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Report to the European Commission on the implementation of the ITC mechanism in 2017

October 2018

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1 Introduction

Pursuant to point 1.4 of Annex Part A of Commission Regulation (EU) No 838/2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging¹ (the “Regulation”), the Agency for the Cooperation of Energy Regulators (the “Agency”) is responsible, since 2012, for preparing a yearly monitoring report on the implementation of the Inter-Transmission System Operator Compensation (“ITC”) mechanism and the management of the ITC Fund. The data and information used for compiling this Report² were provided by the European Network of Transmission System Operators for Electricity (“ENTSO-E”).

The ITC scheme, defined by the Regulation, was implemented on 3 March 2011. Under the Regulation, the ITC Fund was established by ENTSO-E for the purpose of compensating transmission system operators (“TSOs”) for the costs incurred on national transmission systems due to the hosting of cross-border flows of electricity (“transits”). The ITC Fund consists of two parts, which aim at covering, respectively, the costs of the incurred transmission losses and the costs of making infrastructure available. TSOs participating in the ITC mechanism (“ITC Parties”) receive compensation from the ITC Fund based on the transits they carry and contribute to the ITC Fund based on their net import and export flows. Non-participating countries connected to the ITC Parties (“Perimeter countries”³) pay a transmission system use fee for their scheduled imports from and scheduled exports to the ITC Parties’ networks.

The implementation of the provisions of the Regulation regarding the ITC mechanism and the management of the ITC Fund is carried out by ENTSO-E through the legal framework of the ITC Clearing and Settlement Multi-Year Agreement (“ITC Agreement”) concluded on 9 February 2011 and currently comprises 35 ITC Parties⁴. The ITC Agreement contractually sets out ENTSO-E’s and ITC Parties’ duties and entitlements. It also sets out detailed ITC procedures, including the submission, audit and validation of data, calculation of compensation and contribution amounts, and the clearing and settlement of the ITC Fund.

The Agency has reviewed the implementation of the ITC mechanism and the management of the ITC Fund in 2017 based on:

- The ITC Agreement and its amendments;
- Relevant data and information from ENTSO-E in relation to the implementation of the ITC mechanism in 2017.

¹ OJ L 250, 24.9.2010, p.5

² The previous ACER ITC Monitoring Reports (regarding ITC implementation in years 2011-2016) are available at the Agency’s website: http://www.acer.europa.eu/Official_documents/Publications/Pages/Publication.aspx

³ Belarus, Moldova, Morocco, Russian Federation, Turkey and Ukraine

⁴ All EU Member States including Northern Ireland (as a separate ITC party) except Cyprus and Malta and the following third countries: Albania, Bosnia and Herzegovina, Kosovo, FYR of Macedonia, Montenegro, Norway, Serbia and Switzerland

2 Review of the 2017 ITC implementation

2.1 Alignment between the 2017 ITC implementation and the Regulation

Since no major amendments to the ITC Agreement were introduced in 2017⁵, the Agency concludes that the general arrangements are still in line with the guidelines set out in the Regulation.

2.2 Accuracy of data

Through the ITC Agreement, two TSOs (Amprion GmbH and Swissgrid ag) are appointed as 'ITC Data Administrators' to manage relevant data and to carry out the clearing and settlement. The ITC Agreement includes yearly and monthly data audits and/or validation procedures involving all ITC Parties⁶. Based on the information provided by ENTSO-E, the ITC parties' own revision of the submitted data resulted in three changes in costs of losses values (for Bosnia, the Netherlands and Switzerland) with accompanying explanatory notes: updated values following NRAs' approval or losses tendering process. ITC Parties' requests to other ITC Parties to provide explanation on the information provided resulted in one additional change in Schedule X (Table of losses costs) for Denmark. In a letter dated 1 August 2018, ENTSO-E submitted to the Agency data relating to the implementation of the ITC mechanism in 2017, marked as preliminary, as well as some relevant descriptive information⁷. On 2 October 2018, ENTSO-E informed the Agency that all final settlements (including the netted final settlement for July-December 2017) have been signed by all ITC Parties and confirmed that the data provided on 1 August are the final data.

The Agency regards that the self-governance arrangement in the operation of the ITC mechanism is in principle an appropriate approach and ought to be sufficient for assuring the accuracy of the operation of the ITC mechanism. Therefore, the Agency does not consider it necessary for its own review to conduct a detailed audit or validation of all the input and intermediate data used in the operation of the 2017 ITC mechanism. The Agency reminds that in its Report to the European Commission on the implementation of the ITC mechanism in 2017, it noted that there might be scope for strengthening the quality assurance process in the ITC settlement process and, possibly, explicitly to address the issue of correction in data after the signed settlements. The Agency recommends ENTSO-E promptly to provide all due information pursuant to point 1.4 of Annex Part of the Regulation, should ENTSO-E decide to take any actions for amending the ITC rules in this regard.

⁵ Amendments in the ITC Agreement were made for: Updated schedules due to results of the last ITC audit and yearly updates; Schedule O (Ex-Ante Financial Spreadsheet), Schedule P (ENTSO-E convention on Business Day), Schedule T (List of yearly Vertical Loads), Schedule U (List of lines and measurement points) and Schedule X (Table of losses costs); Technical amendments taken pursuant to Article 7.4.2 of the ITC Agreement and adopted by means of a written notice of the Data Administrators.

⁶ Before the year's settlement begins, a yearly audit of the vertical load, the costs of losses and the capacity not allocated in a manner compatible with Congestion Management Guidelines is carried out. During the year, before the monthly settlements are issued, several data validation procedures are performed involving all ITC Parties.

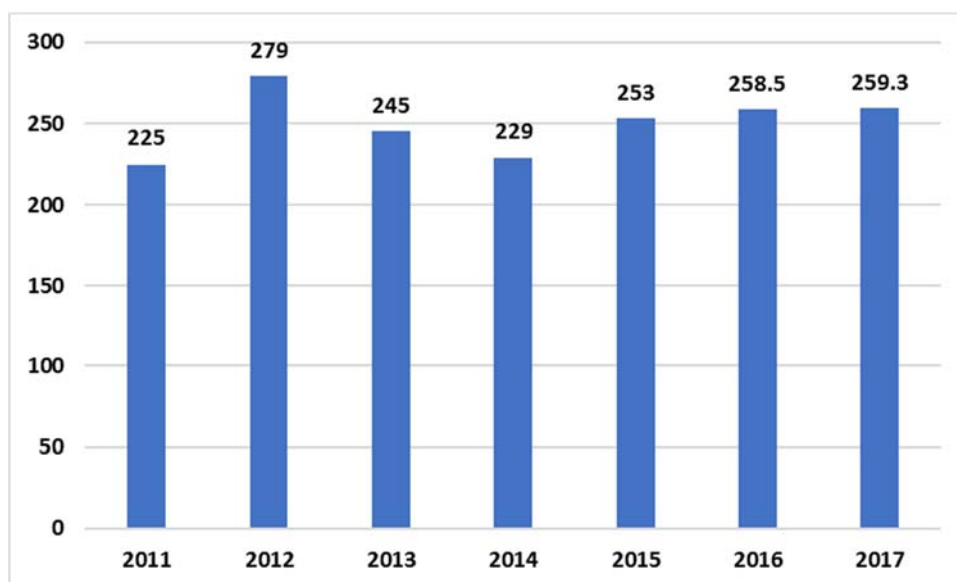
⁷ ENTSO-E provided explanations or description of the results for: the calculation of the perimeter country fee; transit reduction and explanations regarding each border where transits are reduced due to the allocation of capacity on interconnections which is not compatible with point 2 of the guidelines of Annex 1 of Regulation 714/2009 (ref. clause 1.6); results of the yearly audit process in terms of identified errors and measures taken for their correction; the amendments of the ITC Agreement; and the decisions on value of losses in non-EU countries.

