



ELECTRICITY MARKET TRANSPARENCY

Electricity Data Publication in the Energy Community pursuant to Regulation 543/2013

December 2017



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Introduction

1. About ECRB

The Energy Community Regulatory Board (ECRB) operates based on the Energy Community Treaty. As an institution of the Energy Community¹ the ECRB advises the Energy Community Ministerial Council and Permanent High Level Group on details of statutory, technical and regulatory rules and makes recommendations in the case of cross-border disputes between regulators.

ECRB is the independent regional voice of energy regulators in the Energy Community. ECRB's mission builds on three pillars: providing coordinated regulatory positions to energy policy debates, harmonizing regulatory rules across borders as well as sharing regulatory knowledge and experience.

2. Background

ECRB promotes transparency in electricity markets via various tools such as the market monitoring endeavours it implemented through the South East Europe Automated Market Monitoring System², the ECRB Market Monitoring Reports³, but also via specific assessment of the compliance with Commission Regulation (EU) 543/2013 on submission and publication of data in electricity markets (hereinafter: 'Regulation (EU) 543/2013' or 'the Transparency Regulation').⁴ The ECRB's recommendation on the adoption of the Transparency Regulation in the Energy Community⁵ was one of the latest achievement of the group's dedicated work in that regard and led to the factual adoption of said Regulation in 2015.

The transposition deadline for Regulation (EU) 543/2013 was set as 24 December 2015, while the deadline for implementation was set for 24 December 2016. Discussions with ENTSO-E, in charge of operating the central Electricity Market Fundamental Information Platform (EMFIP) ⁶ as specified by the Regulation, led to unanimous support for the Contracting Parties' entities to submit, collect and publish their electricity market data at said platform. Contracting Parties that for technical reasons are not able to submit the data to ENTSO-E, should publish the data on the platform of website of the national Transmission System Operator (TSO) until relevant technical issues are resolved and transfer of data to ENTSO-E is possible.

¹ www.energy-community.org. The Energy Community comprises the EU and Albania, Bosnia and Herzegovina, fYR of Macedonia, Georgia, Kosovo*, Moldova, Montenegro, Serbia and Ukraine. Armenia, Turkey and Norway are Observer Countries. [Throughout this document the symbol * refers to the following statement: *This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Advisory Opinion on the Kosovo declaration of independence*].

² Compare to the ECRB Market Monitoring Guidelines available here: https://www.energy-community.org/dam/jcr:6ff463f1-4c0f-4c3f-943b-f769f2c065f9/ECRB market monitoring.pdf .

³ Cf: ECRB, Market Monitoring Report 2015. See: https://www.energy-community.org/dam/jcr:fe63cdf1-f49e-4ad7-9a87-7dd7cf094ed1/ECRB market report 2015.pdf.

⁴ Cf ECRB, Electricity Data Publication in SEE, December 2016.

⁵ PHLG Decision 2015/01/PHLG/EnC https://www.energy-community.org/dam/jcr:dad276cb-5eee-4884-b44a-5d40a9682243/Decision_2015_01_PHLG_EL.pdf

⁶ The central data platform is available at www.entsoe.net and https://transparency.entsoe.eu/.



2.1. The concept of Transparency Regulation (EU) 543/2013

Transparency was an element of every legislative package adopted on EU level since the beginning of market liberalisation, as it was, and is, understood to be a necessary precondition for market functioning. With the experience gained during the establishment and development of cross-border wholesale markets in the EU, awareness for the need of a harmonised and comprehensive set of rules for transparency in electricity markets arose. Accordingly, such an update of the legal basis for the submission and publication of data translated in Commission Regulation (EU) 543/2013.

