ACER

European Union Agency for the Cooperation of Energy Regulators

ACER

Report on the implementation of the ITC mechanism in 2021

14 December 2022

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Find us at:

ACER

E press@acer.europa.eu
Trg republike 3
1000 Ljubljana
Slovenia

www.acer.europa.eu

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Executive summary

(1) The implementation of the Inter-Transmission System Operator Compensation ('ITC') mechanism and the management of the ITC Fund in 2021 continues to be in line with the requirements set out in Commission Regulation (EU) No 838/2010. However, ACER considers that, in light of recent extreme price volatility and in line with the general tarification principle of cost reflectivity introduced by Regulation (EU) No 943/2019, there may be room for improvements regarding the way how, when and/or how often the values of losses are determined for the purpose of the ITC mechanism. ACER aims to further work on this topic and may put forward proposals for improvements, among others, based on its review of the criteria for the valuation of losses. Because this assessment is complex and requires further analysis and additional information, it is not included in the present report and is planned to be issued in early 2023.

(2) The main highlights regarding the specific aspects of the implementation of the ITC mechanism in 2021 include the following:

- In 2021, the total ITC fund amounted to 364.5 million EUR (out of which 264.5 million EUR is the losses component and 100 million EUR is the infrastructure component), reaching its highest ever value. This is the third year in a row with record-high ITC fund size and, compared to its amount 5 years ago, it increased by more than 40%.
- The reason for the 3.3% increase of the total ITC fund's amount in comparison to 2020 lies in a 19.6% increase of volume of transmission losses due to transits, which was not outweighed by the 12.6% reduced volume-weighted average value of losses. Similar sharp changes of the volume of transmission losses due to transits already occurred several times in the past, however, in absolute terms, the two recent increases stand out significantly.
- After its decreasing trend between 2012 and 2017, followed by a gradual increase in the next three years, the volume-weighted average value of losses decreased by 12.6% in 2021 compared to 2020, from 51.21 EUR/MWh to 44.75 EUR/MWh.
- In 2021, the volume-weighted average value of losses remained higher for the non-EU ITC Parties than for the EU ITC Parties, however, for the third time in a row, the difference between them decreased. For both the EU and the non-EU ITC Parties, the average volume-weighted value of losses decreased in comparison to 2020, i.e. by 11.8 % for the EU ITC Parties and by 17.5% for the non-EU ITC Parties.
- The individual values of losses are being rather volatile from year to year. In 2021, the value of losses decreased for 28 ITC parties (on average by 15.9%) and increased for 5 ITC Parties (on average by 4.1%).
- The abovementioned decrease of the value of losses in the vast majority of the ITC Parties in 2021 compared to the previous year might be largely explained by the overall decrease of the energy prices in the previous year. The volatility occurs especially due to the facts that power exchange prices are the most frequently used as a basis to value the losses and that ITC Parties, following the procedure laid down in the ITC Agreement, determine and provide the value of losses for the ITC mechanism on a yearly basis, in advance, i.e. at the end of each year for the next year. Considering this and the unprecedented heights of the electricity wholesale prices in 2021 with significant volatility within the year, ACER considers that the way how, when and/or how often the values of losses are currently determined may not be fully fit for purpose.
- The changing values of losses accompanied with changing volumes of losses due to transit (the latter may also be caused by the changing trade and flow patterns) have also significantly changed the net positions of several ITC Parties. ACER observes the largest increase in Germany, Poland and Greece, while the highest decrease occurred in Czech Republic, Italy and Austria.

- The Perimeter countries' fee for 2021 was calculated and approved by ENTSO-E at the value of 0.6 EUR/MWh, decreasing by 0.1 EUR/MWh for the second time in a row. The main reason for this decrease is lower anticipated costs of losses for 2021 in comparison to 2020.
- In 2021, the Perimeter countries contributed to an amount of 12.3 million EUR or 3.4% to the ITC Fund. This is a similar contribution as in a year before when they contributed 3.1%, but significantly lower than in the period between 2011 and 2019 with the contributions ranged between 4.3% and 9.1%. The reasons for the significant decrease in the two recent years are significant decrease of the volume of the schedules flows between the Perimeter countries and ITC Parties, the decreased Perimeter countries' fee and the increased overall amount of the ITC fund.

1. Introduction

(3) Pursuant to point 1.4 of Part A of the Annex to 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 charging[1] (the 'Regulation'), the European Union Agency for the Cooperation of Energy Regulators ('ACER') 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 Report[2] were provided by the European Network of Transmission System Operators for Electricity ('ENTSO-E').

(4) 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,
- the costs of making infrastructure available.

(5) TSOs or groups of TSOs being treated as a single unit 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' networks ('Perimeter countries'[3]) pay a transmission system use fee for their scheduled imports from and scheduled exports to the ITC Parties' networks.

(6) 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. In 2021, it comprised 35 ITC Parties[4]. 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.

(7) ACER has reviewed the implementation of the ITC mechanism and the management of the ITC Fund in 2021 based on:

- the ITC Agreement and its amendments,
- relevant data and information received from ENTSO-E in relation to the implementation of the ITC mechanism in 2021.

[1] OJ L 250, 24.9.2010, p.5
[2] The previous ACER ITC Monitoring Reports are available at ACER's website: https://www.acer.europa.eu/electricity/infrastructure/inter-tso-compensation-monitoring
[3] Belarus, Moldova, Morocco, Russian Federation, Turkey and Ukraine
[4] TSOs from all EU Member States except Cyprus and Malta and from the following third countries: Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro, Norway, Serbia, Switzerland and United Kingdom (Great Britain and Northern Ireland as separate ITC parties).

2. Alignment between the 2021 ITC implementation and the Regulations

(8) No major amendments to the ITC Agreement were introduced in 2021, as there were only annual and technical amendments, which do not affect the main elements of the ITC agreement. Amendments were made for:

- updated schedules due to yearly updates (Schedule P: ENTSO-E convention on Business Day),
- results of the last ITC audit (Schedule T: List of used Yearly vertical loads, Schedule X: Table of losses costs, Schedule O: Ex-Ante Financial Spreadsheet),
- updated schedules due to new tie-lines between ITC Parties (Schedule U: List of lines and measurement points, W: Geographical parameters).

(9) ACER concludes that the general arrangements are still in line with the guidelines set out in the Regulation. However, ACER notes that, compared to its previous analysis of the valuation of losses, new provisions have been introduced by Regulation (EU) No 2019/943. In this respect, based on the findings in section 5.2.2. of this report and contemplating the extreme price volatility effects in 2021-2022, ACER considers there may be room for improvements regarding the way how, when and/or how often the values of losses are determined for the purpose of the ITC mechanism, also to better align with the general tarification principle of cost reflectivity introduced by Regulation (EU) No 943/2019.

(10) For this reason, ACER aims to further work and interact with ENTSO-E[5] on this topic and may put forward some proposals for improvement, among others, based on its ongoing detailed review of the criteria for the valuation of losses.

3. Accuracy of data

(11) 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 Parties. Every year, before the financial settlements begin, an audit of the vertical load, the costs of losses and the capacity not allocated in a manner compatible with the congestion management methods as initially set out in Point 2 of Annex I of Regulation (EC) No 714/2009 and now required according to Regulation (EU) 2019/943[6] is carried out. During the year, before the monthly settlements are issued, several data validation procedures are performed involving all ITC Parties.

(12) In a letter dated 7 October 2022, ENTSO-E submitted to ACER data relating to the implementation of the ITC mechanism in 2021, as well as some relevant descriptive information. ENTSO-E provided explanations or a description of the results for:

[5] ACER notes that ENTSO-E draft Work Programme 2023 (p.12.) also foresees that "*ENTSO-E may develop proposals in 2023 to ACER and the EC in order for the ITC Mechanism to adequately reflect current political and market conditions*"
https://consultations.entsoe.eu/markets/copy-of-pre-consultation-awp-list-of-deliverables/supporting_documents/ENTSOE_AWP%202023.pdf

[6] Cf. in particular Article 16 on general principles of capacity allocation and congestion management and Article 17 on allocation of cross-zonal capacity across timeframes. Point 2 of the guidelines of Annex 1 of Regulation 714/2009. Regulation (EC) No 714/2009 was valid until 31 December 2019, since 1 January 2020 Regulation (EU) 2019/943 shall apply.

- the calculation of the Perimeter countries' fee,
- transit reductions including the explanation regarding each border where transits are reduced due to the allocation of capacity on interconnections which is not compatible with the congestion management methods set out in Point 2 of Annex I of Regulation (EC) No 714/2009,
- results of the yearly audit process in terms of identified errors,
- the amendments of the ITC Agreement,
- the computation of losses resulting from transit flows,
- the decisions on value of losses in non-EU countries.

(13) On 28 November 2022, ENTSO-E informed ACER that the final settlements for 2021 (including the netted final settlements) had been signed by all ITC Parties.