2.3 ITC Fund in 2017

In 2017, the ITC Fund amounted to €259.3 million, consisting of €100 million related to the costs of the transmission infrastructure which is made available for transits and €159.3 million related to the costs of the incurred transmission losses due to transits. Of the total ITC Fund, €247.2 million were recovered through contributions from the ITC Parties and the remaining €12.1 million through the Perimeter countries' fees.

As shown in Figure 1, the upward trend of the ITC Fund amount observed from 2015 continued, although in 2017 the ITC Fund increased only by 0.3% compared to 2016. The small increase is due to a 0.5% increase of the losses component.

Figure 1. Amount of the ITC Fund (2011-2017) in €million



An overview of the compensations drawn from, and contributions made to the 2017 ITC Fund by the ITC Parties is provided in Table 5 in the Annex. It also shows the contributions from Perimeter countries collected through their directly-connected ITC Parties.

2.4 Reduction of transits

Under the Regulation, the transits of electricity carried by an ITC Party are a key input for the determination of the compensation amount the ITC Party is entitled to receive from the ITC Fund (see more details in Sections 2.5 of this Report). Point 1.6 of Annex Part A of the Regulation requires that, for the purpose of calculating transits, the amount of imports and exports at each interconnection between the ITC Parties is reduced in proportion to the share of capacity allocated in a manner which is not compatible with the congestion management methods set out in Point 2 of Annex I of Regulation (EC) No 714/2009⁸.

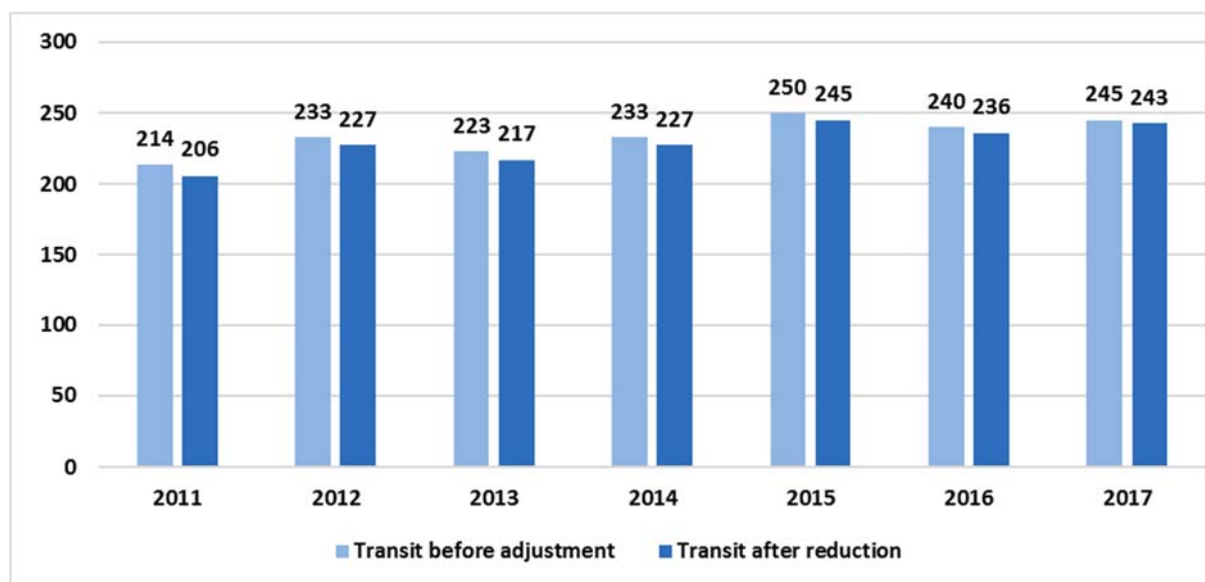
⁸ OJ L 211, 14.8.2009, p.15, Regulation (EC) No 714/2009 of the European Parliament and of the Council on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003. Point 2.1 of Annex I of Regulation (EC) No 714/2009 stipulates that "capacity shall be allocated only by means of explicit (capacity) or implicit (capacity and energy) auctions".

The Agency notes that ENTSO-E took the following steps in line with the definition in the Regulation related to transits reductions:

- The affected ITC Parties indicated, for each concerned border, the overall exports and imports, as well as the schedules allocated in a manner which is not compatible with point 2 of the Guidelines on congestion management set out in Annex I of Regulation (EC) No 714/2009;
- The ITC Data Administrators translated this information into the amount by which the relevant transit needs to be reduced; and
- The reduced transit represented the basis for calculating the compensation amounts relating to both the infrastructure and the losses parts of the ITC Fund.

Table 1 in the Annex provides a summary of the transits through each ITC Party's network before and after such reductions. In 2017, two borders (France - Switzerland and Switzerland - Italy) were affected by the reduced transits⁹, due to the existence of long-term priority contracts. On both borders, the capacity which is not allocated in a manner compatible with the congestion management methods decreased compared to the previous year. The capacity which is not allocated in a manner compatible with the congestion management methods was significantly decreased in the direction from Switzerland to Italy due to the expiration of a long-term contract (for 450 MW) at the end of 2016 and it was slightly decreased in the direction from France to Switzerland due to the partial expiration of a long term contract (for 53 MW) in October 2016. Overall, these developments contributed to a further significant decrease of the deducted amount from transits (5.4 TWh in 2015, 3.9 TWh in 2016 and about 1.9 TWh in 2017). In 2017, the amount of transits after reduction is 242.7 TWh. A comparison of transits before and after reduction in the period 2011-2017 is provided in Figure 2.

Figure 2. Amount of transits before and after reduction (2011-2017) in TWh



Note: The values in the Figure are rounded up.

2.5 Compensation for transmission losses

⁹ In the direction France to Switzerland, around 67% of the total scheduled exchanges is allocated in a manner which is not compatible with Point 2 of the guidelines on congestion management set out in Annex I of Regulation (EC) No 714/2009. This percentage amounts to 2% in the direction Switzerland to Italy.

