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**OPINION OF THE AGENCY FOR THE COOPERATION OF ENERGY  
REGULATORS No 05/2014**

**of 25 February 2014**

**ON THE ENTSO-E WINTER OUTLOOK REPORT 2013/14  
AND SUMMER REVIEW 2013**

THE AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

HAVING REGARD to Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators<sup>1</sup>, and, in particular, Articles 6(3)(b) and 17(3) thereof,

HAVING REGARD to Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003<sup>2</sup>, and, in particular, Article 9(2) thereof,

HAVING REGARD to the favorable opinion of the Board of Regulators of 19 February 2014, delivered pursuant to Article 15(1) of Regulation (EC) No 713/2009,

WHEREAS:

- (1) On 28 November 2013, the European Network of Transmission System Operators for Electricity (“ENTSO-E”), pursuant to Articles 8(3)(f) and 9(2) of Regulation (EC) No 714/2009, submitted its annual winter generation adequacy outlook report for 2013/14 to the Agency for the Cooperation of Energy Regulators (“the Agency”) for its opinion. The report is entitled “Winter Outlook Report 2013/14 and Summer Review 2013” (the “WOR&SR 2013/14”)<sup>3</sup>.
- (2) Pursuant to Article 6(3)(b) of Regulation (EC) No 713/2009, the Agency shall provide an opinion to ENTSO-E in accordance with the first subparagraph of Article 9(2) of Regulation (EC) No 714/2009 on relevant documents referred to in Article 8(3) of Regulation (EC) No 714/2009. Point (f) of Article 8(3) of Regulation (EC) No 714/2009 refers to annual summer and winter generation adequacy outlooks to be adopted by ENTSO-E. It does not explicitly refer to the summer and winter reviews. However, such reviews are of utmost relevance for the preparation of future outlooks and, equally, constitute a long-standing practice of the associations of transmission system operators (“TSOs”).

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<sup>1</sup> OJ L 211, 14.8.2009, p.1.

<sup>2</sup> OJ L 211, 14.8.2009, p.15.

<sup>3</sup> ENTSO-E, “Winter Outlook Report 2013/14 and Summer Review 2013”, November 2013.

<https://www.entsoe.eu/publications/system-development-reports/outlook-reports/>.

Furthermore, the summer review of 2013 forms an integral part of the document containing ENTSO-E's winter outlook for 2013/14 and is strictly linked to it. In light of the above, it is therefore appropriate to consider in this Opinion not only the Winter Outlook Report 2013/14 (the "WOR 2013/14"), but also the Summer Review 2013 (the "SR 2013").

- (3) In its Opinion on the Winter Outlook Report 2012/13 and Summer Review 2012 (the "WOR&SR 2012/13")<sup>4</sup> the Agency outlined several actions for ENTSO-E to improve the future outlooks and reviews. This Opinion therefore takes stock of the progress made by ENTSO-E regarding these actions,

## HAS ADOPTED THIS OPINION:

### 1. Winter Outlook Report 2013/14 – General aspects

#### 1.1 Objectives and main results of the Winter Outlook Report 2013/14

According to ENTSO-E<sup>5</sup>, the purpose of the WOR 2013/14 is to present the TSOs' views on any matters concerning security of supply for the forthcoming winter period. In addition, it seeks to identify risks and countermeasures proposed by TSOs in cooperation with their neighbours, and to assess the possibility for neighbouring countries to contribute to the generation/demand balance if required.

Further, the WOR 2013/14 reports the outlook of the national and regional power balances between forecast generation and load on a weekly basis for the upcoming winter period, from Wednesday 4 December 2013 (week 49) to Sunday 20 April 2014 (week 16). The analysis also includes downward adequacy assessment, which covers the cases when an excess of generation can occur in the system, especially when variable renewable generation and inflexible classical generation are at high output levels.