Compared to the 2nd or 3rd Internal Energy Market Packages' transparency provisions⁷, Regulation (EU) 543/2013 provides a much more comprehensive set of definitions of the data to be published, prescribes roles and responsibilities and establishes a central platform for the publication of that data. In a nutshell, the objective of Transparency Regulation (EU) 543/2013 are:

- To overcome the lack of legal certainty in two areas:
 - on data and timing requirements, as the previous rules (Annex 1, points 5.5 and 5.9 of Regulation (EC) 714/2009 and Regulation (EC) 1228/2003, respectively) were not detailed and precise enough. These provisions, which are to be replaced by Regulation (EU) 543/2013 allowed for different interpretations and hence led to different applications of these. Moreover, the bindingness of regulators' interpretations of these provisions was questioned and hardly enforceable. Consequentially, publications were and still are often not comparable across markets: and
 - in the relation between Transmission System Operators (TSOs) and other market participants, where the latter are the primary owners of the data. This in turn supported the TSOs that were already active in implementation and provided incentives to all other TSOs to cooperate with ENTSO-E on that project.
- To establish information flows with clear roles and responsibilities (primary data owner, data provider, central information transparency platform).
- To provide a centralised publication of data, allowing for an overall assessment of fundamentals of market functioning.
- To avoid potential inconsistency with REMIT⁸.

To realise the benefits from implementation of the central publication platform. Significant synergies were won through a cooperation of the Energy Community Contracting Parties' TSOs with ENTSO-E's EMFIP project. The relative ease of implementation, additionally, forwards the integration of the Southeast European Region, as it facilitates market participation and promotes the reputation of the Contracting Parties as trustworthy partners for trade, investment and cooperation.

- To facilitate the endeavours of Energy Community Contracting Parties' TSOs to get involved in the EMFIP project.

⁷ The provisions governing the publication of data of both packages have the same wording. They are to be found in points 5.5 and 5.9 of Annex I to Regulation (EC) 714/2009 or to Regulation (EC) 1228/2003, respectively.
 ⁸ The Regulation (EU) No 1227/2011 on wholesale energy market integrity and transparency (REMIT) is not yet part of the

Energy Community acquis.



Experience gained in the EU during integrating and developing electricity markets across borders, showed that transparency is a precondition for market functioning. EU strengthened transparency requirements even further with REMIT by considering an inside information any information that is required to be published by Regulation (EU) 543/2013. This awareness for the need to have harmonised and comprehensive regimes for wholesale electricity markets integrity and transparency also manifested in the Energy Community Contracting Parties, thus implementation of REMIT is also considered by the Energy Community stakeholders. ECRB believes that a harmonised market integrity and transparency regime needs to be made reality in all of Southeast Europe, aiming to create a levelplaying field and preparing the region to integrate into the pan-European electricity market. Efficient price discovery by market participation is one of the main reasons behind that. The other one is to empower regulators to monitor market abuse, manipulation and compliance. Thus, it is important to note that the timely and comprehensive publication is only one part of transparency. The other element forming part of transparency is the regulators' monitoring not only of publically available data, but also other information, such as, but not limited to, executed contracts. Lastly, one needs to acknowledge that for the publication element of transparency, the optimal level is not the maximum level. This is the case for two reasons: First, smaller traders do not possess the computation power to process all data, which could then constitute a barrier to market participation. Second, excess information may also include highly sensitive data, not only about business operation, but also about critical infrastructure.

3. Scope

The current report is taking stock of the level of implementation of the Contracting Parties in fulfilling their obligations under Regulation (EU) 543/2013. This monitoring shall help the National Regulatory Authorities (NRAs) to enforce implementation of the Regulation.

The report also analyses the possible reasons for lack of data publication and to provide an outlook on the envisaged time schedule for catching up with existing publication shortcomings.

In addition to data for 2017, the present report further shows improvement trends by comparing the current publication level with results of previous years.

4. Methodology

The present report evaluates the level of compliance with the data publication requirements of the Transparency Regulation in the Contracting Parties. Each publication item, as listed in the Annex of this report, is treated with equal weight in the results presented. The analysis to this extent remains neutral as regards the significant differences in the efforts that are needed to achieve compliance with the respective publication requirements: indeed, some elements can be fulfilled through the annual publication of information on largely static underlying elements, e.g. installed generation capacity, whereas others need complex and steady information streams between different unbundled entities that result in a timely and constant publication, like data on actual generation. It is to be noted that the number of obligatory publication items differs from jurisdiction to jurisdiction: requirements do not apply in case certain thresholds triggering publication obligations are not reached certain types of infrastructure or markets are not in place.