Point 4 of Annex Part A of the Regulation defines the key steps for calculating the amount of compensation to be received by an ITC Party for transmission losses incurred by carrying cross-border flows of electricity. These are summarised below:

- a) The physical amount of the relevant losses must be calculated by ENTSO-E based on the difference between actual losses with transits and estimated losses without transits on the ITC Party's network; and
- b) The value of losses incurred by a national system as a result of transits shall be calculated on the same basis as those approved by the respective NRA in respect of all losses on the national transmission system. Where the relevant NRA has not approved the basis for the calculation of losses, ENTSO-E is required to estimate the value of losses for the purpose of the ITC mechanism.

ENTSO-E sets out the detailed method for the calculation of the volume of losses in the ITC Agreement. Based on the review of the ITC Agreement and the dataset submitted by ENTSO-E, the Agency is able to confirm that this aspect of the implementation of the ITC mechanism is in line with the definition in the Regulation.

Table 2 in the Annex provides a summary of the volume of annual losses in the ITC Parties' networks due to transits, the values of losses adopted by them, and the compensation received from the ITC Fund in 2017.

The Regulation requires ENTSO-E to publish the calculation of the volume of losses and its method. The Agency notes that, on 27 September 2018, ENTSO-E published the calculation method and the results for 2017¹⁰.

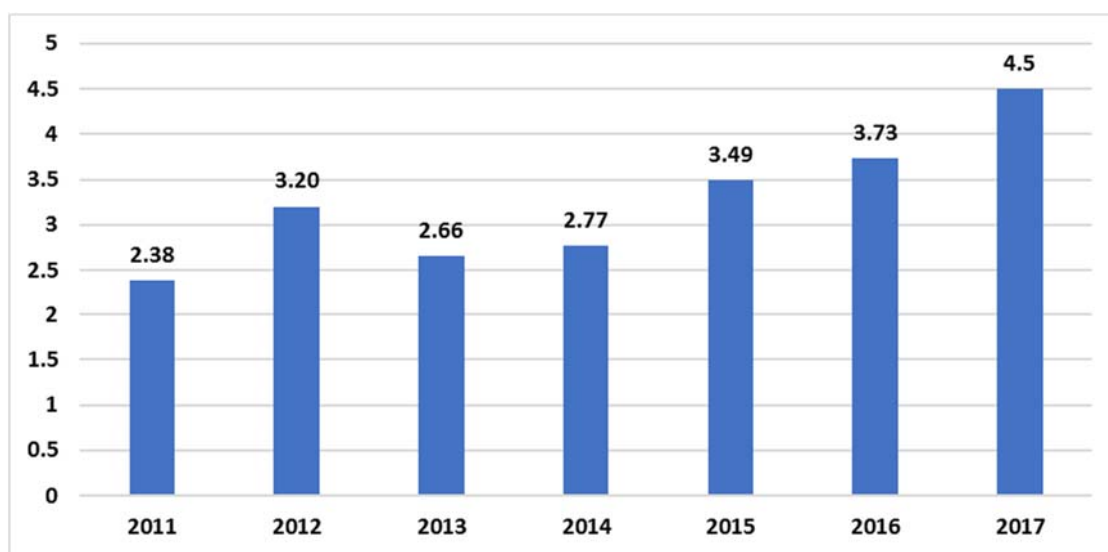
In 2017, the losses component of the ITC Fund further increased slightly to €159.3 million, from €158.4 million in 2016 (a 0.5% increase). This slight increase is the combined impact of, on the one hand, a significant increase (by 20.8% of the volume of transmission losses due to transits (from ca. 3.73 TWh in 2016 to ca. 4.5 TWh in 2017 as shown in Figure 3)¹¹ and, on the other hand, a significant decrease of the average value of losses, weighted by the volumes of losses as described in Section 2.7 below.

¹⁰ ITC Transit Losses Data Report 2017

https://docstore.entsoe.eu/Documents/MC%20documents/ITC_Transit_Losses_Data/entso-e_ITC_transit_losses_data_report_2017_180927.pdf

¹¹ Since the volume of transits of the ITC Parties only slightly increased, the increase in the value of the transmission losses due to transits is attributed mainly to differences in the location of the importing tie-lines and exporting tie-lines and in the network topology.

Figure 3. Volume of transmission losses due to transits (2011-2017) in TWh



The impact of transits on the volume of losses (MWh) for each of the 35 ITC Parties including 27 ITC Parties from 26 EU Member States (“EU ITC Parties”) is shown in Table 2 in the Annex.

2.6 Criteria for valuing losses and its approval

Pursuant to point 4 of Annex Part A of the Regulation, the value of losses incurred by a national transmission system as a result of the cross-border flows of electricity shall be calculated on the same basis as that approved by the regulatory authority in respect of all losses on the national transmission system. The Agency shall verify the criteria for the valuation of losses at national level taking particular account that losses are valued in a fair and non-discriminatory way.

The Agency’s detailed review of the criteria for the valuation of losses at national level, based on the information on the criteria for valuing losses received from all NRAs of the EU ITC Parties, as well as from the NRAs of Norway and Switzerland is provided in the Agency’s Report on the implementation of the ITC mechanism in 2016¹².

2.7 Values of Losses

As described in previous editions of the ITC monitoring report, the differences of energy prices for different products in different markets and from auctions and bilateral contracts resulted in a broad range of values of losses for the EU ITC Parties. The difference between the lowest and highest values, after a decrease in 2016, increased in 2017. The difference in 2016 between the lowest and highest value was 31.2 €/MWh (28.8 €/MWh in Denmark and 60 €/MWh in Greece), while in 2017 this value was 40.6 €/MWh (i.e. difference between 25.4 €/MWh in Luxemburg and 66 €/MWh in Great Britain). However, the value of losses for

