ACER
European Union Agency for the Cooperation of Energy Regulators

PUBLIC

OPINION No 07/2020
OF THE EUROPEAN UNION AGENCY
FOR THE COOPERATION OF ENERGY REGULATORS

of 10 December 2020

ON THE ENTSO-E SUMMER OUTLOOK 2020
AND WINTER REVIEW 2019-2020 REPORT

THE EUROPEAN UNION AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

Having regard to Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators[1], and, in particular, Article 4(3)(b) thereof,

Having regard to Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity[2] and, in particular, Articles 30(1)(m) and 32(2) thereof,

Having regard to Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC[3] and, in particular, Article 9(2) thereof,

Having regard to the favourable opinion of the Board of Regulators of 13 October 2020, delivered pursuant to Article 22(5)(a) of Regulation (EU) 2019/942,

Whereas:

1. INTRODUCTION

(1) On 15 June 2020, the European Network of Transmission System Operators for Electricity ('ENTSO-E') published its annual summer adequacy outlook report for 2020 ('Summer Outlook 2020') together with the review of the main events occurring during winter 2019-2020 ('Winter Review 2019-2020'). On 17 September, ENTSO-E submitted the Summer Outlook 2020 to ACER for its opinion, according to

[1] OJ L 158, 14.6.2019, p. 22–53.
[2] OJ L 158, 14.6.2019, p. 54–124.
[3] OJ L 158, 14.6.2019, p. 1–21.

Articles 32(2) and 30(1) of Regulation (EU) 2019/943. The document submitted by ENTSO-E is entitled "2020 Summer Outlook – Winter Review 2019-2020"[4] (the 'Report').

(2) Pursuant to Article 4(3)(b) of Regulation (EU) 2019/942 and Article 30(1)(m) of Regulation (EU) 2019/943, ACER may provide an opinion to ENTSO-E on their seasonal adequacy assessments, taking into account the objectives of non-discrimination, effective competition and the efficient and secure functioning of the internal market for electricity. In view of these objectives, and to steer the implementation of the ACER Decision No. 08/2020[5] towards the desired outcomes, ACER considers it appropriate to issue this opinion on the submitted Report.

(3) The Report is accompanied by:

(a) a document including country-specific comments on the expected security of supply situation in their system during summer 2020 and country-specific analyses of events or specific operational conditions which occurred during winter 2019-2020. The document is entitled "2020 Summer Outlook – Winter Review 2019-2020 – Country Comments"[6] (the 'Country Comments Report');

(b) a spreadsheet file providing relevant input information with respect to supply data[7] for Summer Outlook 2020;

(c) a spreadsheet file providing the expected transfer capacities between study zones[8] for Summer Outlook 2020;

(d) a spreadsheet file providing wind offshore generation time series from the ENTSO-E Pan-European Climate Database ('PECD')[9] used for Summer Outlook 2020;

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[4] ENTSO-E, "2020 Summer Outlook – Winter Review 2019-2020", 15 June 2020. https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/Summer-Outlook-2020_Report.pdf.

[5] ACER Decision No. 08/2020 of 6 March 2020 on the methodology for short-term and seasonal adequacy assessments. https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2008-2020%20on%20the%20short-term%20and%20seasonal%20adequacy%20assessments%20methodology_RPR8.pdf

[6] ENTSO-E, "2020 Summer Outlook – Winter Review 2019-2020 – Country Comments", 15 June 2020. https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/Summer-Outlook-2020_Country_comments.pdf

[7] https://eepublicdownloads.blob.core.windows.net/public-cdn-contain.er/clean-documents/sdc-documents/seasonal/SOR2020/data/Supply_SOR%2020.xlsx.

[8] https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/data/Transfer%20Capacities_SOR%2020.xlsx.

[9] https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/data/PECD/PECD_2020_edition%202020_Offshore.xlsx.

(e) a spreadsheet file providing wind onshore generation time series from the ENTSO-E Pan-European Climate Database ('PECD')[10] used for Summer Outlook 2020;

(f) a spreadsheet file providing solar generation time series from the ENTSO-E Pan-European Climate Database ('PECD')[11] used for Summer Outlook 2020;

(g) an archive file providing relevant input information with respect to hydroelectric power modelling[12] used for Summer Outlook 2020; and

(h) a spreadsheet file providing the expected electricity demand data[13] used for Summer Outlook 2020.