The results presented in the following chapters are sorted along the following lines:

- Overall scoring in terms of publication of data pursuant to Regulation (EU) 543/2013;
- Overall scoring in terms of publication of data on ENTSO-E transparency platform
- Comparative performance of publication items by groups:
 - o Load;
 - o Transmission;
 - o Generation;
 - o Balancing.

In addition, the Annex provides a detailed analysis of the level of compliance with the individual publication requirements of Regulation (EU) 543/2013 per Contracting Party.



Findings

Overview

Certain progress has been achieved on transposition of the Transparency Regulation. However the implementation, i.e. the publication of complete set of information as required, is lagging behind.

In overall terms, the level of implementation is very heterogeneous with the Contacting Parties whose TSOs are members of ENTSO-E being the front-runners, and all others appearing as laggards. This is partly because of the Transparency Regulation's concept to centrally publish data through the platform operated by ENTSO-E. Another reason is that transparency has always been part of previous legislative packages. Hence, those Contacting Parties leading in implementation of older parts of the Energy Community acquis since the start of market liberalisation also turned out to be leading in transparency by publication.

2. Transposition and de iure compliance

Even if the present report focuses on analysing the *de facto* level of compliance with the Transparency Regulation, it is still worth providing a snapshot of the status of legal compliance, i.e. to which extent the individual Contracting Parties transposed Regulation (EU) 543/2013 into their national legislative framework. This information is relevant as lack of a legal basis requiring data publication must be accepted as reason triggering lack of *de facto* compliance as well as an argument for inability of regulators to enforce implementation.

- In Albania and Montenegro national legislation⁹ defines the obligation for data publication, however, without transposing Regulation (EU) 543/2013 completely. In both jurisdictions secondary acts on data publication are required and drafted¹⁰ but not yet adopted.
- In Bosnia and Herzegovina legislation on state level imposes an obligation on the Independent System Operator to publish data on transmission capacity and ancillary services, including the right to request relevant data from market participants. On entity level the various market rules include obligations to report on demand forecast, the use of distribution networks and contracted supply. Obligations to publish specific data exist in the applied rules for allocation of cross-border capacity, market rules and balancing rules. However, Regulation (EU) 543/2013 as such is formally neither transposed into national legislation nor regulatory rules.
- In Georgia, the Regulation (EU) 543/2013 is not transposed yet.
- In Kosovo*, fYR of Macedonia and Ukraine national legislation¹¹ only includes general obligations for data keeping, reporting and provision is defined in the. However, the specific requirements of Regulation (EU) 543/2013 are not transposed yet.

⁹ Albania: the Power Sector Law; Montenegro: Energy Law and Law on Cross-Border Exchange of Electricity and Natural Gas.

¹⁰ Albania: secondary act of the regulator; Montenegro: rulebook of the ministry.

¹¹ Kosovo*: Law on Electricity; fYR Macedonia: Law on Energy; Ukraine: Law on Electricity Market.



- In Moldova transposition of the Transparency Regulation requires a secondary act by the national regulator that is under preparation but not adopted yet.
- In Serbia Regulation (EU) 543/2013 was transposed via the TSO's Rules for Publication of Key Market Data. To reach full compliance changes in national legislation are required, among which the Energy Law, to allow for publication of data on generation units, which existing legislation considers as commercially sensitive information.

3. Implementation and de facto compliance

The publication items used for this report and listed in Annex, and are based on the so-called Detailed Data Descriptions¹² (Version 1, Release 4, as of 24 February 2014) and the Manual of Procedures (Version 2.1 of 12 December 2016) for the ENTSO-E Central Information Transparency Platform¹³, pursuant to Article 5 of Regulation (EU) 543/2013.