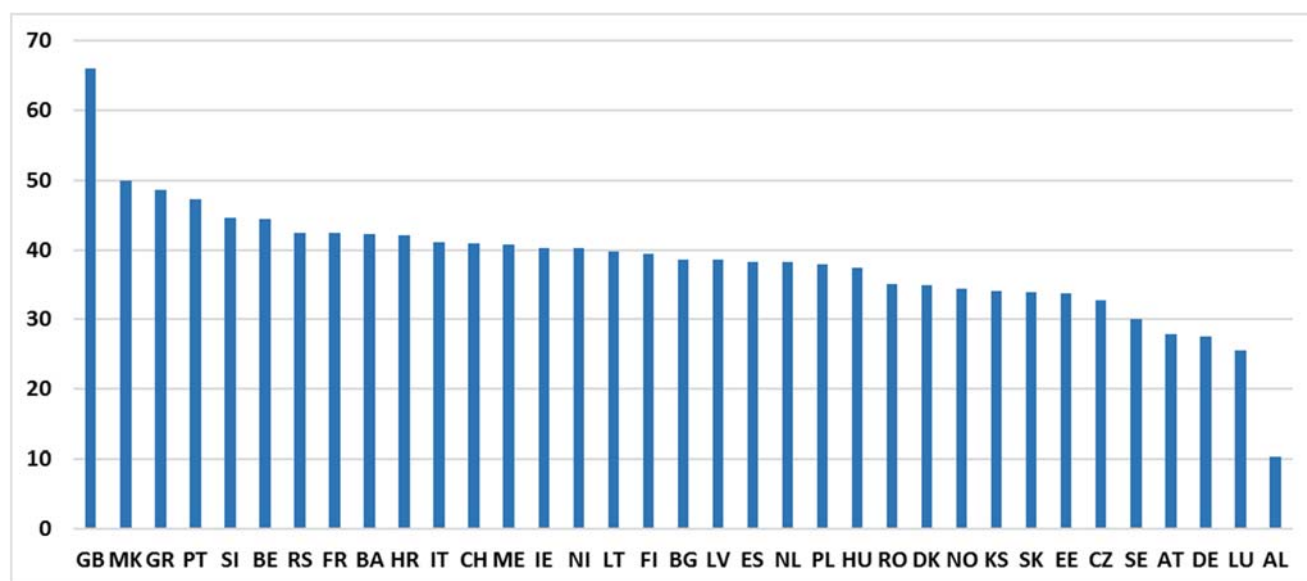
¹² Agency’s Report to the European Commission on the implementation of the ITC mechanism in 2016 (Section 2.6)

https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ITC%20Monitoring%20Report%202017.pdf

the EU ITC Parties shows a downward trend. In 2017, for 22 out of the 27 EU ITC Parties the value of losses decreased, for one EU ITC Party it remained the same, and for 4 it increased compared to 2016¹³.

The Agency also reviewed the relevant values set for the ITC Parties from third countries (“non-EU ITC Parties”). The Agency notes that Albania’s value of losses of 10.35 €/MWh, which is based on regulated price set for the TSO to cover losses, is still significantly lower than the values provided by other ITC Parties¹⁴. Figure 4 shows the value of losses in 2017 for each individual ITC party.

Figure 4 - Values of losses in 2017



The Agency notes that the average value of losses for the EU ITC Parties, weighted by the volumes of losses, was 34.67 €/MWh in 2017, which is 17% lower than in 2016 (i.e. 42.13 €/MWh). In contrast, the weighted average value of losses for ITC Parties from third countries slightly increased from 48.43 €/MWh to 49.1 €/MWh. These developments resulted in a 42% higher weighted average value for the non-EU ITC Parties compared to the EU ITC Parties in 2017¹⁵.

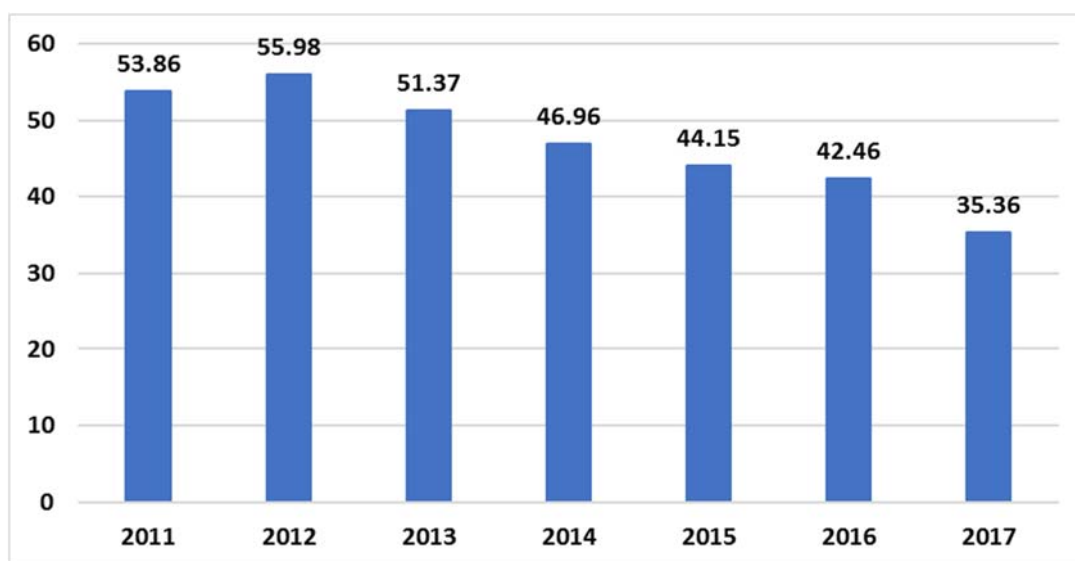
In 2017, the weighted average value of losses for all ITC Parties was 35.36 €/MWh, which was the lowest figure of the weighted average value of losses registered in the last seven years as shown in Figure 5.

¹³ Comparison of the 2016 and 2015 values of losses for the ITC Parties show the same statistical results. (i.e. in 2016, for 22 out of the 27 EU ITC Parties, the value of losses decreased, for one EU ITC Party it remained the same, and for 4 it increased compared to 2015)

¹⁴ ENTSO-E indicated that in accordance with the Decisions of ERE Board of Commissioners No 190 of 22.12.2016 and No 194 of 30.12.2016, the Albanian TSO (OST) shall purchase electricity from KESH Gen (Public Generation Company) as needed to cover transmission grid losses with regulated price of 1450 ALL/MWh (approx. 10.35 €/MWh using the average exchange rate for 2016).

¹⁵ The weighted average value for the non-EU ITC parties was 11% higher than the weighted average value for the EU ITC parties in 2015, and 15% higher in 2016.

Figure 5. Volume-weighted average value of losses for all ITC Parties (2011-2017) in €/MWh



2.8 Compensation for cross-border infrastructure

Point 5 of Annex Part A of the Regulation defines the key parameters for calculating the amount of compensation that an ITC Party should receive for the provision of infrastructures to carry cross-border flows of electricity. These are summarised below:

- a) The annual cross-border infrastructure sum is set at €100 million until determined otherwise by the European Commission; and
- b) The Transit Factor and Load Factor are used to apportion the above sum to each ITC Party. The Transit Factor refers to the amount of transits carried by an ITC Party as a proportion of the total transits carried by all ITC Parties. The Load Factor refers to the relative amount of transits measured by the square of transits divided by the level of the load plus transits in proportion to the relative amount of transits for all ITC Parties. In apportioning the infrastructure compensation amount for an ITC Party, the Transit Factor has a weighting of 75% and the Load Factor of 25%.

Based on the review of the ITC Agreement and the final dataset submitted by ENTSO-E, the Agency is able to confirm that the compensation amounts relating to the provision of cross-border infrastructures were derived according to the above requirements.

Table 3 in the Annex provides a summary of the annual amount each ITC Party received in 2017 based on their Transit Factors and Load Factors.

