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[REPORT ON EU ELECTRICITY MARKET TRANSPARENCY: COUNTRY COMPARISON]

REVIEW

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While we tried to assess the TSOs and other relevant web-pages thoroughly, it is still possible that we have omitted some information available on the web-pages or this information may be available elsewhere. In such cases we will be grateful if the potential readers correct any possible mistakes made in this report. However, to meet the EU transparency targets we believe that information disclosed should be not only full and precise but also easily searchable and in the user friendly format.

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Executive Summary

This report analyzes how the European TSOs deal with their obligation to create energy transparency platforms and disclose information about the respective electricity markets to the third parties. The obligation is stated in the Regulation (EC) No. 714/2009 of the European Parliament and of the Council. Based on information available on the TSOs web-pages we have found significant differences between countries in this respect. Some countries, in our view, have generally fulfilled the obligation, while the others publish only certain data and are still far from the standard requested by the EU.

Countries included in this report:

Country	Our Rating
BELGIUM	10 / 10
CZECH REPUBLIC	8 / 10
ROMANIA	7 / 10
AUSTRIA	7 / 10
GERMANY	6 / 10
DENMARK	6 / 10
SLOVENIA	5 / 10
SLOVAKIA	3 / 10
HUNGARY	3 / 10
POLAND	2 / 10

1. Introduction

Good access to information for all the market participants is crucial for development of efficient electricity markets. This includes particularly availability of complete and timely data on supply and demand fundamentals as well as information on actual transmission networks capacity and usage. However, the recent data disclosure systems of the EU countries has not provided for the level of detailing which had been considered necessary for market participants to develop an accurate view of electricity market fundamentals across Europe. Therefore the European Union has put significant emphasis on developing transparent market platforms and has assigned this task to the respective national transmission system operators. TSOs must comply with Regulation (EC) No. 714/2009 of the European Parliament and of the Council, which requires the publication of data about the electricity market.

This report aims to assess how TSOs in different EU countries are dealing with the need to publish transparent EU market data based on European Parliament and the Council regulation, which includes the following:

1. All information published by the TSOs shall be made freely available in *an easily accessible form*. All data shall also be accessible through *adequate and standardized means of information exchange*, to be defined in close cooperation with market participants. *The data shall include information on past time periods with a minimum of two years*, so that new market entrants may also have access to such data.
2. TSOs shall publish all relevant data related to network availability, network access and network use, including a report on where and why congestion exists, the methods applied for managing the congestion and the plans for its future management.
3. The TSO shall publish the relevant information on *forecast demand and on generation*. The TSO shall also publish the relevant information necessary for the cross-border balancing market.
4. The TSO shall publish *ex-ante information on planned outages and ex-post information for the previous day on planned and unplanned outages of generation units larger than 100 MW*.
5. TSOs shall publish all relevant data concerning cross-border trade on the basis of the best possible forecast.

We analyzed information disclosed by countries TSOs particularly in line with the requirements stated above. More specifically there are following criteria on which disclosed information is assessed in this report:

User friendliness of the transparency platforms: ease of data search, means of download, clarity of data, reliability of the data platforms, different data formats available.

Load data: previous day data disclosure, availability of long-term historical data, future load forecasts.

Renewable generation: previous day data disclosure, downloadable long-term time series, day-ahead and longer-term forecasts, hydro generation data availability.

Other generation data: Availability of previous day data, historical time series, future forecasts, data divided by fuel type.

Information on availability of generating units: scheduled outages, unscheduled outages, exactness of data, ex-ante and ex-post data availability.

Transmission capacity data: available capacity history, available capacity forecasts, power flows.

A standardized way of how TSOs disclose information on their transparency platforms is represented particularly by the German and Austrian TSOs. They concentrate on the previous day data and provide some kind of short-term forecasts regarding load and renewable generation. Outages of generating units larger than 100 MW and information on available transfer capacities are also available on most websites. However, there are still significant differences between the EU countries data disclosure levels. While some went even further than the regulation outlines, other are falling far behind.

We analyzed electricity market data disclosure platforms of the following, mostly Central European, countries in this report: Belgium, Romania, Denmark, Germany, Austria, Slovenia, Czech Republic, Slovakia, Hungary and Poland.