(14) Based on the information provided by ENTSO-E, the ITC Parties' own revision of the submitted data[7] resulted in 10[8] updated values of costs of losses following NRA's approval or losses tendering process. Further on, ITC Parties sent 9 requests to other ITC Parties[9] to provide explanation on the information, all regarding the cost of losses in 2021. All ITC Parties' responses to the requests were deemed satisfactory by the ITC Parties and none of the requests resulted in a change of value.

(15) In line with its considerations in previous reports on the implementation of the ITC mechanism, ACER regards that the self-governance arrangement in the operation of the ITC mechanism is in principle an appropriate approach for assuring the accuracy of the operation of the ITC mechanism.

4. Treatment of third countries

(16) ACER notes that the ITC Agreement has not changed regarding the treatment of the ITC Parties, including TSOs from those third countries, which have adopted and apply European Union law in the field of electricity as well as TSOs from third countries which have not concluded such agreements with the EU, but participate in the ITC through a voluntary multi-party agreement, thus the former findings of ACER are still valid.

(17) In 2012, ACER noted that the ITC Agreement makes no distinction between categories of ITC Parties, whether the latter participate 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, ACER concludes that the requirements of points 3.2 and 3.4 of Annex Part A of the Regulation are met.

5. ITC fund

(18) In 2021, the ITC Fund amounted to 364.5 million EUR, consisting of 100 million EUR related to the costs of the transmission infrastructure made available for transits and 264.5 million EUR related to the costs of the incurred transmission losses due to transits. 352.2 million EUR or 96.6% of the total ITC fund was recovered through contributions from the ITC Parties and the remaining 12.3 million EUR or 3.4 % through the Perimeter countries' fees.

[7] Before 15 January each ITC party can revise the data it submitted, providing an explanatory note.

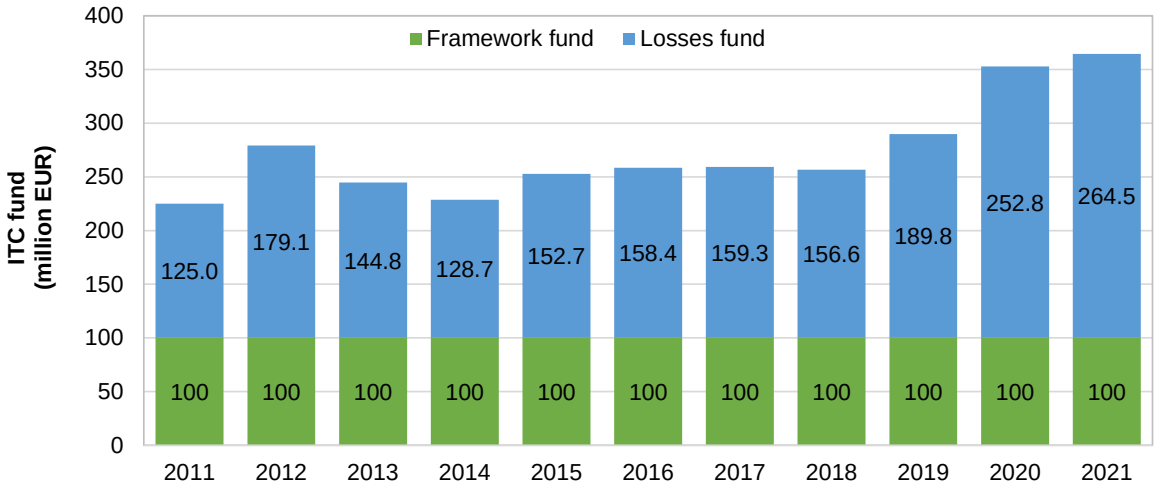
[8] BA, ES, GR, HU, IT, MK, NL, NO, PL, SK

[9] By 25 February ITC parties can request other parties to provide explanation on information provided. In 2021, BE received two requests and AL, BG, EE, ES, IT, RO and SI one request.

(19) As presented in Figure 1, after being relatively stable between 2015 and 2018, the ITC fund has continuously been increasing in the last three years, reaching its highest ever value in 2021. Compared to its size 5 years ago, it increased by more than 40%.

(20) While the sum of the infrastructure part of the fund, which is set by the Regulation, has not changed, the losses part of the ITC Fund increased by 4.6% in the last year, resulting in a 3.4% increase of the total ITC Fund.

Figure 1: ITC Fund size between 2011 and 2021



(21) An overview of the compensations drawn from, and contributions made to the 2021 ITC Fund is provided in Table 2 in the Annex. The table includes the contributions from both the ITC Parties and Perimeter countries which made their contributions through their directly-connected ITC Parties.

(22) The difference between the compensations drawn from, and contributions made to the ITC Fund by an ITC Party in a particular year provides its net position (i.e. net compensation from or net contribution to the ITC Fund). The share of net compensation or net contribution of each ITC Party (which is calculated as the net compensation/sum of all net compensations or as the net contribution/sum of all net contributions) in 2021 is presented in Figure 2 and Figure 3. As additional information, the corresponding shares for 2020 are also added to these figures and negative values indicate a shift in ITC Party's beneficiary role to the contributing one or vice versa. The total net compensation (which equals to the total net contribution) in 2021 amounted to 125.5 million EUR, resulting in a 4.9% increase compared to the previous year. ACER notes that in 2021, four ITC Parties together (DE, PL, DK and CH)[10] received more than half of the total net compensation (54.1%), including Germany that received almost its one quarter. Furthermore, the same four countries as in 2020 (IT, NO, FR, GB) contributed almost two-thirds (more than two thirds in 2020) of the total net contribution, with Italy contributing the biggest share of 29%.

(23) As shown in Figures 2 and 3, the share of total net compensations or contributions show a great difference compared to 2020 for some countries. The share of compensation for Germany increased by more than three times, while for Austria and Czech Republic it decreased by about two thirds and almost halved for Switzerland. Regarding net contributions, Bulgaria's share increased by more than four times, while Greece's and Northern Ireland's share decreased by almost seven. Spain and Latvia became net contributors from net recipients a year ago and

[10] AT, CZ, SK and CH in 2020

Croatia and Kosovo turned to net recipients from net contributors. The reason for these changes are a combination of changes in the values and volumes of losses across the years.

(24) Table 3 in the Annex shows the final net positions of each ITC Party since 2011. For 16[11] out of 35 ITC Parties or for 46% of all ITC Parties, the direction of the net balance has been the same every year (i.e. they have always been a net contributor or they have always been a net receiver). For the remaining 19 ITC Parties, the direction of their net balance has changed at least once[12].

Figure 2: Share of net compensation per ITC party within total net compensation in 2020 and 2021

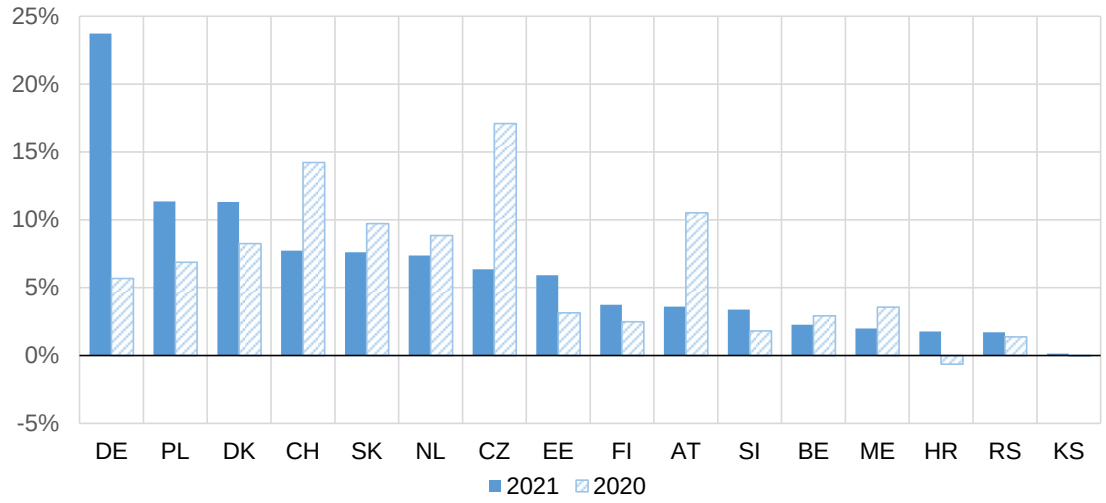
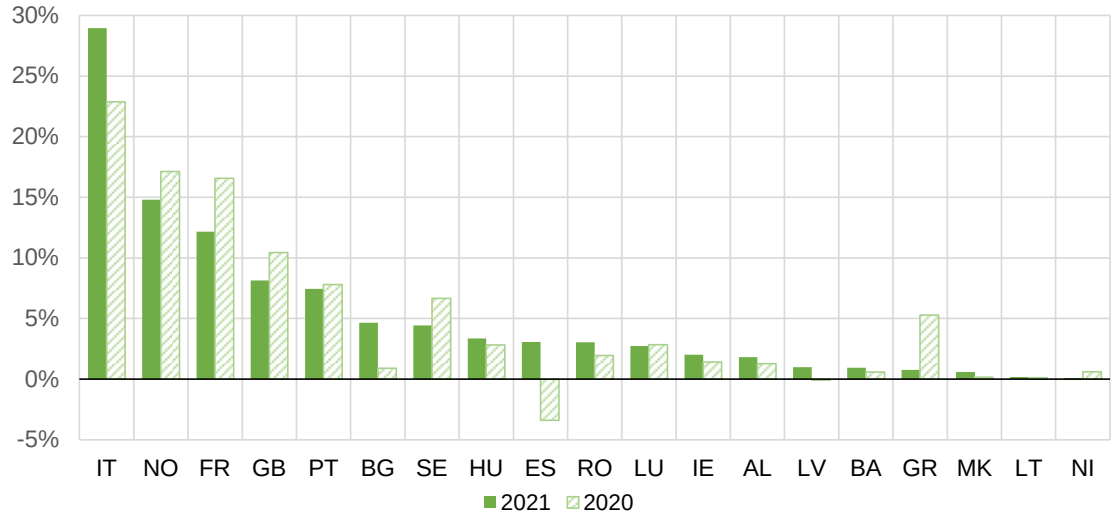