2.9 Contributions to the ITC Fund

Point 6 of Annex Part A of the Regulation sets out that each ITC Party shall contribute to the ITC Fund based on its share of the total absolute amount of Net Imports and Net Exports of all ITC Parties.

Point 7 of Annex Part A of the Regulation sets out that an ITC Party shall levy a transmission system use fee on all scheduled imports and exports between its national transmission

system and that of a Perimeter country. Because the collection of the Perimeter countries' contributions is governed by a series of bilateral contracts, which are renewed annually in most cases, ENTSO-E is required to calculate this Perimeter countries' fee each year in advance based on projected flows for the relevant year. The Perimeter countries' fee for 2017 was calculated and approved by ENTSO-E at the value of 0.5 €/MWh.

Based on the review of the ITC Agreement and the final dataset submitted by ENTSO-E, the Agency is able to confirm that the ITC Parties' contribution amounts were derived according to the requirements of points 6 and 7 of Annex Part A of the Regulation. The relevant ITC Parties also collected contributions from Perimeter countries with which they have direct connections.

ENTSO-E's calculation of the Perimeter countries' fee was based on the equivalent losses and infrastructure compensation for historical flows of the previous year¹⁶. According to ENTSO-E, this is the best possible projection for flows in the subsequent year. The Agency notes that the Perimeter countries' fee after a continued decrease over the past years¹⁷ remained stable at 0.5 €/MWh in 2017 compared to 2016.

Table 4 in the Annex provides a summary of the annual Net Import, Net Export and the contribution amount each ITC Party paid into the ITC Fund in 2017, including the contribution it made on behalf of Perimeter countries it had a direct connection with. The Agency notes that the contribution by Perimeter countries, which showed a downward trend since 2011, slightly increased between 2016 and 2017 in terms of value, from €11.24 million to €12.12 million (as shown in Figure 6), and remained stable in terms of share to the ITC Fund, which is ca. 4.5%.

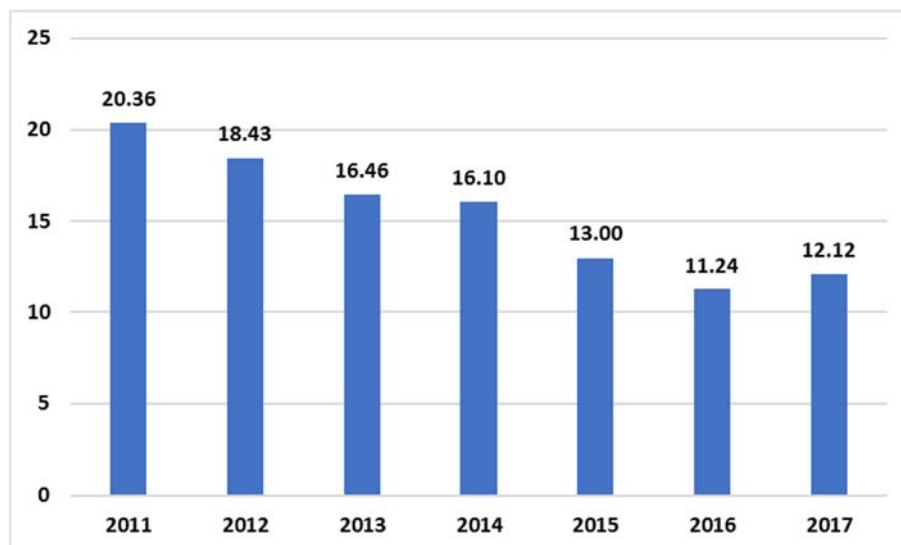
¹⁶The perimeter fee has two elements; a loss-related component and a Framework Fund component, which are summed and round to a single decimal place to create the perimeter fee:

- the losses-related fee is calculated by dividing the WWT(With and Without Transit) Fund size by the sum of scheduled import and export flows plus the sum of net import and net export flows; and
- the Framework Fund related fee is calculated by dividing the total contribution (100 million at present) by the sum of scheduled import and export flows plus the sum of net import and net export flows.

This value is produced in January each year based on losses costs and vertical load data collected from ITC parties. The Perimeter fee is calculated on the basis of unaudited data (for timing reasons) and it is rounded to a single decimal.

¹⁷ The perimeter country fee was 0.5 €/MWh in 2016, 0.6 €/MWh in 2015, 0.7 €/MWh in 2014 and 2013, 0.8 €/MWh in 2012 and 2011).

Figure 6. Contributions to the ITC Fund by Perimeter countries (2011-2017) in million €



2.10 Treatment of third countries

The Agency notes that the ITC Agreement has not changed regarding the treatment of ITC Parties, thus the former findings of the Agency are still valid. In 2012, the Agency noted that the ITC Agreement makes no distinction between categories of ITC Parties, whether participating on a compulsory or voluntary basis under point 2 of Annex Part A of the Regulation or through voluntary multi-party agreements under point 3. Therefore, the Agency concluded that the requirements of points 3.2 and 3.4 of Annex Part A of the Regulation are met.

3 Summary of the findings

The Agency concludes that the implementation of the ITC mechanism and the management of the ITC Fund in 2017 continues to be in line with the requirements set out in the Regulation.

With regard to specific aspects of the implementation of the ITC mechanism in 2017, the major findings include the following:

- The ITC Fund remained relatively stable compared to 2016, amounting to €259.35 million, out of which the losses component increased only by 0.5% compared to 2016.
- While the volume of losses due to transits significantly increased (by 20%), its rising impact on the losses component of the ITC Fund was almost fully compensated by a remarkable reduction of the weighted average value of losses for the ITC Parties.
- The weighted average value of losses for the 2017 ITC mechanism dropped by 16.7% from 42.46 €/MWh in 2016 to 35.36 €/MWh in 2017, which is the lowest figure registered since 2011.
- In 2017, the Perimeter countries' fee remained stable at 0.5 €/MWh after several years in which it decreased. The absolute contribution of the Perimeter countries to the ITC Fund slightly increased, but their relative contribution remained stable compared to 2016.

Annex – Tables and Figures

Please note that while the actual ITC settlement is in Euro cents, the tables below present all monetary values in millions of Euros rounded to three decimal places.