Figure 1 displays the overall level of data publication pursuant to Regulation (EU) 543/2013, combining local and EMFIP-based publication. For the monitoring purposes, requirements that are not applicable to the CP are identified and total number of publication item monitored were reduced by the number of items that are not applicable to the respective CPs (refer to the Annex). The results shows that there has been different progress in implementing the publication obligations in the various Contracting Parties. The following is the summary of findings:

- Significant progress recoded by Albania in the second consecutive year. However, the overall implementation is still below 50%.
- Little progress on implementation by Bosnia and Herzegovina. Over the last two years, form more than 35% of implementation, Bosnia and Herzegovina achieved slightly above 50%.
- Georgia became a Contracting Party of the Energy Community as of 1 July 2017 therefore considered in the assessment, despite the fact that the regulation is not transposed into the national legislation. The existing implementation level is above 30%.
- After little progress in 2016, no progress at all by Kosovo* in 2017. Current implementation stands well below 20%.
- Little progress in 2017 in the fYR of Macedonia, after a significant progress in the previous year when fYR of Macedonia jumped from below 10% up to 50%. The overall implementation currently is well below 60% based on 2017 assessment.
- Little progress in 2017 by Moldova. The existing implementation is below 10%.
- After a significant progress in 2016, a similar progress is achieved in particular towards the end of 2017. The current implementation in Montenegro goes beyond 65%.
- Serbia is the benchmark on transparency. Significant progress is made compared to last year bringing implementation in Serbia close to 80%.

https://www.entsoe.eu/fileadmin/user_upload/_library/resources/Transparency/MoP%20Ref02%20-%20EMFIP_Detailed%20Data%20Descriptions%20V1R4-2014-02-24.pdf

¹² See detailed data descriptions available at:

¹³ See: https://www.entsoe.eu/Documents/MC%20documents/Transparency%20Platform/MOP/00_ENTSO-E%20Manual%20of%20Procedures_V2R1.pdf



- Some progress by Ukraine year-on-year but still the implementation stands only above 20%.

Based on level of implementation one can identify three groups of Contracting Parties:

- 1. Contracting Parties that achieved significant progress on implementation such as Serbia.
- 2. Contracting Parties that have a moderate level of implementation such as Bosnia and Herzegovina, Montenegro, Albania and FYR Macedonia.
- 3. Contracting Parties that have a low level of implementation such as Kosovo*, Ukraine, Moldova and Georgia.

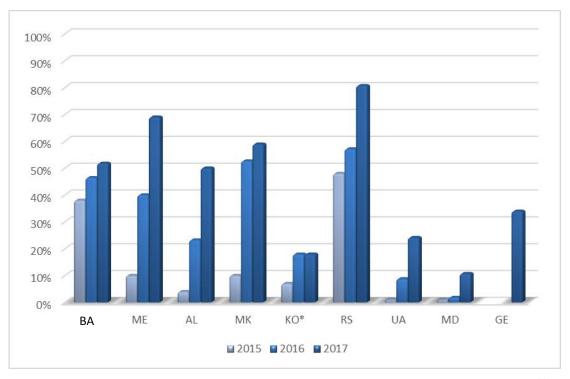


Figure 1: Overall scoring in terms of publication of data pursuant to Regulation 543/2013¹⁴

Regulation (EU) 543/2013 broadly encourages participation of TSOs on the ENTSO-E transparency platform. The relative ease of implementation forwards the integration of the Energy Community Contracting Parties' TSOs, as it facilitates market participation and promotes the reputation of the Contracting Parties as trustworthy partners for trade, investment and cooperation. Definitely, the degree of cooperation of Energy Community Contracting Parties' TSOs with the ENTSO-E transparency platform falls under the scope and interest of this report. The survey reveals that not all the data that is published locally is also published on the ENTSO-E transparency platform. Figure 2 shows overall scoring in terms of publication of data on ENTSO-E Transparency Platform. A comparison between Figure 1 and 2 identifies to which extent data is published locally only or also on EMFIP. Contracting Parties that are not member of ENTSO-E such as Georgia, Moldova¹⁵, and Ukraine¹⁶, as well as

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¹⁴ The abbreviations used follow ISO standard 3166: AL: Albania, BA: Bosnia and Herzegovina, GE: Georgia, KO*: Kosovo*, MD: Moldova, ME: Montenegro, MK: former Yugoslav Republic of Macedonia, RS: Serbia, UA: Ukraine.