Figure 3: Share of net contribution per ITC party within total net compensation in 2020 and 2021



5.1. Contributions to the ITC fund

5.1.1. Perimeter countries' fee

(25) 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

[11] Net receivers in each year: AT, DK, ME, PL, RS, SK, SI, CH
Net contributors in each year: AL, GB, IE, IT, LU, NI, NO, RO
[12] In 2021, Latvia was net contributor for the first time.

and that of a Perimeter country. 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.

(26) For 2021, ENTSO-E reported no change in the methodology for calculating the Perimeter countries' fee (or 'Perimeter fee') which is based on the equivalent losses and infrastructure compensation for historical flows of the previous year. The Perimeter fee has two elements: a losses-related and an infrastructure-related component. While the losses-related fee is calculated by dividing the 'With-and-without transit' fund size by the sum of both net and scheduled imports and exports, the infrastructure-related fee is calculated by dividing the total 'Framework Fund' contribution, which is set at 100 million EUR[13], by the sum of both net and scheduled import and export flows. The two components, summed and rounded to a single decimal place, create the Perimeter fee. This value is produced at the end of each year for the next year based on losses costs and vertical load data collected from ITC Parties. For timing reasons, it is calculated on the basis of unaudited data, but is updated after the data audit.

(27) The Perimeter countries' fee for 2021 was calculated and approved by ENTSO-E at the value of 0.6 EUR/MWh, which means it decreased by 0.1 EUR/MWh for the second time in a row. The evolution of the Perimeter fee between 2011 and 2021 is presented in Figure 4, along with the Perimeter countries' contributions to the fund. ACER notes that after a steady increase between 2016 and 2019, the Perimeter countries' contribution decreased by almost half in 2020 and again increased by 13.9 % in 2021. In 2022, it doubled, reaching 1.2 EUR/MWh[14].

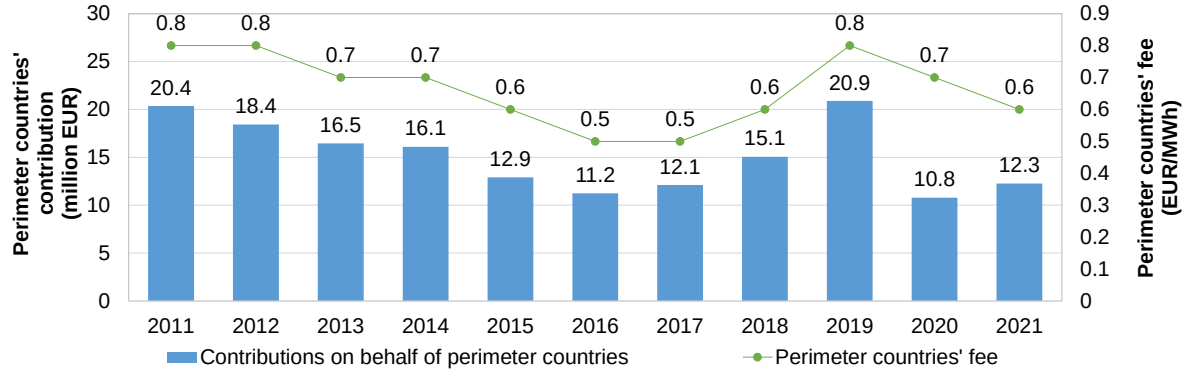
(28) According to the explanation by ENTSO-E, the main reason for the decrease of the Perimeter fee was a reduction of the 'With-and-without transit' fund size from 205.84 million EUR to 176.70 million EUR due to lower anticipated costs of losses for 2021 in comparison to 2020. This reduction was not compensated by the 4 % decrease in the amount of historical flows (from 436 TWh in 2018 to 418 TWh in 2019[15]).

[13] In its Recommendation No 05/2013, ACER recommended the ITC infrastructure fund (Framework Fund) should be phased-out.

[14] https://www.entsoe.eu/news/2022/07/19/assembly-approves-itc-audit-results-and-2022-perimeter-fee/#:~:text=The%202022%20perimeter%20fee%20has,%E2%82%AC%201%2C2%20%2F%20MWh

[15] The amount of flows in year Y-2 is used as an input for the calculation of the Perimeter countries' fee for year Y.

Figure 4: Perimeter countries' relative contributions and Perimeter countries' fee between 2011 and 2021

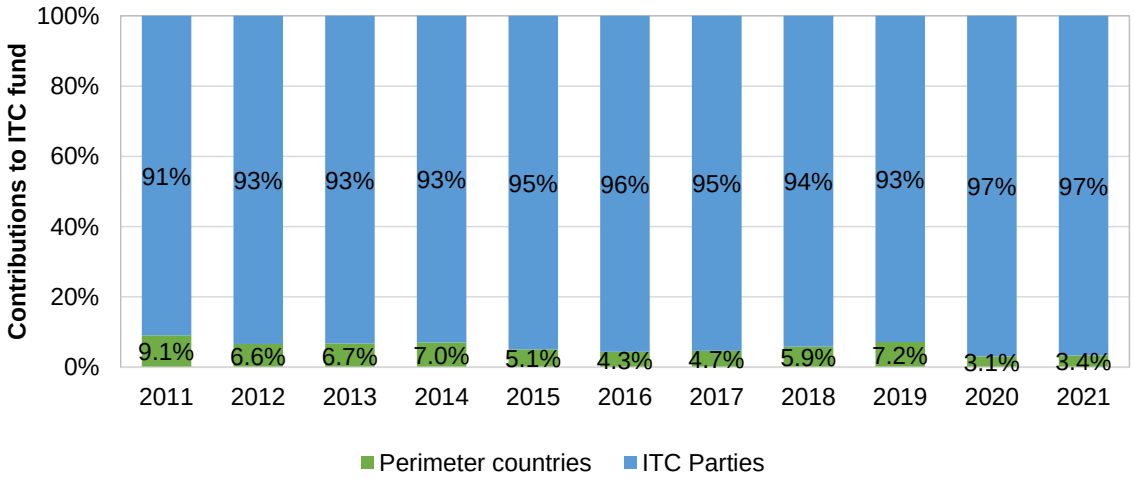


5.1.2. ITC Parties' and Perimeter countries' contributions

(29) 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.

(30) Table 4 in the Annex provides a summary of the annual net import, net export and the contribution amount that each ITC Party paid into the ITC Fund in 2021, including the contributions made on behalf of the Perimeter countries with whom it has a direct connection. Shares of contributions from ITC parties and Perimeter countries between 2011 and 2021 are presented in Figure 5. In 2021, Perimeter countries paid 12.3 million EUR to the ITC fund, representing 3.4% of its total amount. This is a slightly higher relative contribution as in 2020 when the ITC parties contributed 3.1%, but a significantly lower one than in the period between 2011 and 2019 when their contribution ranged between 4.3% and 9.1%. The reason behind the sharp decrease of the Perimeter countries' relative contribution to the ITC fund in the two recent years lies in the significantly lower volume of the scheduled flows between the Perimeter countries and the ITC parties during these years compared to the past volumes (i.e. 26.1 TWh in 2019, while approx. 15.4 TWh in 2020 and 20.4 TWh in 2021), in the decreased Perimeter countries' fee as well as in the increased overall amount of the ITC Fund.

Figure 5: Shares of contributions to the fund between 2011 and 2021



(31) Based on the review of the ITC Agreement and the final dataset submitted by ENTSO-E, ACER is able to confirm that the ITC fund contribution amounts were derived according to the requirements of points 6 and 7 of Annex Part A of the Regulation.

5.2. Compensations from the ITC fund

(32) Under the Regulation, the ITC Parties should receive compensation for losses incurred due to hosting cross-border flows and for making their infrastructure available to host these flows. The key input for the determination of the compensation amounts are the transits. More information on the transit consideration is provided in section 5.2.1 and on the compensations in sections 5.2.2 and 5.2.3 of this report.