ENTSO-E indicates<sup>6</sup> that the WOR 2013/14 is based on the information provided by ENTSO-E members during September 2013 on a qualitative and quantitative basis in response to a specific questionnaire<sup>7</sup>.

According to the WOR 2013/14<sup>8</sup>, the balance between generation and demand is expected to be maintained during the winter period in the case of normal weather conditions. However, under severe weather conditions several countries (such as

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<sup>4</sup> Agency for the Cooperation of Energy Regulators, "Opinion on the ENTSO-E Winter Outlook Report 2012/13 and Summer Review 2012", Opinion No. 08/2013, 25 March 2013, [http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2008-2013.pdf](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2008-2013.pdf).

<sup>5</sup> WOR&SR 2013/14, p. 3.

<sup>6</sup> WOR&SR 2013/14, p.6.

<sup>7</sup> Appendix 1 of the WOR&SR 2013/14.

<sup>8</sup> WOR&SR 2013/14, pp. 4-5.

Croatia, Finland, Hungary, Latvia and Sweden) would require imports to maintain the demand and supply balance during the entire winter period. In Poland, such import needs may exceed the available import capacities. On the other hand, the downward adequacy analysis shows that during certain weeks during the winter, it may be necessary to reduce generation in various countries (resulting from a combination of high renewables in-feed, inflexible generation and insufficient cross border export capacity).

The WOR 2013/14 also mentions<sup>9</sup> that “*greater [generation adequacy] margins are expected in the European power system over the coming winter when compared to winter 2012/13*”.

### *1.2 Glossary of key terms*

Like in the ENTSO-E Summer Outlook Report (“SOR”) 2013, a glossary of key terms is provided in Chapter 3<sup>10</sup>. The Agency notes that it is important to expand the glossary, to improve the definitions and to ensure consistency with terms used in the forthcoming Operational Planning and Scheduling Network Code, in the long-term adequacy reports and in the Yearly Statistics and Adequacy Retrospect Reports.

### *1.3 Transparency and publication of data*

In its Opinion on the WOR&SR 2012/13, the Agency regarded the availability of national datasheets for the Outlook Reports as important. Such datasheets should provide explicit figures e.g. on:

- (a) Expected load increase due to severe conditions, and
- (b) Expected generation constraints due to severe conditions.

The Agency expects ENTSO-E to consider providing such information in the future outlook and review reports, and notes that the publication requirements for similar types of data (load on a market-time-unit basis and generation capacity forecasts per generation unit) already exist in Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council<sup>11</sup>.

Further, the Agency positively acknowledges that the comments provided by countries about their situation concerning the upward and downward regulation margin are included in the WOR&SR 2013/14<sup>12</sup>.

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<sup>9</sup> WOR&SR 2013/14, p.4.

<sup>10</sup> WOR&SR 2013/14, p.10.

<sup>11</sup> OJ L 163, 15.6.2013, p.1. See Article 6(2)(e): *...a year-ahead forecast of total load for every week of the following year, which shall for a given week include a maximum and a minimum*; Article 14(2)(b) for forecasts of available generation capacity, and Article 15 for forecasts of unavailability of generation and production units.

<sup>12</sup> WOR&SR 2013/14, pp. 18-19 and p. 21.

## 2. Winter Outlook Report 2013/14 - (Upward) Adequacy assessment

### 2.1 Methodology for adequacy analysis

In its Opinion on the WOR&SR 2012/13, the Agency mentioned that a probabilistic approach should be used for the adequacy assessments and noted ENTSO-E's commitment to examine possible changes in generation adequacy assessments with particular regards to the treatment of renewable energy sources (RES).

As done in its Opinion on the ENTSO-E Summer Outlook Report 2013 and Winter Review 2012/2013 ("SOR&WR 2013")<sup>13</sup>, the Agency acknowledges the use of the Pan-European Climatic Database by ENTSO-E in the WOR&SR 2013/14.