¹⁵ Moldelectrica started testing the publication of specific data items with ENTSO-E.

¹⁶ Reportedly, after completion of transparency surveying of Contracting Parties, Ukraine started with some data publication on



Kosovo* are not currently cooperating with ENTSO-E Transparency Platform in terms of data publication; results for these markets are thus only provided in Figure 1 and related to local publication. For the other Contracting Parties lack of data publication on EMFIP is explained by lack of automation in the process of data collection and submission stemming from the lack of SCADA and communication software development¹⁷.

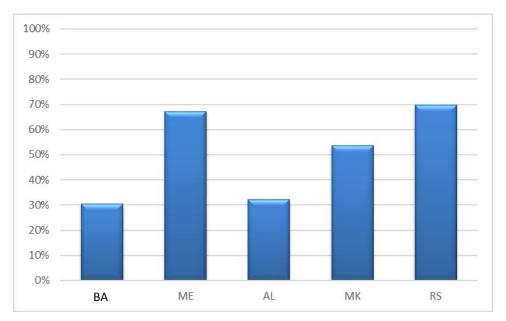


Figure 2. Overall scoring in terms of publication of data on ENTSO-E Transparency Platform (2017)

A look into the details of the publication items reveals that the harder the items are to implement, like those related to data not primarily owned by the TSOs, close to real-time operational data and data on balancing, the worse the scoring is of all Contracting Parties. Figures 3-6 also indicate for most parties better performance in the areas of transmission and load, where the TSOs do not have to engage (much) with other entities from the sectors, but largely with other TSOs only, and worse, where agreement(s) on data submission clarifying data confidentiality issues would be needed, like in the sphere of generation and balancing.

In terms of load data publication, it is worthwhile to mention good progress of Montenegro, fYR of Macedonia and Serbia.

EMFIP. However, data publication contains only load data and part of transmission data.

17 According to the feedback received from Montenegrin TSO, CGES is currently replacing existing SCADA system with a new one. It is envisaged that the project will be implemented by the end of 2018. New SCADA should foster acquisition of required data and, consequently, CGES will be able to feed all reporting items on EMPIF platform by this date.



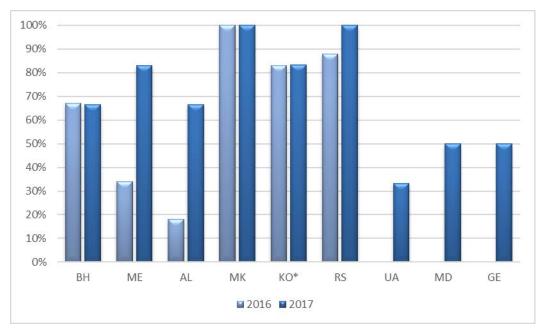


Figure 3: Publication of items related to Load

In relation to transmission data publication, Serbia and fYR of Macedonia increased the level of compliance up to 95%. Kosovo* and Moldova are the exception, as these two Contracting Parties score worst in the sphere of transmission, shown in Figure 4.

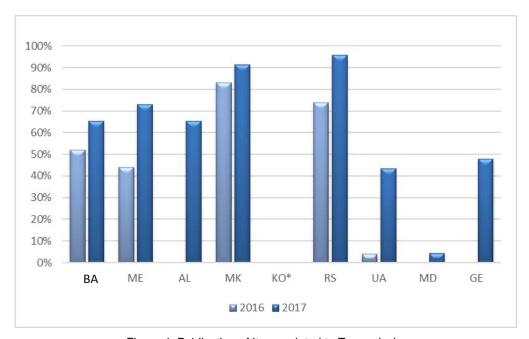


Figure 4: Publication of items related to Transmission

Good progress in terms of generation data publication is shown on the figure 5 for the parties – Albania, fYR of Macedonia and Serbia. Certain deterioration is observable in case of Ukraine that might be caused due to reporting errors for previous year, in any case, special attention is required from the



relevant Ukrainian authorities in order to monitor explicit reasons of low progress in this direction.