5.2.1. Transit and its reduction

(33) Point 1.6 of Annex Part A of the Regulation requires that transit of electricity is calculated by taking the lower of the absolute amount of imports and the absolute amount of exports between national transmission systems. In addition, for the purpose of calculating transits, the amount of imports and exports at each interconnection between the ITC Parties must be reduced in proportion to the share of capacity allocated in a manner which is not compatible with the congestion management methods set out congestion management methods as initially set out in Point 2 of Annex I of Regulation (EC) No 714/2009[16] and now required according to Regulation (EU) 2019/943. Ultimately, these reductions lead to decreased financial net positions of the concerned ITC Parties.

(34) ACER 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 compatible with the congestion management guidelines;
- The ITC Data Administrators translated this information into the amount by which the relevant transit needs to be reduced;
- The reduced transit represented the basis for calculating the compensation amounts relating to both the infrastructure and the losses parts of the ITC Fund.

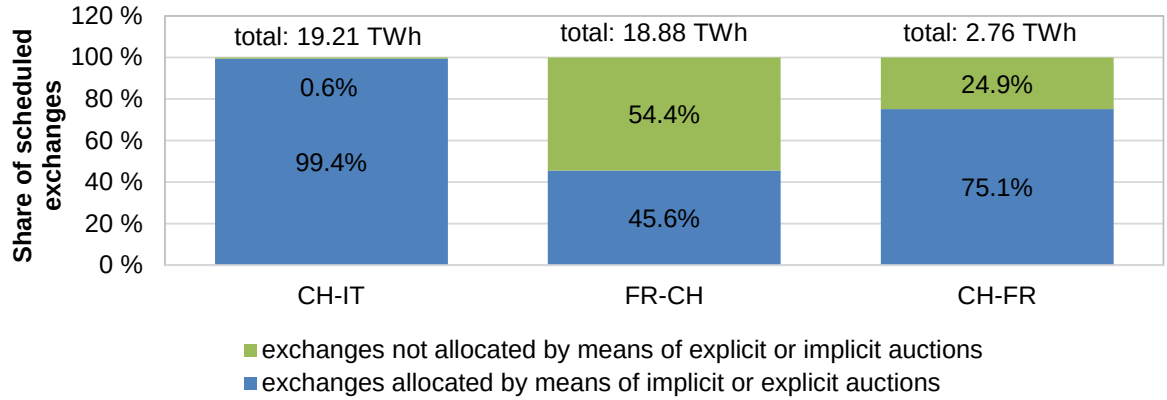
(35) Table 5 in the Annex provides a summary of the transits through each ITC Party's network before and after such reductions. The following borders were affected by the reduced transits in 2021 due to existence of long-term priority contracts:

- the French-Swiss border (in both directions),
- the Swiss-Italian border (in the direction towards Italy);

(36) Based on the information provided by ENTSO-E, for all the three borders, capacity not allocated in a manner compatible with congestion management guidelines remained the same in 2021 as in 2020. Shares of scheduled exchanges in 2021 that were allocated in a manner compatible and not compatible with the congestion management guidelines are presented in Figure 6. ACER notes that while on the Swiss-Italian border and on the Swiss-French border (in the direction towards France), the amount of exchanges not allocated by means of implicit and explicit auctions decreased, it significantly increased on the border between France and Switzerland, i.e. from 5.2 TWh in 2020 to 10.3 TWh in 2021.

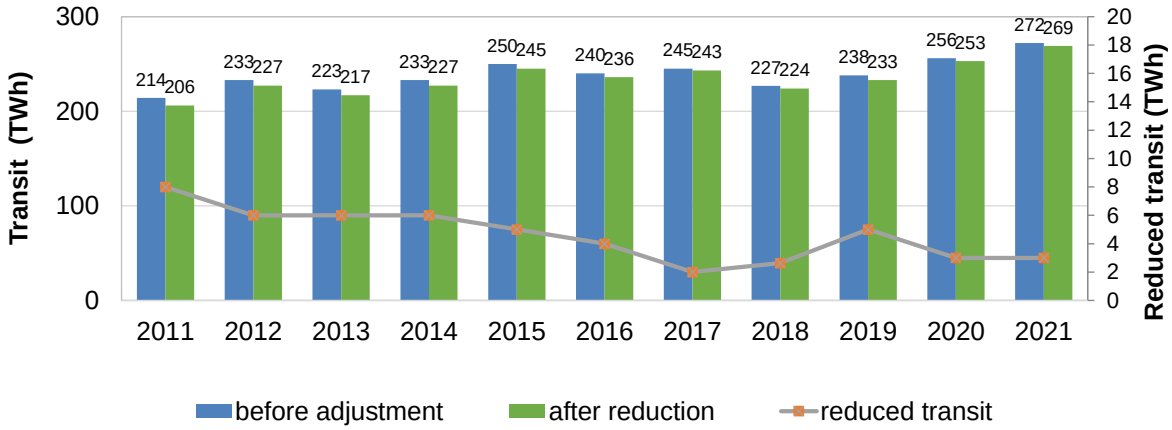
[16] OJ L 211, 14.8.2009, p.15, Regulation (EC) No 714/2009 of the European Parliament and of the Council on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003. Point 2.1 of Annex I of Regulation (EC) No 714/2009 stipulates that 'capacity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

Figure 6: Shares of scheduled exchanges according to the manner of their allocation for the three borders affected by reduced transits in 2021



(37) Figure 7 provides a comparison of transits before and after reduction in the period between 2011 and 2021. In 2021, the amount of transits was reduced by 2.9 TWh, resulting in 268.9 TWh.

Figure 7: Amounts of transits before and after reduction between 2011 and 2021 (all values are rounded)



5.2.2. Compensation for transmission losses

(38) The key steps for calculating the amount of compensation received by each ITC Party for the transmission losses incurred by carrying cross-border flows of electricity are defined under Point 4 of Annex Part A of the Regulation. They are summarised below:

- 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.
- 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.

5.2.2.1. Volume of losses

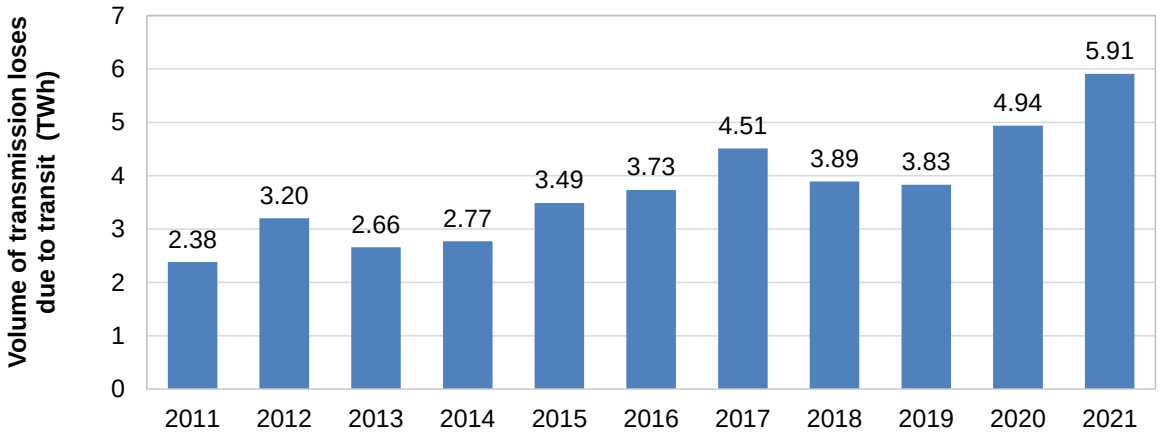
(39) ENTSO-E sets out the detailed method for the calculation of the volume of losses in the ITC Agreement.

(40) The Regulation also requires ENTSO-E to publish the calculation of the volume of losses and its method. ACER notes that, on 13 December 2022, ENTSO-E published the calculation method and the results for 2021[17].

(41) For each ITC party, Table 6 in Annex provides a summary of the volume of annual losses due to transits, the respective values of losses and the compensation received from the ITC Fund in the past two years. Further on, the evolution of the overall volume of transmission losses due to transits is presented in Figure 8.

(42) ACER notes that for the second time in a row, the volume of transmission losses due to transits increased significantly, i.e. by 19.6% from 4.94 TWh in 2020 up to 5.91 TWh in 2021. Similar sharp changes of the volume of transmission losses due to transits already occurred several times in the past (e.g. in 2012, 2015, 2017 and 2020), however, in absolute terms, the two recent increases stand out significantly. Compared to its amount 10 years ago, the volume of transmission losses increased by almost 150%. This increased amount of losses due to transits was not outweighed by the 12.6% reduced volume-weighted average value of losses, so finally, the losses component of the ITC fund in 2021 increased by 4.6% and for the third time in a row reached its highest ever value.

Figure 8: Volume of transmission losses due to transits between 2011 and 2021



5.2.2.2. Values of losses[18]

(43) 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 the one approved by the regulatory authority in respect of all losses on the national transmission system. ACER 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.