2. Data Disclosure Review






2.1 DENMARK

TSO: Energinet




Data website: <http://www.energinet.dk/EN/El/Engrosmarked/Udtraek-af-markedsdata/Sider/default.aspx>

Description: Energinet.dk data platform provides large amount of various market related information through the user friendly and well structured pages. These include number of data series beyond the EU requirements as well as data for the whole Nordic region and Germany. A significant benefit of the webpage, which is not usual with other TSOs, is an option to download data in different number and date formats. A weaker side of the Energinet.dk platform are generation related data sets as generation sorted by fuel type or generation forecasts are not available.

Positives:

-  Large number of various data sets – for Denmark and for surrounding countries
-  Easy and user friendly download of historical time series data
-  Load forecast available through Nordpoolspot web-pages
-  Option to download data in different date types, currencies and formats
-  Lots of information on transmission capacities and power flows

Negatives:

-  Unavailability of generation data sorted by fuel type
-  Unavailability of renewable generation forecasts
-  No data on generating units unavailability, however we have found some information on other web-pages

OUR RATING: 6 / 10



2.2 SLOVAKIA

TSO: SEPS, a.s.






Data website: https://dae.sepsas.sk/public/?VIEW_CODE=SYS_DE-SS_PUB-PUB-DATAFLOW-PRODUCTION_CONSUMPTION_VIEW

Description: Slovak transmission operator SEPS publishes most of the transparency information about Slovak electricity market through the system Damas energy. Other information is provided in the tables on the SEPS website. A significant drawback of the Damas energy system is its low user friendliness as the platform is slow, inflexible and unreliable compared to the easy downloads provided by other European TSOs. Unfortunately, there is no option to download historical time series data. Detailed information on generation (particularly the renewable sources) is also missing.

Positives:

-  Planned and unplanned generating units outages
-  Good provision of data on power flows and available cross border capacities

Negatives:

-  No option to easily download data for longer historical time periods
-  Slow, inflexible and hard to use platform. Often returns errors
-  No information on renewable generation
-  No generation data sorted by fuel type
-  No exact times for the generating units planned outages (dates only)

OUR RATING 3 / 10

2.3 CZECH REPUBLIC

TSO: ČEPS, a.s.

Data website: <http://www.ceps.cz/ENG/Data/Vsechna-data/Pages/default.aspx>

Description: CEPS data website includes more information than is the basic EU standard and its data platform is on the highest level in the Central European region. The webpage is user friendly, provides data in various formats, historical time series are easily downloadable and forecasts for most of the data sets are also available.

Positives:

- ⌚ User friendly web-page with different data formats available for download (XML, csv, xls, screen)
- ⌚ Hourly data on generation sorted by fuel type
- ⌚ Very detailed information on cross border capacities and power flows
- ⌚ Load forecast for the future periods as well as generation plan
- ⌚ Detailed information on scheduled and unscheduled power plant outages

Negatives

- ⌚ No renewable generation forecast
- ⌚ In some cases dates formatting could be improved. E.g. For units unavailability reports it seems that midnight date points actually refer to the following day. Additionally, in some cases dates are displayed in the U.S. format, which is confusing and creates some problems

OUT RATING: 8 / 10




2.4 GERMANY

TSOs: 50hertz, Tennet, Amprion, TransnetBW




Summary data website: <http://www.transparency.eex.com/de/>

Description: German electricity market is characterized by the fact that the whole area is divided into four parts and each has its own transmission operator. However, transparency data reported by 4 TSOs are well synchronized and summary information is available on the EEX website: <http://www.transparency.eex.com/de/>, which reports transparency data also for the surrounding countries such as Belgium, Netherlands, Austria and Czech Republic. This platform is also a winner of 2013 transparency award. General impression of the site is very good. The webpage contains lots of various information which is sorted in the clear and user friendly manner. However, in some cases the information is disclosed in the form of a chart (no values) and time series for the longer historical periods are available as a service only. It is questionable if selling of transparency data is in line with the EU regulation. (We understand that EEX is not a TSO responsible for data disclosure, however, in such case some other summarizing body has to be established which would publish German market transparency information free of charge)

Positives:

-  Next day renewable generation forecast
-  Detailed information on power plants unavailability
-  Website aims to merge information for all the transmission operators in Germany as well as surrounding countries.

Negatives:

-  For most of the data sets there is no free download for longer historical periods
-  Load data is available through the 4 separate TSO web-pages only
-  Available capacity chart could be very useful but there is no supporting data available (also no information on the past periods)

OUR RATING: 6 / 10


2.5 HUNGARY

TSO: MAVIR




Data website: <http://www.mavir.hu/web/mavir-en/data-publication>

Description: The transparency website of Hungarian TSO MAVIR contains large amount of various information. However, particularly for the users from the foreign countries, the site is very confusing as some of the data labels and crucial information is available only in Hungarian even in the English version of the webpage. Also in cases where the information is provided in English, it is often unclear what exactly was meant by the data reports (e.g. generating units' unavailability report). The website seems to contain a wide range of useful data, however, the value for the users is still far from the EU standard requested.