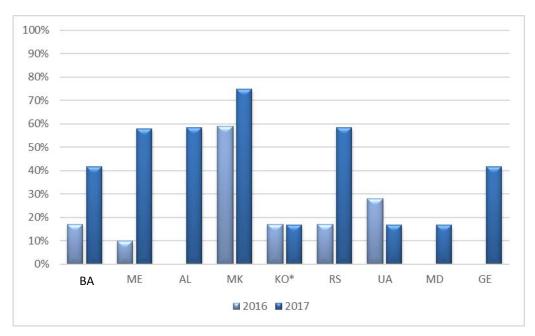


Figure 5: Publication of items related to Generation

The poor performance of most Contracting Parties in the balancing dimension is to a large extent due to missing balancing market structures or imbalance settlement mechanisms. In Contracting Parties where balancing market structures exist, namely Serbia or Bosnia and Herzegovina, the level of compliance with Regulation (EU) 543/2013 is significantly higher than in other Contracting Parties. Also, Montenegro made significant progress related to publication of balancing related data.

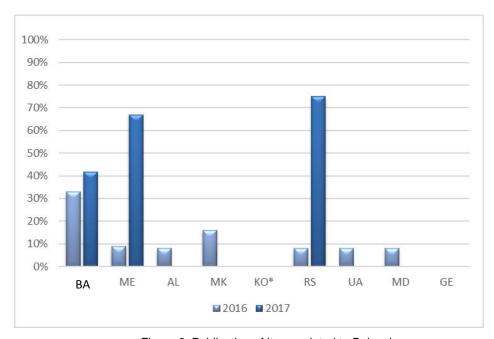


Figure 6: Publication of items related to Balancing



Conclusions and Recommendations

The present report shows different progress made by Contracting Parties in implementing Regulation (EU) 543/2013. As regards the overall implementation level, as well as by item groups, Serbia is the front-runner among the Contracting Parties. Montenegro, Albania, Bosnia and Herzegovina and fYR Macedonia are progressing and are amongst them at similar compliance level. Ukraine, Moldova, Kosovo* and Georgia are significantly lagging behind. The analysis reveals that network and market data availability and transparency by tendency increases along with the 3rd Internal Energy Market Package transposition and electricity market development. ECRB emphasises the importance of transparency for electricity market development and, thus, encourages regulators to ensure enhanced compliance of their national market participants with the data publication requirements of Regulation (EU) 543/2013.

The transparency survey also reveals an interesting finding in context with the Energy Community Contracting Parties' TSOs cooperation with the ENTSO-E transparency platform. Namely, not all data, that is locally published, is at the same time available on EMFIP. The reasons for this are related to both, lack of secondary legislation and/or set-up of IT platform for communicating data to ENTSO-E transparency platform. The reason behind non-publication of certain data items and lack of cooperation with EMFIP per each Contracting Party, aiming to identify barriers for full compliance will be conducted in the next report. It is to be noted though, that lack of ENTSO-E membership per se does not create a barrier for delivering data to EMFIP. On the contrary, ENTSO-E at several occasions declared openness to also receive and publish data for non-member markets provided that the TSO transferring the data meets the operational requirements set by the ENTSO-E. ECRB urges the need for Contracting Parties' TSOs to increase the level of data submission to ENTSO-E transparency platform and calls upon regulators to actively promote related progress ECRB also encourages Georgia, Kosovo*, Moldova, Ukraine to start and/or increase the level of data items submission to EMFIP. In addition to the list of unpublished data items, the follow-up report should provide details on the reasons for not publication as well as a clear roadmap on complete implementation of each Contracting Party.

ECRB is the right body to coordinate and lead comparisons of results of the monitoring activity by the regulators of the Contracting Parties. The main duty to monitor and promote compliance, however, remains with the National Regulatory Authorities.





Annex: List of Publication Items Monitored

The following table provides a detailed assessment of the compliance status with the individual publication requirements of Regulation (EU) 543/2013. Fulfilled requirements are marked green, also referring to the place of publication (EMFIP – pure green, or locally – green with red dots) whereas lack of compliance is marked red. For the later cases the table further provides information on the expected time schedule for implementation. The grey colour means that certain requirement is not applicable to the Contracting Party.