This Database is used to model injections by wind and solar photovoltaic plants in the regional analysis. It contains per-country load factors for solar, onshore wind and offshore wind, per hour, for a ten-year period. For the regional (upward) analysis, the 50<sup>th</sup> percentile is used for normal conditions and the 10<sup>th</sup> percentile for severe conditions<sup>14</sup>.

The Agency considers that the Pan-European Climatic Database represents a first step towards the introduction of a probabilistic approach in the adequacy assessments and is a very important tool to be further exploited (e.g. in areas such as load responsiveness to temperature).

### 2.2 Treatment of maintenance and overhauls

The WOR spreadsheet includes a field related to maintenance and overhauls (field 7), as explained in Section 7.5 of the WOR&SR 2013/14<sup>15</sup>. It also includes:

- Net generating capacity (field 6);
- Non-usable capacity at peak load under normal conditions (field 8).

The WOR spreadsheet indicates that the available capacity under normal conditions (field 9) is automatically calculated from the data submitted. However, based on the schematic description of the methodology<sup>16</sup>, it is not immediately clear whether maintenance is deducted when calculating the available capacity. The Agency expects ENTSO-E to clarify the treatment of maintenance in the schematic description.

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<sup>13</sup> Agency for the Cooperation of Energy Regulators, "Opinion on the ENTSO-E Summer Outlook Report 2013 and Winter Review 2012/2013", Opinion No 22/2013, 29 November 2013, [http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2022-2013.pdf](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2022-2013.pdf)

<sup>14</sup> The 10<sup>th</sup> percentile is (a rather low) injection level which (historically/statistically) is exceeded more than 90% of the time.

<sup>15</sup> WOR&SR 2013/14, p.119.

<sup>16</sup> Figure in ENTSO-E WOR&SR 2013/14, p.8.

### *2.3 Identification of appropriate weekly reference points*

The Agency commends the fact that ENTSO-E conducted a load study<sup>17</sup>, similar to the one already conducted for the SOR 2013, to identify the most representative synchronous time for covering the global European peak load in winter (the synchronous point turned out to be Wednesday, 19:00 CET).

### *2.4 Coverage of potential threats to generation adequacy – the case of natural gas supply*

During the development cycles of the seasonal Outlooks, ENTSO-E has consistently been asking TSOs for information about natural gas supply threats. As also mentioned in the Agency's Opinion on the WOR&SR 2012/13, and acknowledging the difficulties to fully analyse the implications of natural gas supply stresses at regional level, the Agency suggests considering, as an initial step, the definition of appropriate indicators. Such indicators could be (a) gas fueled generation capacity, in MW and as a % of total non-intermittent capacity, and (b) number of equivalent days of normal system operation under gas supply interruption.

The Agency deems that this issue can be among the ones on which ENTSO-E will consult stakeholders in the forthcoming public consultation on the methodological advancements to be introduced in the analysis of adequacy issues<sup>18</sup>.

## **3. Winter Outlook Report 2013/14 - Downward adequacy analysis (Downward Regulation Margin)**

### *3.1 Introduction of a probabilistic approach*

The Agency positively acknowledges the fact that the Pan-European Climatic Database is introduced also in the downward regional analyses to model injections by wind and solar photovoltaic plants. In this case, the 90<sup>th</sup> percentile for the past three years is used<sup>19</sup>.

### *3.2 Identification of appropriate weekly reference points*

According to the SR 2013, the experience of several European TSOs showed that the relevance of downward adequacy assessment on weekends or holidays increases.

The Agency positively acknowledges ENTSO-E's learning from the seasonal review to improve the seasonal outlook: further to the 05.00 CET Sunday minimum demand scenario used so far, the WOR&SR 2013/14 downward analysis is also performed for daytime, at 11.00 CET on Sundays, to account for increasing PV generation.

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<sup>17</sup> ENTSO-E SOR&WR 2013, p.6.

<sup>18</sup> ENTSO-E, "Draft ENTSO-E Work Programme Autumn 2013 through December 2014", p.13.