Table 1 Reduction in Transits

| ITC Party | Transits before adjustment (MWh) | Reduction due to non-auctioned interconnection capacity (MWh) | Transits after reduction (MWh) |
|-----------------------|----------------------------------|---|--------------------------------|
| Albania / AL | 414,960 | 0 | 414,960 |
| Austria / AT | 21,416,552 | 0 | 21,416,552 |
| Belgium / BE | 6,424,350 | 0 | 6,424,350 |
| Bosnia / BA | 3,109,649 | 0 | 3,109,649 |
| Bulgaria / BG | 3,671,464 | 0 | 3,671,464 |
| Croatia / HR | 4,747,364 | 0 | 4,747,364 |
| Czech Rep. / CZ | 14,529,427 | 0 | 14,529,427 |
| Denmark / DK | 8,343,167 | 0 | 8,343,167 |
| Finland / FI | 2,148,113 | 0 | 2,148,113 |
| France / FR | 16,385,434 | 680,238 | 15,705,196 |
| Germany / DE | 26,153,468 | 0 | 26,153,468 |
| Great Britain / GB | 2,349,463 | 0 | 2,349,463 |
| Greece / GR | 2,242,349 | 0 | 2,242,349 |
| Hungary / HU | 6,924,767 | 0 | 6,924,767 |
| Ireland / IE | 274,834 | 0 | 274,834 |
| Italy / IT | 3,273,815 | 5,620 | 3,268,195 |
| Estonia / EE | 2,203,668 | 0 | 2,203,668 |
| Kosovo / KS | 1,551,450 | 0 | 1,551,450 |
| Latvia / LV | 3,043,554 | 0 | 3,043,554 |
| Lithuania / LT | 3,248,754 | 0 | 3,248,754 |
| Luxembourg/LU | 37,873 | 0 | 37,873 |
| FYROM / MK | 2,226,278 | 0 | 2,226,278 |
| Montenegro / ME | 2,063,827 | 0 | 2,063,827 |
| Netherlands / NL | 15,969,427 | 0 | 15,969,427 |
| Northern Ireland / NI | 488,137 | 0 | 488,137 |
| Norway / NO | 2,951,342 | 0 | 2,951,342 |
| Poland / PL | 8,733,204 | 0 | 8,733,204 |
| Portugal / PT | 2,567,495 | 0 | 2,567,495 |
| Romania / RO | 2,175,192 | 0 | 2,175,192 |
| Serbia / RS | 4,880,685 | 0 | 4,880,685 |
| Slovakia / SK | 12,303,583 | 0 | 12,303,583 |
| Slovenia / SI | 8,385,119 | 0 | 8,385,119 |
| Spain / ES | 11,246,839 | 0 | 11,246,839 |
| Sweden / SE | 13,177,166 | 0 | 13,177,166 |
| Switzerland / CH | 25,017,570 | 1,280,595 | 23,736,975 |
| TOTAL | 244,680,341 | 1,966,453 | 242,713,888 |

Table 2 Derivation of compensation for transmission losses

| ITC Party | 2016 | | | 2017 | | |
|-----------------------|---|-------------------------|-------------------------|---|-------------------------|-------------------------|
| | Impact of Transits on losses volume (MWh) | Value of losses (€/MWh) | Compensation (€million) | Impact of Transits on losses volume (MWh) | Value of losses (€/MWh) | Compensation (€million) |
| Albania / AL | -1,073 | 10.35 | -0.011 | -550 | 10.35 | -0.006 |
| Austria / AT | 153,091 | 33.64 | 5.150 | 230,324 | 27.88 | 6.421 |
| Belgium / BE | 120,140 | 44.44 | 5.339 | 95,839 | 44.44 | 4.259 |
| Bosnia / BA | 35,302 | 48.60 | 1.716 | 32,240 | 42.30 | 1.364 |
| Bulgaria / BG | 58,315 | 34.17 | 1.993 | 54,414 | 38.74 | 2.108 |
| Croatia / HR | 88,064 | 46.07 | 4.057 | 57,505 | 42.21 | 2.427 |
| Czech Rep. / CZ | 209,794 | 36.25 | 7.605 | 249,706 | 32.79 | 8.188 |
| Denmark / DK | 270,387 | 28.80 | 7.787 | 334,158 | 34.94 | 11.675 |
| Finland / FI | 175,991 | 43.88 | 7.722 | 96,234 | 39.48 | 3.799 |
| France / FR | 534,145 | 50.61 | 27.033 | 437,515 | 42.45 | 18.573 |
| Germany / DE | 379,401 | 40.00 | 15.176 | 926,535 | 27.51 | 25.489 |
| Great Britain / GB | 40,605 | 55.30 | 2.245 | 19,182 | 66.08 | 1.268 |
| Greece / GR | 14,515 | 60.00 | 0.871 | 29,658 | 48.70 | 1.444 |
| Hungary / HU | 33,028 | 38.01 | 1.255 | 54,074 | 37.60 | 2.033 |
| Ireland / IE | -49 | 48.92 | -0.002 | 0 | 40.33 | 0.000 |
| Italy / IT | -2,686 | 53.43 | -0.143 | 6,135 | 41.12 | 0.252 |
| Estonia / EE | 105,910 | 33.85 | 3.585 | 91,270 | 33.78 | 3.083 |
| Kosovo / KS | 18,100 | 28.24 | 0.511 | 17,189 | 34.11 | 0.586 |
| Latvia / LV | 57,123 | 43.81 | 2.503 | 61,888 | 38.73 | 2.397 |
| Lithuania / LT | 110,913 | 45.20 | 5.013 | 79,561 | 39.90 | 3.174 |
| Luxembourg/ LU | 0 | 34.27 | 0.000 | 602 | 25.48 | 0.015 |
| FYROM / MK | 18,956 | 50.00 | 0.948 | 11,317 | 50.00 | 0.566 |
| Montenegro / ME | 3,327 | 47.92 | 0.159 | 7,568 | 40.84 | 0.309 |
| Netherlands / NL | 102,404 | 45.75 | 4.685 | 160,062 | 38.34 | 6.137 |
| Northern Ireland / NI | 1,797 | 48.92 | 0.088 | 2,221 | 40.33 | 0.090 |
| Norway / NO | 30,636 | 21.48 | 0.658 | 10,672 | 34.56 | 0.369 |
| Poland / PL | 194,358 | 41.28 | 8.023 | 178,268 | 38.07 | 6.787 |
| Portugal / PT | 40,832 | 49.22 | 2.010 | 26,899 | 47.34 | 1.273 |
| Romania / RO | -14,776 | 37.61 | -0.556 | -40,117 | 35.20 | -1.412 |
| Serbia / RS | 58,323 | 46.53 | 2.714 | 51,304 | 42.46 | 2.178 |
| Slovakia / SK | 55,500 | 41.13 | 2.283 | 96,225 | 33.96 | 3.268 |
| Slovenia / SI | 62,761 | 44.60 | 2.799 | 80,874 | 44.61 | 3.608 |
| Spain / ES | 255,176 | 50.37 | 12.853 | 260,170 | 38.37 | 9.983 |
| Sweden / SE | 201,468 | 37.46 | 7.547 | 419,557 | 30.00 | 12.587 |
| Switzerland / CH | 316,570 | 46.88 | 14.841 | 366,633 | 41.07 | 15.058 |
| TOTAL | 3,728,349 | N/A | 158.457 | 4,505,135 | N/A | 159.351 |