Group	Relevant Article(s) of Regulation (EU) 543/2013	Short description of Data	AL	ВА	GE	KS*	ME	мк	MD	RS	UA
Load	6.1a, 6.2a	Actual total load per Bidding Zone (BZ)		TSO	TSO	TSO	EMFIP	EMFIP	TSO	EMFIP	TSO
	6.1b, 6.2b	D-1 total load forecast per BZ	TSO	TSO	TSO	TSO	EMFIP	EMFIP		EMFIP	TSO
	6.1c, 6.2c	W-1 total load forecast per BZ	TSO		TSO		EMFIP	TSO		EMFIP	
	6.1d, 6.2d	M-1 total load forecast per BZ	TSO		TSO	TSO	EMFIP	TSO	TSO	EMFIP	
	6.1e, 6.2e	Y-1 total load forecast per BZ	TSO	TSO	TSO	TSO	EMFIP	TSO	TSO	EMFIP	
	8.1, 8.2	Y-1 forecast margin	TSO	TSO		TSO		EMFIP		EMFIP	
	7.1a, 7.2, 7.3	Planned unavailability of consumption units						EMFIP			
	7.1b, 7.2, 7.3	Actual unavailability of consumption units (Changes in actual availability of consumption units)									
Trans-	9,1	Report on developments (expansion and dismantling projects)	TSO	TSO	TSO			EMFIP		EMFIP	
mission	10.1a, 10.2, 10.4	Planned unavailability in the transmission grid	TSO	TSO			TSO	EMFIP		EMFIP	
	10.1b, 10.3, 10.4	Changes in actual availability of interconnections and the transmission grid	TSO								
	10.1c, 10.3	Unavailability of offshore infrastructure									
	11.1, 11.2	Yearly forecasted cross-zonal capacity	EMFIP		TSO		EMFIP	EMFIP		EMFIP	TSO
	11.1, 11.2	Monthly forecasted cross-zonal capacity	EMFIP	TSO	TSO		EMFIP	EMFIP		EMFIP	TSO
	11.1, 11.2	Weekly forecasted cross-zonal capacity			TSO						TSO
	11.1, 11.2	Yearly offered cross-zonal capacity	EMFIP	TSO	TSO		EMFIP	EMFIP		EMFIP	TSO
	11.1, 11.2	Monthly offered cross-zonal capacity	EMFIP	TSO	TSO		EMFIP	EMFIP		EMFIP	TSO

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	11.1, 11.2	Weekly offered cross-zonal capacity									TSO
	11,1	D-1 forecasted cross-zonal capacity (NTC)	EMFIP				EMFIP	EMFIP		EMFIP	TSO
	11.1, 11.2	D-1 offered cross-zonal capacity (NTC allocation method)	TSO	TSO			EMFIP	EMFIP		EMFIP	TSO
	11.1, 11.2	D-1 offered cross zonal capacity (FB allocation method)									
	11,1	Other offered transfer capacities (semester, quarter, weekend,									
		etc.)									
	11.1, 11.2	Intraday offered cross-zonal capacity (NTC allocation)	TSO	TSO			EMFIP	EMFIP		EMFIP	
	11.1, 11.2	Intraday offered cross-zonal capacity (FB allocation)									
	11,3	Restrictions on DC links - Ramping restrictions									
	11,3	Restrictions on DC links - Intraday Transfer limits									
	11,4	Yearly report about critical network elements limiting offered						EMFIP		EMFIP	
		capacity									
	12.1a, 12.2a	Explicit allocation - The capacity, requested by the market	EMFIP	TSO	TSO		EMFIP	EMFIP		EMFIP	
	12.1a, 12.2a	Explicit allocation - the capacity allocated to the market	EMFIP	TSO	TSO		EMFIP	EMFIP		EMFIP	
	12.1a, 12.2a	Explicit allocation - the price of the capacity	EMFIP	TSO			EMFIP	EMFIP		EMFIP	
	12.1a, 12.2a	Explicit allocation - the auction revenue per border between BZs	EMFIP	TSO				EMFIP		EMFIP	
	12.1b, 12.2b	Total Capacity nominated from explicit allocation	EMFIP		TSO			EMFIP		EMFIP	
	12.1c, 12.2c	Total Capacity Already Allocated	EMFIP		TSO		EMFIP	EMFIP		EMFIP	
	12.1d, 12.2d	Day-Ahead Prices								EMFIP	
	12.1e, 12.2a	Implicit allocations - net positions									
	12.1e, 12.2a	Implicit allocations - congestion income									
	12.1f, 12.2e	Total scheduled commercial exchanges	EMFIP		TSO		EMFIP	EMFIP		EMFIP	
	12.1g, 12.2f	Physical Flows		TSO	TSO		EMFIP		TSO	EMFIP	TSO
	12.1h, 12.2g	Transfer capacities allocated between BZ in Member									
		States/Contracting Parties and third countries									
	13.1a, 13.2	Congestion management - redispatching									
	13.1b, 13.2	Congestion management - Countertrading									
	13.1c	Congestion management report (Costs of Congestion									
		management)									
Generatio	14.1a, 14.2a	Installed Generation Capacity aggregated	TSO	TSO	TSO	TSO	EMFIP	EMFIP	TSO	EMFIP	
n	14.1b, 14.2 b	Installed capacity by Production Unit	EMFIP	TSO		TSO	EMFIP	EMFIP	TSO	EMFIP	