(44) ACER's latest 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 at that time, as well as from the NRAs of Norway and Switzerland is provided in section 2.6 of ACER's report on the implementation of the ITC mechanism in 2018[19]. While this review is still

[17] ENTSO-E ITC Transit Losses Data Report 2021, https://eepublicdownloads.azureedge.net/clean-documents/mc-documents/ITC_Transit_Losses_Data/entso-e_ITC_Transit_Losses_Data_report_2021_211209.pdf

[18] The values reported in this section are the losses' values used for the implementation of the ITC mechanism, which are typically calculated or estimated ex ante (i.e. at the end of the previous year based on forecasted market prices) and they may not be the same as the 'actual' losses' values, which are typically registered ex post (i.e. using the actual costs/market prices).

[19] Report to the European Commission on the implementation of the ITC mechanism in 2018, December 2019,

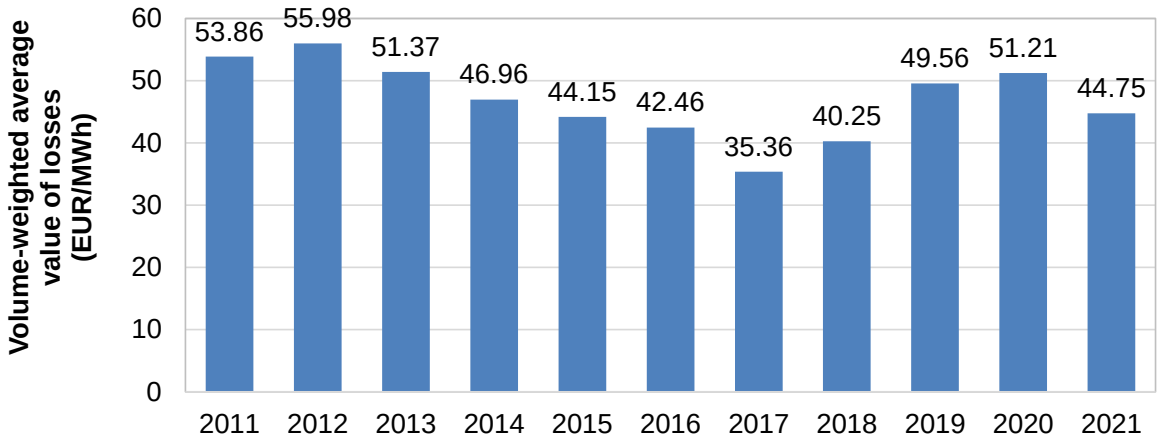
broadly valid, ACER notes that, compared to its previous analysis of losses valuation for year 2018, new provisions have been introduced by Regulation 2019/943, including the principle of cost reflectivity of network charges.

(45) ACER is currently revisiting its previous review of the criteria for the valuation of losses. As this assessment is complex and requires further analysis and additional information, its outcome is not included in this report and planned to be presented early 2023.

(46) In its previous ITC monitoring reports ACER already described that different prices for different energy products in different markets and from auctions and bilateral contracts result in a broad range of values of losses for the EU ITC Parties[20]. The summary of the losses values used for the purpose of the implementation of the ITC mechanism between 2011 and 2021 is provided in Table 8.

(47) Figure 9 presents average values of losses, weighted by their volume, for all ITC Parties between 2011 and 2021. ACER notes that after a decreasing trend between 2012 and 2017 and a gradual increase that followed in the next three years, the volume-weighted average value of losses in 2021 decreased by 12.6% compared to 2020, amounting to 44.75 EUR/MWh.

Figure 9: Volume-weighted average value of losses for all ITC Parties between 2011 and 2021



(48) Table 1 and Figure 10 provide an overview of the values of losses used for the ITC mechanism in the period between 2017 and 2021. ACER notes that in 2021, the weighted average value of losses remained higher for the non-EU ITC Parties (49.84 EUR/MWh) than for the EU ITC Parties (44.06 EUR/MWh), however, the difference between them further decreased by 4.68 EUR/MWh, reaching its lowest value in the last five years. For both the EU and the non-EU ITC Parties, the average weighted value of losses decreased in comparison to 2020, i.e. by 11.8% for the EU ITC Parties and by 17.5% for the non-EU ITC Parties.

(49) ACER notes that the difference between the minimum and the maximum values of the losses in 2021 decreased within the EU ITC Parties, but increased within the non-EU ITC Parties. The highest losses value in 2021 was applied for Bulgaria (58.4 EUR/MWh) and the lowest for Norway (17.43 EUR/MWh).

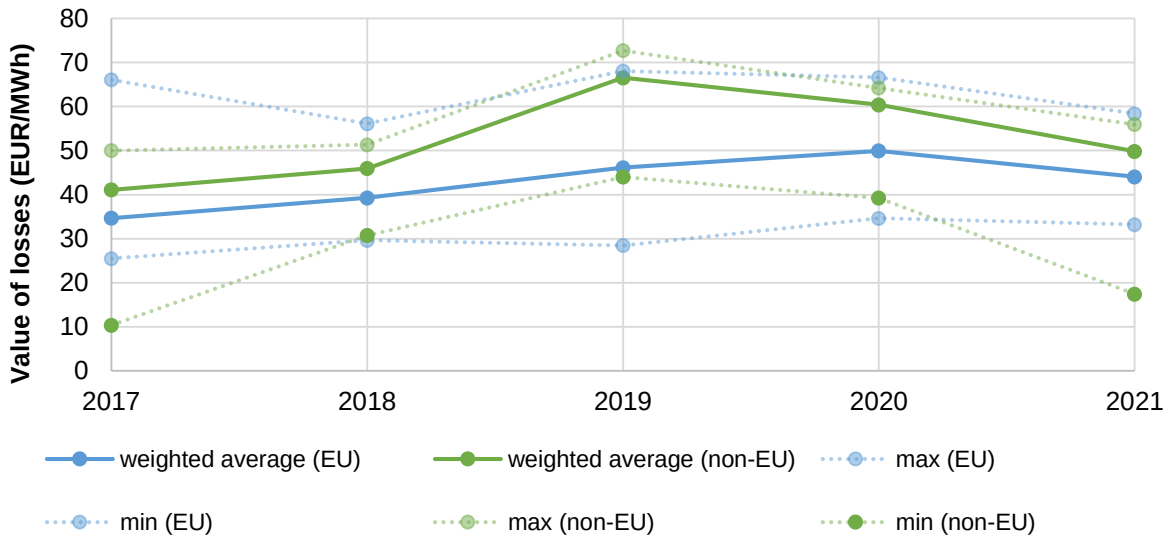
https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ITC%20Monitoring%20Report%202019.pdf

[20] e.g. ACER Report on the implementation of the ITC mechanism in 2020, p. 14-16

Table 1: Comparison of losses values in the EU and the non-EU ITC Parties between 2017 and 2021[21]

	Average value weighted by the volume of losses (EUR/MWh)		Maximum value (EUR/MWh)		Minimum value (EUR/MWh)	
	EU ITC Parties	non-EU ITC Parties	EU ITC Parties	non-EU ITC Parties	EU ITC Parties	non-EU ITC Parties
2017	34.67	41.08	66.08 (GB)	50 (MK)	25.48 (LU)	10.35 (AL)
2018	39.28	45.95	56.13 (IT)	51.32 (BA)	29.62 (SE)	30.76 (NO)
2019	46.11	66.55	68.08 (GB)	72.72 (CH)	28.45 (SE)	44.00 (KS)
2020	49.93	60.39	66.6 (GR)	64.22 (BA)	34.62 (FI)	39.22 (NO)
2021	44.06	49.84	58.4 (BG)	55.93 (BA)	33.21 (SE)	17.43 (NO)

Figure 10: Evolution of the value of losses (average weighted by the volume of losses, minimum and maximum values) between 2017 and 2021



(50) Losses values of individual ITC Parties in each year are shown in Table 8. ACER notes that the losses values of several individual ITC Parties significantly vary from year to year. In 2021, 28 ITC Parties had a lower value of losses compared to 2020 (on average a 15.9% decrease), while 5 had a higher value (on average a 4.1% increase). For two ITC Parties the value has not changed.

(51) ACER notes that the highest relative decrease of the value of losses among the EU ITC Parties occurred in Spain (38.6%) and among the non-EU ITC Parties in Norway (55.6%). On the contrary, the highest relative increase was identified in France for the EU ITC Parties (10.7%) and in Kosovo for the non-EU ITC Parties (3.4%).

(52) The abovementioned decrease of the value of losses in the vast majority of the ITC Parties in 2021 compared to the previous year might be largely explained by the overall decrease of the

[21] For 2020 and 2021, Great Britain and Northern Ireland are reported within the non-EU ITC Parties, while for the previous years, they are reported within the EU ITC Parties.

energy prices in the previous year[22]. The volatility occurs especially due to the facts that power exchange prices are the most frequently used as a basis to value the losses[23] and that ITC Parties, following the procedure laid down in the ITC Agreement, determine and provide the value of losses for the ITC mechanism on a yearly basis, in advance, i.e. at the end of each year for the next year.

(53) Considering this and the unprecedented heights of the electricity wholesale prices in 2021 with significant volatility within the year[20], the value of losses are expected to significantly increase again for the 2022 ITC mechanism.