Table 3 Derivation of compensation for cross-border infrastructure

| ITC Party | Transits (MWh) | Load* (GWh) | Transit Factor based compensation (€million) | Load Factor based compensation (€million) | Total Infrastructure compensation (€million) |
|----------------------|--------------------|------------------|--|---|--|
| Albania / AL | 414,960 | 6,716 | 0.128 | 0.012 | 0.140 |
| Austria / AT | 21,416,552 | 31,624 | 6.618 | 4.350 | 10.968 |
| Belgium / BE | 6,424,350 | 68,168 | 1.985 | 0.278 | 2.264 |
| Bosnia / BA | 3,109,649 | 11,719 | 0.961 | 0.328 | 1.289 |
| Bulgaria / BG | 3,671,464 | 29,789 | 1.135 | 0.203 | 1.337 |
| Croatia / HR | 4,747,364 | 16,830 | 1.467 | 0.525 | 1.992 |
| Czech Rep. / CZ | 14,529,427 | 35,475 | 4.490 | 2.124 | 6.613 |
| Denmark / DK | 8,343,167 | 21,388 | 2.578 | 1.178 | 3.756 |
| Finland / FI | 2,148,113 | 62,321 | 0.664 | 0.036 | 0.700 |
| France / FR | 15,705,196 | 420,247 | 4.853 | 0.285 | 5.138 |
| Germany / DE | 26,153,468 | 282,349 | 8.082 | 1.115 | 9.197 |
| Great Britain / GB | 2,349,463 | 282,300 | 0.726 | 0.010 | 0.736 |
| Greece / GR | 2,242,349 | 46,716 | 0.693 | 0.052 | 0.745 |
| Hungary / HU | 6,924,767 | 33,360 | 2.140 | 0.599 | 2.739 |
| Ireland / IE | 274,834 | 27,566 | 0.085 | 0.001 | 0.086 |
| Italy / IT | 3,268,195 | 244,196 | 1.010 | 0.022 | 1.032 |
| Estonia / EE | 2,203,668 | 7,443 | 0.681 | 0.253 | 0.934 |
| Kosovo / KS | 1,551,450 | 5,553 | 0.479 | 0.170 | 0.650 |
| Latvia / LV | 3,043,554 | 5,803 | 0.940 | 0.527 | 1.467 |
| Lithuania / LT | 3,248,754 | 9,326 | 1.004 | 0.422 | 1.426 |
| Luxembourg / LU | 37,873 | 4,224 | 0.012 | 0.000 | 0.012 |
| FYROM / MK | 2,226,278 | 7,491 | 0.688 | 0.257 | 0.945 |
| Montenegro / ME | 2,063,827 | 3,315 | 0.638 | 0.398 | 1.036 |
| Netherlands / NL | 15,969,427 | 76,749 | 4.935 | 1.384 | 6.318 |
| Northern Ireland/ NI | 488,137 | 8,786 | 0.151 | 0.013 | 0.164 |
| Norway / NO | 2,951,342 | 91,936 | 0.912 | 0.046 | 0.958 |
| Poland / PL | 8,733,204 | 87,457 | 2.699 | 0.399 | 3.097 |
| Portugal / PT | 2,567,495 | 36,503 | 0.793 | 0.085 | 0.878 |
| Romania / RO | 2,175,192 | 34,572 | 0.672 | 0.065 | 0.737 |
| Serbia / RS | 4,880,685 | 28,293 | 1.508 | 0.361 | 1.869 |
| Slovakia / SK | 12,303,583 | 18,347 | 3.802 | 2.485 | 6.286 |
| Slovenia / SI | 8,385,119 | 12,720 | 2.591 | 1.676 | 4.267 |
| Spain / ES | 11,246,839 | 188,653 | 3.475 | 0.318 | 3.794 |
| Sweden / SE | 13,177,166 | 85,999 | 4.072 | 0.881 | 4.953 |
| Switzerland / CH | 23,736,975 | 44,694 | 7.335 | 4.142 | 11.477 |
| TOTAL | 242,713,888 | 2,378,629 | 75.000 | 25.000 | 100.000 |

* This is the total amount of electricity which exits the national transmission system to distribution systems and to end consumers directly connected to the transmission system, as well as to electricity producers for their consumption in the generation of electricity.

Table 4 Derivation of contributions to the ITC Fund

| ITC Party | Net Import (MWh) | Net Export (MWh) | Contribution to infrastructure (€million) | | Contribution to losses (€million) | |
|-----------------------|---------------------|---------------------|---|-----------|--------------------------------------|-----------|
| | | | Perimeter countries | ITC Party | Perimeter countries | ITC Party |
| Albania / AL | 2,988,083 | 73,455 | 0.000 | 0.765 | 0.000 | 1.248 |
| Austria / AT | 9,625,219 | 1,893,762 | 0.000 | 2.877 | 0.000 | 4.695 |
| Belgium / BE | 7,790,185 | 1,229,984 | 0.000 | 2.253 | 0.000 | 3.677 |
| Bosnia / BA | 236,074 | 2,077,316 | 0.000 | 0.578 | 0.000 | 0.943 |
| Bulgaria / BG | 29,796 | 3,597,396 | 0.462 | 0.906 | 0.462 | 1.479 |
| Croatia / HR | 7,409,305 | 30,731 | 0.000 | 1.859 | 0.000 | 3.033 |
| Czech Rep. / CZ | 113,741 | 13,356,686 | 0.000 | 3.365 | 0.000 | 5.491 |
| Denmark / DK | 6,969,426 | 2,271,121 | 0.000 | 2.308 | 0.000 | 3.767 |
| Finland / FI | 14,708,803 | 0 | 1.442 | 3.674 | 1.442 | 5.996 |
| France / FR | 4,075,621 | 42,454,671 | 0.000 | 11.623 | 0.000 | 18.967 |
| Germany / DE | 592,860 | 55,445,930 | 0.000 | 13.999 | 0.000 | 22.843 |
| Great Britain / GB | 17,396,333 | 1,384,760 | 0.000 | 4.692 | 0.000 | 7.656 |
| Greece / GR | 3,748,975 | 218,274 | 0.133 | 0.991 | 0.133 | 1.617 |
| Hungary / HU | 8,424,215 | 1,555 | 0.989 | 2.105 | 0.989 | 3.435 |
| Ireland / IE | 797,092 | 1,483,253 | 0.000 | 0.570 | 0.000 | 0.930 |
| Italy / IT | 39,579,131 | 250,071 | 0.000 | 9.949 | 0.000 | 16.235 |
| Estonia / EE | 109,147 | 1,723,185 | 0.000 | 0.458 | 0.000 | 0.747 |
| Kosovo / KS | 1,081,774 | 694,022 | 0.000 | 0.444 | 0.000 | 0.724 |
| Latvia / LV | 562,584 | 1,059,702 | 0.000 | 0.405 | 0.000 | 0.661 |
| Lithuania / LT | 5,096,840 | 0 | 0.823 | 1.273 | 0.823 | 2.078 |
| Luxembourg / LU | 4,275,170 | 0 | 0.000 | 1.068 | 0.000 | 1.743 |
| FYROM / MK | 1,964,759 | 578 | 0.000 | 0.491 | 0.000 | 0.801 |
| Montenegro / ME | 1,269,347 | 139,440 | 0.000 | 0.352 | 0.000 | 0.574 |
| Netherlands / NL | 6,488,858 | 2,980,296 | 0.000 | 2.365 | 0.000 | 3.860 |
| Northern Ireland / NI | 587,563 | 906,340 | 0.000 | 0.373 | 0.000 | 0.609 |
| Norway / NO | 2,956,795 | 17,202,749 | 0.026 | 5.036 | 0.026 | 8.218 |
| Poland / PL | 3,745,363 | 1,821,817 | 0.225 | 1.391 | 0.225 | 2.269 |
| Portugal / PT | 2,937,607 | 5,622,684 | 0.000 | 2.138 | 0.000 | 3.489 |
| Romania / RO | 469,937 | 3,857,855 | 0.121 | 1.081 | 0.121 | 1.764 |
| Serbia / RS | 1,673,712 | 721,666 | 0.000 | 0.598 | 0.000 | 0.976 |
| Slovakia / SK | 3,253,304 | 45,653 | 0.406 | 0.824 | 0.406 | 1.345 |
| Slovenia / SI | 747,413 | 1,173,053 | 0.000 | 0.480 | 0.000 | 0.783 |
| Spain / ES | 12,513,602 | 2,188,978 | 1.431 | 3.673 | 1.431 | 5.993 |
| Sweden / SE | 176,836 | 19,822,216 | 0.000 | 4.996 | 0.000 | 8.152 |
| Switzerland / CH | 10,987,666 | 4,951,527 | 0.000 | 3.982 | 0.000 | 6.497 |
| TOTAL | 185,383,137 | 190,680,728 | 100.00 | | 159.351 | |