<sup>19</sup> The 90th percentile is (a rather high) injection level which (historically/statistically) is exceeded less than 10% of the time.

### 3.3 *Displaying each country's export requirements*

The Agency commends the fact that the national analysis is enriched with a new diagram showing the 'Export requirements due to incompressibility of generation' for each country.

### 3.4 *Extension of the downward analysis to other periods of the year*

Already in its Opinion on the WOR&SR 2012/13, the Agency suggested that ENTSO-E considers the extension of the downward analysis to other periods during spring or autumn, which are currently not investigated by the Summer and Winter Outlooks.

The Agency positively acknowledges that in the WOR&SR 2013/14 the assessed period has been extended up to Sunday 20 April 2014 in order to include the Easter weekend which is on week 16 in most ENTSO-E member countries and can be one of the most stressed periods in several European areas.

## 4. **Summer Review 2013**

### 4.1 *Objectives and main results of the Summer Review 2013*

The objective of the SR 2013<sup>20</sup> is to report on the summer season as regards weather conditions and other factors and their consequences on the power system (temperatures, hydro and wind conditions), the availability of generating units, the market conditions, the use/availability of interconnections and imported energy, and to compare what happened in reality with the risks identified in the SOR 2013. The SR 2013 covers the period from Wednesday 5 June 2013 (week 23) to Wednesday 25 September 2013 (week 39).

ENTSO-E indicates<sup>21</sup> that the SR 2013 is based on information provided by ENTSO-E members in response to a specific questionnaire<sup>22</sup>. The Agency acknowledges the improvement of the Summer Review Questionnaire, which has been aligned with the Winter Review Questionnaire.

According to the SR 2013<sup>23</sup>, except from heavy rainfalls and severe floods in parts of the Czech Republic, Austria and Germany in June, no extreme weather conditions occurred across Europe during the last summer, the load mainly remained at normal levels and no critical and unexpected situation occurred.

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<sup>20</sup> WOR&SR 2013/14, p.125.

<sup>21</sup> WOR&SR 2013/14, p.6.

<sup>22</sup> Appendix 1 of the WOR&SR 2013/14, p.126.

<sup>23</sup> WOR&SR 2013/14, p.13.

#### 4.2 Availability of retrospect information

In its Opinion on the WOR&SR 2012/13, the Agency recommended ENTSO-E to collect and publish quantitative information as an element of the review reports. Priority should be given to the actual weekly peak load levels and to the actual average temperatures and their deviation with respect to the forecasts.

The publication of quantitative information should then also include the actual reliably available capacity in weekly peak load conditions. This would eventually allow calculating and publishing weekly actual values of remaining capacity. Such indicators would contribute to accurate quantitative analysis of margins in the demand and supply balance.

In the WOR&SR 2013/14 Questionnaire<sup>24</sup> TSOs are urged to provide, among others, the following:

*'...quantitative data to illustrate how the summer out-turned against what was forecast (e.g. actual peak load and difference compared with forecast in normal and extreme conditions, ...)'.*

The Agency notes that such data and comparison do not appear in the WOR&SR 2013/14. The Agency also notes that such data are not published in the ENTSO-E Yearly Statistics and Adequacy Retrospect Report 2012<sup>25</sup>.

Further, the Agency believes that obtaining structured feedback responses would further enhance the quality of the review reports and increase their value for stakeholders. As already emphasised in its Opinion on the WOR&SR 2012/13, the Agency once again suggests that ENTSO-E provides information on the following:

- events which occurred during the period under 'review' (causes, effects and countermeasures);
- curtailments of Renewable Energy Sources.

Done at Ljubljana on 25 February 2014.

For the Agency:

  
Alberto Pototschnig  
Director

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<sup>24</sup> WOR&SR 2013/14, p.125.

<sup>25</sup> <https://www.entsoe.eu/publications/statistics/yearly-statistics-adequacy-retrospect/>



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