5.2.3. Compensation for infrastructure availability for cross-border flows

(54) The key parameters for calculating the amount of compensation an ITC Party should receive for provision of infrastructure to carry cross-border flows are defined in Point 5 of Annex Part A of the Regulation. They are summarized below:

- The annual cross-border infrastructure sum is set at 100 million EUR until determined otherwise by the European Commission.
- 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 all 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 all ITC Parties' transits. In apportioning the infrastructure compensation amount for an ITC Party, the Transit Factor has a weighting of 75% and the Load Factor a weighting of 25%.

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

(56) Table 7 in the Annex provides a summary of the annual amount each ITC Party received in 2021 based on their transit factors and load factors.

[22] ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2020 Snapshot November 2021, p.2
https://acer.europa.eu/en/Electricity/Market%20monitoring/Documents/MMR%202020%20Summary%20-%20Final.pdf

[23] Cf. ACER Report to the European Commission on the implementation of the ITC mechanism in 2018, p. 10

Annex 1: ITC Party specific information

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 2: Overview of compensations and contributions to the ITC fund in 2021

ITC Party	Compensation (million EUR)		Contribution on behalf of Perimeter countries (million EUR)		Contribution from ITC Party (million EUR)		Final net position (million EUR)
	losses	infrastructure	losses	infrastructure	losses	infrastructure	
Albania	0.373	0.279	0.000	0.000	2.145	0.779	-2.273
Austria	8.631	7.617	0.000	0.000	8.595	3.123	4.531
Belgium	6.796	4.986	0.000	0.000	6.547	2.379	2.856
Bosnia	1.842	1.211	0.000	0.000	3.103	1.127	-1.177
Bulgaria	1.354	0.562	0.469	0.469	5.003	1.818	-5.843
Croatia	3.855	2.775	0.000	0.000	3.230	1.174	2.226
Czech Republic	12.942	5.667	0.000	0.000	7.799	2.834	7.975
Denmark	16.206	5.848	0.000	0.000	5.758	2.092	14.204
Estonia	7.337	2.147	0.000	0.000	1.503	0.546	7.435
Finland	15.519	2.476	2.756	2.756	5.714	2.076	4.693
France	29.015	4.689	0.000	0.000	35.911	13.048	-15.255
Germany	51.831	13.745	0.000	0.000	26.251	9.538	29.786
Great Britain	11.523	1.120	0.000	0.000	16.762	6.090	-10.209
Greece	2.152	0.818	0.180	0.180	2.609	0.948	-0.948
Hungary	2.934	2.558	0.471	0.471	6.426	2.335	-4.212
Ireland	0.084	0.035	0.000	0.000	1.934	0.703	-2.518
Italy	1.428	0.717	0.000	0.000	28.225	10.255	-36.336
Kosovo	0.996	0.809	0.000	0.000	1.200	0.436	0.169
Latvia	1.367	0.985	0.859	0.859	1.367	0.497	-1.228
Lithuania	3.043	1.343	0.543	0.543	2.545	0.925	-0.169
Luxembourg	0.010	0.017	0.000	0.000	2.527	0.918	-3.418
Montenegro	1.077	2.573	0.000	0.000	0.855	0.311	2.484
Netherlands	15.798	4.991	0.000	0.000	8.473	3.079	9.237
North Macedonia	0.810	0.813	0.000	0.000	1.669	0.606	-0.652
Northern Ireland	0.734	0.442	0.000	0.000	0.943	0.342	-0.109
Norway	0.612	1.349	0.009	0.009	15.058	5.471	-18.586
Poland	17.832	3.381	0.243	0.243	4.745	1.724	14.258
Portugal	0.154	0.436	0.000	0.000	7.293	2.650	-9.354
Romania	-0.384	0.613	0.195	0.195	2.678	0.973	-3.812
Serbia	3.205	1.747	0.000	0.000	2.050	0.745	2.158
Slovakia	6.059	5.543	0.177	0.177	1.249	0.454	9.545
Slovenia	2.951	3.262	0.000	0.000	1.436	0.522	4.255
Spain	6.912	2.750	0.231	0.231	9.570	3.477	-3.847
Sweden	13.647	3.503	0.000	0.000	16.661	6.054	-5.565
Switzerland	15.835	8.194	0.000	0.000	10.511	3.819	9.699
TOTAL	**264.479**	**100.000**	**6.133**	**6.133**	**258.346**	**93.867**	**0.000**

Table 3: Final net positions of ITC Parties between 2011 and 2021

ITC party	Final net position (million EUR)										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Albania	-2.176	-2.320	-1.518	-1.607	-1.364	-1.239	-1.878	-1.624	-1.271	-1.534	-2.273
Austria	11.144	17.915	11.263	6.223	7.136	5.526	9.817	7.650	16.176	12.584	4.531
Belgium	2.566	-3.077	-1.604	-5.964	-9.933	1.989	0.592	-5.768	3.030	3.507	2.856
Bosnia	3.398	3.444	1.018	0.897	2.329	0.375	1.132	0.488	-0.148	-0.696	-1.177
Bulgaria	-4.265	-2.815	-0.713	0.002	-2.691	0.907	0.137	-2.333	-1.500	-1.062	-5.843
Croatia	2.147	0.110	5.264	2.359	0.974	2.556	-0.472	4.604	-0.294	-0.767	2.226
Czech Republic	-5.702	-4.941	-4.544	0.841	7.842	6.447	5.946	8.785	12.291	20.456	7.975
Denmark	4.600	13.108	12.675	11.154	8.674	5.411	9.356	7.640	9.207	9.878	14.204
Estonia	-0.532	1.389	1.853	5.471	8.378	3.854	2.813	3.701	4.759	3.764	7.435
Finland	0.769	-9.125	-5.713	-1.262	3.545	-2.886	-8.054	-5.116	-4.953	2.981	4.693
France	-25.685	-22.123	-19.032	-29.079	-27.331	2.070	-6.880	-20.893	-21.004	-19.808	-15.255
Germany	20.974	26.786	13.207	0.912	-6.101	-12.475	-2.156	-8.435	-9.168	6.791	29.786
Great Britain	-6.794	-11.534	-12.706	-13.274	-14.063	-10.028	-10.344	-7.506	-8.875	-12.489	-10.209
Greece	0.317	4.693	0.612	-3.634	-3.065	-4.637	-0.686	0.278	-4.676	-6.323	-0.948
Hungary	1.765	2.507	-4.412	-3.910	-3.938	-4.034	-2.745	-5.058	-2.753	-3.366	-4.212
Ireland	-0.661	-0.449	-1.217	-0.934	-0.932	-1.167	-1.413	-1.410	-1.818	-1.681	-2.518
Italy	-30.544	-33.931	-29.760	-24.035	-29.726	-25.559	-24.901	-25.849	-22.122	-27.355	-36.336
Kosovo	-	-	-	-	-	0.225	0.069	1.036	0.499	-0.028	0.169
Latvia	0.764	3.185	3.676	2.995	3.548	3.126	2.798	2.966	2.383	0.100	-1.228
Lithuania	-4.969	-5.447	-4.359	-3.719	-3.371	1.454	-0.397	-1.858	-2.642	-0.124	-0.169
Luxembourg	-2.846	-3.264	-2.849	-2.309	-2.551	-2.905	-2.783	-2.405	-2.769	-3.398	-3.418
Montenegro	0.425	0.784	1.032	2.127	0.672	0.504	0.419	0.791	2.128	4.270	2.484
Netherlands	-0.184	-4.540	-1.799	4.559	11.181	4.526	6.230	10.030	7.959	10.576	9.237
North Macedonia	-0.833	-1.031	-0.695	0.395	0.803	1.096	0.218	0.349	0.571	-0.192	-0.652
Northern Ireland	-0.305	-0.896	-0.818	-0.664	-0.619	-0.539	-0.729	-0.315	-0.587	-0.718	-0.109
Norway	-10.870	-13.643	-9.100	-6.274	-5.813	-12.794	-11.978	-10.358	-10.378	-20.503	-18.586
Poland	2.635	5.013	2.853	10.106	15.532	8.342	5.775	3.381	5.072	8.226	14.258
Portugal	-2.692	-3.281	-2.102	-0.292	0.255	-2.894	-3.476	-2.331	-6.321	-9.330	-9.354
Romania	-2.282	-3.329	-1.737	-4.257	-4.352	-3.725	-3.762	-1.303	-4.345	-2.331	-3.812
Serbia	3.297	2.015	1.461	2.012	3.740	2.221	2.473	3.785	1.100	1.645	2.158
Slovakia	6.994	11.415	6.985	7.722	7.737	5.298	6.573	4.218	8.035	11.643	9.545
Slovenia	4.130	3.808	4.023	4.624	5.919	5.186	6.612	1.360	5.597	2.164	4.255
Spain	-1.064	-5.317	-0.191	0.989	1.195	4.972	1.249	10.312	8.820	4.058	-3.847
Sweden	14.311	10.400	16.074	19.795	3.996	4.007	4.391	10.438	-7.205	-7.960	-5.565
Switzerland	22.172	24.491	22.877	18.030	22.396	14.789	16.056	20.752	25.201	17.022	9.699
TOTAL	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Table 4: Derivation of contributions to the ITC Fund