Table 5 Overview of compensation and contribution to the ITC Fund

| (All figures in € million) | Compensation | | Contribution on behalf of Perimeter countries | | Contribution ITC Party | | Final net position |
|-------------------------------|----------------|----------------|--|----------------|------------------------|----------------|--------------------------|
| | losses | infrastructure | losses | infrastructure | losses | infrastructure | |
| Albania / AL | -0.006 | 0.140 | 0.000 | 0.000 | 1.248 | 0.765 | -1.878 |
| Austria / AT | 6.421 | 10.968 | 0.000 | 0.000 | 4.695 | 2.877 | 9.817 |
| Belgium / BE | 4.259 | 2.264 | 0.000 | 0.000 | 3.677 | 2.253 | 0.592 |
| Bosnia / BA | 1.364 | 1.289 | 0.000 | 0.000 | 0.943 | 0.578 | 1.132 |
| Bulgaria / BG | 2.108 | 1.337 | 0.462 | 0.462 | 1.479 | 0.906 | 0.137 |
| Croatia / HR | 2.427 | 1.992 | 0.000 | 0.000 | 3.033 | 1.859 | -0.472 |
| Czech Rep. / CZ | 8.188 | 6.613 | 0.000 | 0.000 | 5.491 | 3.365 | 5.946 |
| Denmark / DK | 11.675 | 3.756 | 0.000 | 0.000 | 3.767 | 2.308 | 9.356 |
| Finland / FI | 3.799 | 0.700 | 1.442 | 1.442 | 5.996 | 3.674 | -8.054 |
| France / FR | 18.573 | 5.138 | 0.000 | 0.000 | 18.967 | 11.623 | -6.880 |
| Germany / DE | 25.489 | 9.197 | 0.000 | 0.000 | 22.843 | 13.999 | -2.156 |
| Great Britain / GB | 1.268 | 0.736 | 0.000 | 0.000 | 7.656 | 4.692 | -10.344 |
| Greece / GR | 1.444 | 0.745 | 0.133 | 0.133 | 1.617 | 0.991 | -0.686 |
| Hungary / HU | 2.033 | 2.739 | 0.989 | 0.989 | 3.435 | 2.105 | -2.745 |
| Ireland / IE | 0.000 | 0.086 | 0.000 | 0.000 | 0.930 | 0.570 | -1.413 |
| Italy / IT | 0.252 | 1.032 | 0.000 | 0.000 | 16.235 | 9.949 | -24.901 |
| Estonia / EE | 3.083 | 0.934 | 0.000 | 0.000 | 0.747 | 0.458 | 2.813 |
| Kosovo / KS | 0.586 | 0.650 | 0.000 | 0.000 | 0.724 | 0.444 | 0.069 |
| Latvia / LV | 2.397 | 1.467 | 0.000 | 0.000 | 0.661 | 0.405 | 2.798 |
| Lithuania / LT | 3.174 | 1.426 | 0.823 | 0.823 | 2.078 | 1.273 | -0.397 |
| Luxembourg / LU | 0.015 | 0.012 | 0.000 | 0.000 | 1.743 | 1.068 | -2.783 |
| FYROM / MK | 0.566 | 0.945 | 0.000 | 0.000 | 0.801 | 0.491 | 0.218 |
| Montenegro / ME | 0.309 | 1.036 | 0.000 | 0.000 | 0.574 | 0.352 | 0.419 |
| Netherlands / NL | 6.137 | 6.318 | 0.000 | 0.000 | 3.860 | 2.365 | 6.230 |
| Northern Ireland / NI | 0.090 | 0.164 | 0.000 | 0.000 | 0.609 | 0.373 | -0.729 |
| Norway / NO | 0.369 | 0.958 | 0.026 | 0.026 | 8.218 | 5.036 | -11.978 |
| Poland / PL | 6.787 | 3.097 | 0.225 | 0.225 | 2.269 | 1.391 | 5.775 |
| Portugal / PT | 1.273 | 0.878 | 0.000 | 0.000 | 3.489 | 2.138 | -3.476 |
| Romania / RO | -1.412 | 0.737 | 0.121 | 0.121 | 1.764 | 1.081 | -3.762 |
| Serbia / RS | 2.178 | 1.869 | 0.000 | 0.000 | 0.976 | 0.598 | 2.473 |
| Slovakia / SK | 3.268 | 6.286 | 0.406 | 0.406 | 1.345 | 0.824 | 6.573 |
| Slovenia / SI | 3.608 | 4.267 | 0.000 | 0.000 | 0.783 | 0.480 | 6.612 |
| Spain / ES | 9.983 | 3.794 | 1.431 | 1.431 | 5.993 | 3.673 | 1.249 |
| Sweden / SE | 12.587 | 4.953 | 0.000 | 0.000 | 8.152 | 4.996 | 4.391 |
| Switzerland / CH | 15.058 | 11.477 | 0.000 | 0.000 | 6.497 | 3.982 | 16.056 |
| TOTAL | 159.351 | 100.000 | 6.058 | 6.058 | 153.293 | 93.942 | 0.000 |



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