Positives:

-  The website seems to contain wide range of various information

Negatives:

-  Very confusing web-page with much of the crucial information and data labels stated in Hungarian even in the English version
-  Availability of the units is formally available but doesn't seem to be useful
-  Without the knowledge of Hungarian language it is hard to understand what else is available on the website, however it seems that the quality of the data could be improved

OUR RATING: 3 / 10




2.6 SLOVENIA

TSO: ELES, d.o.o.





Data website: <http://www.eles.si/en/day-ahead-generation-forecast.aspx>

Description: The ELES web-page provides well-structured information particularly on total load, generation and transmission capacities with forecasts available even for longer periods in advance. Unfortunately, much of the valuable information such as cross-border power flows or generation sorted by fuel type is still missing. Slovenia has significantly increased its solar capacity in recent years, however, no information on renewable generation is disclosed on ELES web-page.

Positives:

-  Forecasts of load and total generation for long periods in advance
-  Planned and unplanned units outages
-  Detailed information on cross-border transmission capacities

Negatives:

-  When downloading data for longer periods the site becomes unreliable
-  No renewable generation data and forecasts
-  No generation data sorted by fuel type
-  No information on cross-border power flows

OUR RATING: 5 / 10







2.7 BELGIUM

TSO: Elia

Website: <http://www.elia.be/en/grid-data/power-generation>

Description: The transparency platform of Belgium TSO Elia is a good example to follow for other European TSOs. The web-page provides full information on the Belgium power market in line with the EU requirements and in some cases goes even further. The platform includes long-term time series, actual data and week-ahead forecasts for all the relevant data sets. Very useful are particularly historical generation time series for all the fuel types.

Positives:

-  Detailed information on generation data
-  Planned and unplanned outages of generating units
-  Load forecasts for longer periods
-  Good site for historical time series download
-  Generation sorted by fuel type
-  Long-term forecast for renewable data

Negatives:

-  XML file type in data download could be also useful

OUR RATING 10 / 10




2.8 AUSTRIA

TSO: APG




Data website: <http://www.apg.at/en/market>

Description: The APG transparency data platform is on the standard European level. The site generally provides a user-friendly environment for the download of last day, historical and forecasted data on generation, load and renewable output. Information on generating units' unavailability is downloadable through the EEX platform.

Positives:

-  Generally good, user friendly, website with most of the usual information available
-  Easy download of historical data
-  Wind generation forecasts

Negatives

-  No detailed information on generation sorted by fuel type
-  No longer term forecasts on load
-  More information on hydro generation would be useful

OUR RATING: 7 / 10

2.9 POLAND

TSO: PSE S.A.

Data website: <http://www.pse.pl/index.php?dzid=59&did=142>

Description: Polish TSO does not have a full transparency platform, however some of the datasets are available on the PSE website. Unfortunately, the majority of information requested by the EU regulation is missing. In our view, the level of market data disclosure presented by PSE is on the lowest level of the 10 country TSOs analyzed in this report.

Positives:

- Available information on load with an option to download data for longer historical time periods
- Availability of transmission capacity forecasts

Negatives:

- No information on generation whatsoever (planned/unplanned outages, available capacity, generation totals, generation forecasts, generation by fuel type)
- No load forecasts available
- No information on power flows

OUR RATING: 2 / 10

2.10 ROMANIA

TSO: Transelectrica

Data website: <http://www.transelectrica.ro/en/web/tel/387>

Description: Transelectrica provides wide range of different data sets through its transparency platform. The amount of information available seems to be on the highest level of all the TSOs analyzed in this report (except of Elia), however the site is somewhat confusing. Additionally the formats of the data available for download are in many cases inconsistent and not always ideal.

Positives:

- 🔄 The amount of information available on the web-page
- 🔄 Generation sorted by fuel type is available, however every day is reported on a single excel sheet. Thus historical data series are quite hard to obtain.

Negatives:

- 🔄 Formatting of the data and user friendliness of the website could be improved.
- 🔄 The web-page states that forecasts for load and wind generation are available but no future data were found.
- 🔄 Time series data are in most cases available, however, the format requires much work to get to the single sheet time-series table.

OUR RATING: 7 / 10