ITC Party	Net Import (MWh)	Net Export (MWh)	Contribution to infrastructure (million EUR)		Contribution to losses (million EUR)	
			Perimeter countries	ITC Party	Perimeter countries	ITC Party
Albania	1,401,278	1,949,174	0.000	0.779	0.000	2.145
Austria	11,224,107	2,198,231	0.000	3.123	0.000	8.595
Belgium	1,343,422	8,881,318	0.000	2.379	0.000	6.547
Bosnia	45,571	4,800,735	0.000	1.127	0.000	3.103
Bulgaria	7,561	7,805,872	0.469	1.818	0.469	5.003
Croatia	4,694,985	349,962	0.000	1.174	0.000	3.230
Czech Republic	446,801	11,733,643	0.000	2.834	0.000	7.799
Denmark	7,044,913	1,947,267	0.000	2.092	0.000	5.758
Estonia	2,343,901	2,971	0.000	0.546	0.000	1.503
Finland	8,923,537	563	2.756	2.076	2.756	5.714
France	6,637,333	49,445,371	0.000	13.048	0.000	35.911
Germany	10,427,735	30,569,635	0.000	9.538	0.000	26.251
Great Britain	25,782,856	394,297	0.000	6.090	0.000	16.762
Greece	2,888,162	1,186,902	0.180	0.948	0.180	2.609
Hungary	10,031,739	4,362	0.471	2.335	0.471	6.426
Ireland	2,289,409	731,012	0.000	0.703	0.000	1.934
Italy	44,007,005	73,469	0.000	10.255	0.000	28.225
Kosovo	1,280,541	593,715	0.000	0.436	0.000	1.200
Latvia	1,692,079	443,485	0.859	0.497	0.859	1.367
Lithuania	3,974,148	0	0.543	0.925	0.543	2.545
Luxembourg	3,946,054	0	0.000	0.918	0.000	2.527
Montenegro	582,011	753,177	0.000	0.311	0.000	0.855
Netherlands	6,743,154	6,489,445	0.000	3.079	0.000	8.473
North Macedonia	2,598,038	8,452	0.000	0.606	0.000	1.669
Northern Ireland	626,759	845,231	0.000	0.342	0.000	0.943
Norway	3,300,346	20,216,466	0.009	5.471	0.009	15.058
Poland	3,964,544	3,445,653	0.243	1.724	0.243	4.745
Portugal	8,070,864	3,319,148	0.000	2.650	0.000	7.293
Romania	2,719,785	1,462,431	0.195	0.973	0.195	2.678
Serbia	1,953,171	1,248,047	0.000	0.745	0.000	2.050
Slovakia	1,521,079	430,051	0.177	0.454	0.177	1.249
Slovenia	986,485	1,256,904	0.000	0.522	0.000	1.436
Spain	7,957,567	6,988,570	0.231	3.477	0.231	9.570
Sweden	202,903	25,817,456	0.000	6.054	0.000	16.661
Switzerland	9,655,105	6,760,165	0.000	3.819	0.000	10.511
TOTAL	**201,314,946**	**202,153,180**	**6.133**	**93.867**	**6.133**	**258.346**
			100.000		**264.479**	

Table 5: Reduction in transits

ITC party	Transit before adjustment (MWh)	Reduction due to non-auctioned interconnection capacity (MWh)	Transit after reduction (MWh)
Albania	851,270	0	851,270
Austria	16,975,401	0	16,975,401
Belgium	13,884,093	0	13,884,093
Bosnia	3,213,173	0	3,213,173
Bulgaria	1,846,843	0	1,846,843
Croatia	6,808,840	0	6,808,840
Czech Republic	14,373,534	0	14,373,534
Denmark	13,020,887	0	13,020,887
Estonia	4,787,998	0	4,787,998
Finland	7,590,459	0	7,590,459
France	17,045,109	1,206,265	15,838,844
Germany	40,304,460	0	40,304,460
Great Britain	3,919,309	0	3,919,309
Greece	2,697,427	0	2,697,427
Hungary	7,206,154	0	7,206,154
Ireland	124,062	0	124,062
Italy	2,529,286	14	2,529,271
Kosovo	2,055,555	0	2,055,555
Latvia	2,420,562	0	2,420,562
Lithuania	3,435,466	0	3,435,466
Luxembourg	59,697	0	59,697
Montenegro	4,735,313	0	4,735,313
Netherlands	14,141,865	0	14,141,865
North Macedonia	2,125,863	0	2,125,863
Northern Ireland	1,310,796	0	1,310,796
Norway	4,453,553	0	4,453,553
Poland	10,502,307	0	10,502,307
Portugal	1,472,625	0	1,472,625
Romania	2,035,122	0	2,035,122
Serbia	5,025,071	0	5,025,071
Slovakia	12,245,012	0	12,245,012
Slovenia	7,400,668	0	7,400,668
Spain	9,177,183	0	9,177,183
Sweden	10,710,652	0	10,710,652
Switzerland	21,292,878	1,682,308	19,610,570
TOTAL	**271,778,493**	**2,888,588**	**268,889,905**

Table 6: Derivation of compensation for transmission losses in 2019 and 2021

ITC party	2020			2021		
	Impact of transits on losses volume (MWh)	Value of losses (EUR/MWh)	Compensation (million EUR)	Impact of transits on losses volume (MWh)	Value of losses (EUR/MWh)	Compensation (million EUR)
Albania	6,983	50.00	0.349	7,465	50.00	0.373
Austria	226,737	57.79	13.103	170,110	50.74	8.631
Belgium	111,534	53.84	6.005	121,871	55.76	6.796
Bosnia	28,499	64.22	1.830	32,942	55.93	1.842
Bulgaria	19,208	56.76	1.090	23,185	58.40	1.354
Croatia	33,831	59.02	1.997	71,570	53.86	3.855
Czech Republic	437,112	55.73	24.360	292,135	44.30	12.942
Denmark	324,319	46.02	14.925	432,398	37.48	16.206
Estonia	116,526	45.23	5.270	174,203	42.12	7.337
Finland	397,156	34.62	13.750	463,802	33.46	15.519
France	447,366	45.18	20.212	580,187	50.01	29.015
Germany	656,749	49.32	32.391	1,144,919	45.27	51.831
Great Britain	109,867	56.19	6.173	219,435	52.51	11.523
Greece	10,893	66.60	0.725	39,853	54.00	2.152
Hungary	70,833	58.09	4.115	60,711	48.32	2.934
Ireland	10,290	59.44	0.612	1,664	50.61	0.084
Italy	57,748	54.09	3.124	34,762	41.07	1.428
Kosovo	10,957	44.88	0.492	21,461	46.42	0.996
Latvia	24,964	46.06	1.150	32,636	41.90	1.367
Lithuania	88,564	46.38	4.108	77,275	39.38	3.043
Luxembourg	355	51.62	0.018	253	39.81	0.010
Montenegro	38,962	54.94	2.141	20,171	53.39	1.077
Netherlands	316,472	49.73	15.738	324,121	48.74	15.798
North Macedonia	10,771	59.87	0.645	14,486	55.90	0.810
Northern Ireland	9,406	59.44	0.559	14,502	50.61	0.734
Norway	14,357	39.22	0.563	35,137	17.43	0.612
Poland	280,217	62.85	17.612	330,592	53.94	17.832
Portugal	3,625	57.82	0.210	3,415	45.03	0.154
Romania	771	57.18	0.044	-6,711	57.26	-0.384
Serbia	34,365	58.00	1.993	63,838	50.20	3.205
Slovakia	141,635	58.16	8.237	115,878	52.29	6.059
Slovenia	42,767	45.80	1.959	64,434	45.80	2.951
Spain	268,491	55.48	14.896	202,938	34.06	6.912
Sweden	243,626	43.73	10.654	410,940	33.21	13.647
Switzerland	339,825	63.95	21.732	313,065	50.58	15.835
TOTAL	**4,935,780**	**-**	**252.781**	**5,909,643**	**-**	**264.479**