	14.1c, 14.2c	D-1 aggregated generation	EMFIP	TSO	EMFIP	EMFIP	E	MFIP	
	14.1d, 14.2d	D-1 generation forecasts for wind and solar		TSO		EMFIP			
	15.1a, 15.2, 15.3	Planned Unavailability of a generation unit	EMFIP			EMFIP	E	MFIP	
	15.1b, 15.2, 15.3	Actual unavailability of generation unit	EMFIP				E	MFIP	
	15.1c, 15.2, 15.3	Planned unavailability of production unit	EMFIP			EMFIP	E	MFIP	
	15.1d, 15.2, 15.3	Actual unavailability of production unit	EMFIP				E	MFIP	
	16.1a, 16.2a	Actual generation per unit			EMFIP	EMFIP			
	16.1b, 16.2b	Aggregated generation per type		TSO	EMFIP	EMFIP	E	MFIP	TSO
	16.1c, 16.2c	Actual wind and solar power generation		TSO		EMFIP			TSO
	16.1d, 16.2d	Pumped storage/reservoir stored energy (Aggregated filling rate			EMFIP		E	MFIP	
		of water reservoirs and hydro storage plants)							
Balancing	17.1a	Rules on balancing	TSO			EMFIP	E	MFIP	
	17.1b, 17.2a	Amount of balancing reserves under contract	TSO		EMFIP	EMFIP	E	MFIP	
	17.1c, 17.2b	Prices of the reserved capacity (procured) of balancing reserves	TSO		EMFIP	EMFIP	E	MFIP	
	17.1d, 17.2c	Accepted aggregated offers (volumes)			EMFIP	EMFIP	E	MFIP	
	17.1e, 17.2d	Volumes of activated balancing reserves (Activated balancing	TSO		EMFIP	EMFIP	E	MFIP	
		energy)							
	17.1f, 17.2e	Prices of activated balancing reserves (energy)	TSO		EMFIP	EMFIP	E	MFIP	
	17.1g, 17.2f	Imbalance prices				EMFIP	E	MFIP	
	17.1h, 17.2g	Total imbalance volume per Balancing time unit			EMFIP	EMFIP	E	MFIP	
	17.1i, 17.2h	Monthly financial balance (Financial expenses and income for				EMFIP	E	MFIP	
		balancing)							
	17.1j, 17.2i	Aggregated volumes of offers for cross-border balancing				EMFIP	E	MFIP	
		activation							
	17.1j, 17.2i	Prices for cross-control area for bids and offers				EMFIP	E	MFIP	
	17.1j, 17.2i	Volumes of cross-control area balancing energy activated				EMFIP	E	MFIP	