increases require certain periods of planned non-availability (planned outage) for these critical branches as the expansion work needs to be conducted with these branches disconnected from the operating network.

Naturally TenneT plans to perform these activities when the market does not require this capacity, however TenneT expects that this will not be possible in all situations. Increasing the capacity of existing branches is a complex process which requires relatively long periods in which the relevant assets are disconnected from the operating network.

Any costs arising from the application of costly measures such as redispatch and/or countertrade to allow investments in the increase of capacity of critical branches are funded through the cross-border congestion revenues, as they contribute to the primary goals of the regulation to increase and maintain the cross-border capacity.

II. Temporary non-availability of a critical branch (planned outage)

In case a critical branch is temporarily not available due to planned work, for instance maintenance, it will be disconnected from the operating network. As the work contributes to maintain the cross border and/or critical branch capacity, the associated redispatch and/or countertrade costs will be funded from the cross-border congestion revenues.

III. Temporary not foreseen non-availability (unplanned outage)

In case there is unforeseen non-availability of a critical branch, TenneT needs to take action to ensure that the network returns to a normal state which is characterised by operational security limits. These measures contribute to maintaining the planned use of the critical branch and thus to guaranteeing the already allocated cross-border capacity. Any costs arising from these measures can thus be funded from the cross-border congestion revenues.

IV. Scheduled transport on the critical branch exceeds operational security limits

It is the intention of the Flow Based Methodology to maximise cross-border capacity provided to the market, while respecting a secure operation of the transmission grid. The flow based market coupling algorithm respects actual limitations in the transmission grid and takes them into account while calculating the cross-border capacity. This is a complex process which applies amongst other things Flow Reliability Margins (FRM) and takes into account the already allocated long term transmission capacity (LTA inclusion).

The FRM for instance is determined based on statistical methods. The method does not consider the 10% of most extreme deviations when setting the margin. This could result in overloads on specific critical branches in the operational time frame even when the methodology aims not to provide more capacity than is physically secure. The allocated capacity could also breach the operational security limits for a number of other reasons for instance due to the LTA inclusion.

These examples demonstrate that even with the application of the Flow Based Methodology it is still possible to have overloads on critical branches in the operational time frame.

As TenneT should comply with the operational security limits these overloads may result in redispatch or other actions in the day-ahead, intra-day or real timeframe. The costs of the associated actions will be funded with cross-border congestion revenues, as they contribute to guaranteeing already allocated cross-border capacity.

The redispatch costs related to critical branches can be allocated to the abovementioned categories as follows:

Cat.	Description	Amount 2021 (in EUR million)	
I	Expansion of capacity of critical branches	EUR	172.2
II	Temporary non-availability of a critical branch (planned outage)	EUR	6.1
III	Temporary not foreseen non-availability (unplanned outage)	EUR	-
IV	Scheduled transport on the critical branch exceeds operational security limits	EUR	120.5
Total		EUR	298.8

2.4.4 Interest costs

An amount of EUR 0.9 million has been withdrawn in 2021 for interest paid over the balance congestion revenues (interest rates applied in 2021 were negative). This withdrawal is in accordance with article 19.2a of the Regulation.

3. COVID-19 impact

In March 2020 Europe was confronted with the outbreak of COVID-19. Several teams within TenneT were handling the situation: a crisis team, a business continuity team and a plan ahead team. TenneT managed to keep our system operations, field operations and projects running in very good order, despite challenging conditions. During 2021, COVID-19 had no material impact on the financial figures of TenneT.