Table 7: Derivation of compensation for cross-border infrastructure in 2021

ITC Party	Transit (MWh)	Load* (GWh)	Transit Factor based compensation (million EUR)	Load Factor based compensation (million EUR)	Total Infrastructure compensation (million EUR)
Albania	851,270	7,004	0.237	0.041	0.279
Austria	16,975,401	27,680	4.735	2.882	7.617
Belgium	13,884,093	63,438	3.873	1.113	4.986
Bosnia	3,213,173	11,438	0.896	0.315	1.211
Bulgaria	1,846,843	30,981	0.515	0.046	0.562
Croatia	6,808,840	16,821	1.899	0.876	2.775
Czech Republic	14,373,534	41,285	4.009	1.658	5.667
Denmark	13,020,887	21,146	3.632	2.216	5.848
Estonia	4,787,998	7,833	1.335	0.811	2.147
Finland	7,590,459	64,203	2.117	0.358	2.476
France	15,838,844	398,048	4.418	0.271	4.689
Germany	40,304,460	249,547	11.242	2.503	13.745
Great Britain	3,919,309	254,487	1.093	0.027	1.120
Greece	2,697,427	47,177	0.752	0.065	0.818
Hungary	7,206,154	35,103	2.010	0.548	2.558
Ireland	124,062	30,700	0.035	0.000	0.035
Italy	2,529,271	241,331	0.705	0.012	0.717
Kosovo	2,055,555	5,964	0.573	0.235	0.809
Latvia	2,420,562	6,012	0.675	0.310	0.985
Lithuania	3,435,466	10,277	0.958	0.384	1.343
Luxembourg	59,697	4,097	0.017	0.000	0.017
Montenegro	4,735,313	3,262	1.321	1.252	2.573
Netherlands	14,141,865	71,174	3.945	1.047	4.991
North Macedonia	2,125,863	7,040	0.593	0.220	0.813
Northern Ireland	1,310,796	8,700	0.366	0.077	0.442
Norway	4,453,553	78,472	1.242	0.107	1.349
Poland	10,502,307	98,503	2.929	0.452	3.381
Portugal	1,472,625	37,594	0.411	0.025	0.436
Romania	2,035,122	38,364	0.568	0.046	0.613
Serbia	5,025,071	27,585	1.402	0.346	1.747
Slovakia	12,245,012	19,223	3.415	2.128	5.543
Slovenia	7,400,668	13,021	2.064	1.198	3.262
Spain	9,177,183	188,073	2.560	0.191	2.750
Sweden	10,710,652	88,759	2.987	0.515	3.503
Switzerland	19,610,570	43,435	5.470	2.724	8.194
TOTAL	**268,889,905**	**2,297,777**	**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 8: Value of losses used for the ITC mechanism between 2011 and 2021 and relative change compared to previous year

	2011	2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
ITC Party	Value	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change
AL	3.00	3.00	0%	7.00	133%	7.00	0%	10.35	48%	10.35	0%	10.35	0%	50.00	383%	50.00	0%	50.00	0%	50.00	0%
AT	58.97	58.68	0%	56.07	-4%	47.96	-14%	37.57	-22%	33.64	-10%	27.88	-17%	30.18	8%	47.04	56%	57.79	23%	50.74	-12%
BE	51.23	60.34	18%	60.32	0%	61.34	2%	62.24	1%	44.44	-29%	44.44	0%	44.44	0%	44.44	0%	53.84	21%	55.76	4%
BA	35.89	46.63	30%	46.63	0%	46.63	0%	46.63	0%	48.60	4%	42.30	-13%	51.32	21%	69.78	36%	64.22	-8%	55.93	-13%
BG	47.03	47.12	0%	50.66	8%	51.35	1%	15.34	-70%	34.17	123%	38.74	13%	55.07	42%	56.18	2%	56.76	1%	58.40	3%
HR	60.00	57.89	-4%	63.38	9%	51.80	-18%	51.51	-1%	46.07	-11%	42.21	-8%	47.67	13%	56.69	19%	59.02	4%	53.86	-9%
CZ	61.56	63.65	3%	57.60	-10%	42.41	-26%	39.26	-7%	36.25	-8%	32.79	-10%	42.32	29%	55.24	31%	55.73	1%	44.30	-21%
DK	57.77	47.57	-18%	43.69	-8%	41.30	-5%	38.00	-8%	28.80	-24%	34.94	21%	35.73	2%	50.87	42%	46.02	-10%	37.48	-19%
EE	29.40	29.40	0%	40.67	38%	44.04	8%	44.10	0%	33.85	-23%	33.78	0%	36.30	7%	47.57	31%	45.23	-5%	42.12	-7%
FI	46.13	48.40	5%	52.13	8%	48.58	-7%	46.48	-4%	43.88	-6%	39.48	-10%	35.23	-11%	34.40	-2%	34.62	1%	33.46	-3%
FR	62.35	65.22	5%	69.44	6%	51.44	-26%	51.44	0%	50.61	-2%	42.45	-16%	40.37	-5%	40.27	0%	45.18	12%	50.01	11%
DE	51.84	54.00	4%	53.42	-1%	44.79	-16%	40.00	-11%	40.00	0%	27.51	-31%	29.64	8%	36.59	23%	49.32	35%	45.27	-8%
GB	52.18	55.59	7%	63.96	15%	61.69	-4%	63.02	2%	55.30	-12%	66.08	19%	54.34	-18%	68.08	25%	56.19	-17%	52.51	-7%
GR	0.00	65.07	-	68.12	5%	65.00	-5%	64.00	-2%	60.00	-6%	48.70	-19%	53.30	9%	56.70	6%	66.60	17%	54.00	-19%
HU	52.74	54.13	3%	54.48	1%	43.14	-21%	39.25	-9%	38.01	-3%	37.60	-1%	40.78	8%	49.05	20%	58.09	18%	48.32	-17%
IE	56.12	70.38	25%	66.51	-5%	64.53	-3%	60.74	-6%	48.92	-19%	40.33	-18%	47.55	18%	64.14	35%	59.44	-7%	50.61	-15%
IT	66.70	74.50	12%	75.50	1%	62.40	-17%	51.06	-18%	53.43	5%	41.12	-23%	56.13	37%	62.96	12%	54.09	-14%	41.07	-24%
KS	-	-	-	-	-	-	-	-	-	28.24	-	34.11	21%	46.17	35%	44.00	-5%	44.88	2%	46.42	3%
LV	53.93	50.00	-7%	45.84	-8%	47.00	3%	51.54	10%	43.81	-15%	38.73	-12%	37.00	-4%	47.90	29%	46.06	-4%	41.90	-9%
LT	49.58	49.58	0%	50.10	1%	55.00	10%	55.52	1%	45.20	-19%	39.90	-12%	37.10	-7%	47.25	27%	46.38	-2%	39.38	-15%
LU	54.11	61.19	13%	54.47	-11%	42.32	-22%	37.22	-12%	34.27	-8%	25.48	-26%	31.86	25%	41.45	30%	51.62	25%	39.81	-23%

	2011	2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
ITC Party	Value	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change
ME	47.75	62.65	31%	62.62	0%	49.59	-21%	50.03	1%	47.92	-4%	40.84	-15%	48.52	19%	62.99	30%	54.94	-13%	53.39	-3%
NL	55.00	62.50	14%	62.70	0%	49.20	-22%	45.60	-7%	45.75	0%	38.34	-16%	42.99	12%	60.36	40%	49.73	-18%	48.74	-2%
MK	38.89	70.00	80%	66.00	-6%	60.00	-9%	62.00	3%	50.00	-19%	50.00	0%	50.07	0%	64.25	28%	59.87	-7%	55.90	-7%
NI	56.12	70.38	25%	66.51	-5%	64.53	-3%	60.74	-6%	48.92	-19%	40.33	-18%	47.55	18%	64.14	35%	59.44	-7%	50.61	-15%
NO	46.92	41.22	-12%	38.82	-6%	37.29	-4%	33.17	-11%	21.48	-35%	34.56	61%	30.76	-11%	44.03	43%	39.22	-11%	17.43	-56%
PL	49.80	45.50	-9%	46.38	2%	41.40	-11%	41.87	1%	41.28	-1%	38.07	-8%	40.93	8%	56.06	37%	62.85	12%	53.94	-14%
PT	46.60	56.16	21%	57.60	3%	53.50	-7%	50.49	-6%	49.22	-3%	47.34	-4%	51.44	9%	61.00	19%	57.82	-5%	45.03	-22%
RO	48.90	58.66	20%	50.22	-14%	45.84	-9%	39.59	-14%	37.61	-5%	35.20	-6%	42.15	20%	43.15	2%	57.18	33%	57.26	0%
RS	44.10	44.10	0%	60.00	36%	45.27	-25%	48.05	6%	46.53	-3%	42.46	-9%	47.48	12%	60.00	26%	58.00	-3%	50.20	-13%
SK	55.96	67.47	21%	63.66	-6%	55.77	-12%	46.86	-16%	41.13	-12%	33.96	-17%	38.42	13%	45.27	18%	58.16	28%	52.29	-10%
SI	56.32	59.51	6%	55.51	-7%	55.73	0%	56.22	1%	44.60	-21%	44.61	0%	44.69	0%	46.08	3%	45.80	-1%	45.80	0%
ES	45.52	51.79	14%	50.33	-3%	43.02	-15%	43.65	1%	50.37	15%	38.37	-24%	53.13	38%	57.34	8%	55.48	-3%	34.06	-39%
SE	56.32	55.89	-1%	51.38	-8%	44.30	-14%	42.58	-4%	37.46	-12%	30.00	-20%	29.62	-1%	28.45	-4%	43.73	54%	33.21	-24%
CH	65.21	69.13	6%	65.35	-5%	56.25	-14%	52.92	-6%	46.88	-11%	41.07	-12%	45.91	11.78 %	72.72	58%	63.95	-12%	50.58	-21%