2. SUMMARY OF THE REPORT

(4) In the Summer Outlook 2020, ENTSO-E upgraded its methodology for assessing adequacy on the seasonal time horizon, as described in section "Seasonal Outlook Revolution" of the Report. In particular, the new methodology (Methodology for Short-term and Seasonal Adequacy Assessment, 'STSAA Methodology')[14] has been developed by ENTSO-E and approved by ACER[15] on 6 March 2020. The Summer Outlook 2020 summarizes the main elements of improvement of the methodological framework (e.g. from deterministic to probabilistic approach). ENTSO-E recognizes that the full implementation of the methodology will require further work in the coming years (e.g. to include flow-based modelling).

(5) The Summer Outlook 2020 covers the period from week 22 of 2020 (25 May 2020) to week 40 of 2020 (4 October 2020), and is based on data collected and processed pursuant to Article 7 of the STSAA Methodology.

(6) ENTSO-E clarifies that the relevant data collection for Summer Outlook 2020 has been performed prior to the COVID-19 pandemic: consequently, the impact on adequacy of measures applied in each country to limit the spread of the pandemic are not captured. On the other hand, ENTSO-E declares that, after a 'stress test' to assess maintenance reschedule under severe conditions was performed, transmission system

[10] https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/data/PECD/PECD_2020_edition%202020_Onshore.xlsx.
[11] https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/data/PECD/PECD_2020_edition%202020_PV.xlsx.
[12] https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/data/Hydro.zip.
[13] https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/sdc-documents/seasonal/SOR2020/data/Demand_SOR%2020.xlsx.
[14] ACER Decision on STSAA Methodology: Annex I. https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C8/ACER%20Decision%2008-2020%20on%20the%20RPR8%20-%20Annex%20I.pdf
[15] See footnote 5

operators ('TSOs') confirmed that there is no significant adequacy risk during the period covered by the assessment.

(7) The Summer Outlook 2020 provides an overview of the status of the power system (section "Overview of the power system in Summer 2020" of the Report) in the period covered by the assessment in terms of:

(a) generation capacity mix. In particular, it is highlighted that Net Generating Capacities ('NGC') are sufficient to cover the highest expected demand in all study zones except Luxembourg. On the other hand, in case only thermal and hydro capacity are considered, the NGC may decrease in several study zones;

(b) generation capacity evolution;

(c) planned unavailability of thermal units;

(d) demand overview; and

(e) network overview.

(8) The information about the power system considered in the Summer Outlook 2020 encompasses all resources available to supply demand in a market-based approach and does not represent resources dedicated to ensuring operational security, transfer capacities, which are dedicated to cope with power flow variability and out-of-market measures, which are dedicated to cope with power supply shortages.

(9) The results of the Summer Outlook with respect to the adequacy situation (section 'Adequacy situation') are summarised below:

(a) Most adequacy concerns (in terms of risk to rely on non-market measures) are identified in the Mediterranean Sea islands;

(b) Marginal and occasional risks are identified in Poland: ENTSO-E observes that such risks are associated with extreme scenarios (high unplanned outages combined with low renewable generation);

(c) Structural risks are highlighted in Malta. The reasons behind this adequacy risk are investigated in the 'Focus on Malta' section:

i. during the daytime of a typical workday in summer, demand in Malta lies in the approximate range of 300–500 MW depending on weather conditions. Meanwhile, market-based resources consist of 355 MW of thermal generation and 178 MW of solar generation, which is weather dependent. Therefore, during the daytime of a summer day, Malta depends on solar generation and imports;

ii. in scenarios where the interconnection between Malta and Sicily (Italy) is not available in a typical working day in week 39 (Monday 21 September 2020 – Sunday 27 September 2020), the Loss of Load Probability ('LOLP') adequacy metric value would reach 29.9%. In scenarios where the interconnector between Malta and Sicily is available, LOLP would be lower than 5% in week 39; and

iii. taking into consideration the utilisation of "reserves" (non-market measures), the adequacy risk in Malta is deemed negligible and related to extreme scenarios with high unplanned outages combined with low renewable generation.

(10) The Winter Review 2019-2020 is described in section 'Winter 2019/2020 Review' of the Report: it describes the most important events that occurred during the winter of 2019/2020 and compares them with the study results reported in the previous Seasonal Outlook. The main elements of the Winter Review 2019-2020 are summarised below:

(a) The past winter (December 2019 to March 2020) was the warmest on record in Europe;

(b) Some voltage regulation challenges were experienced throughout Europe towards the end of the Winter 2019/2020 season, in relation to the decreased demand due to the COVID-19 pandemic and during moments of high renewable generation. The effect was specifically prominent during bank holidays and in regions with important countermeasures in place to cope with the pandemic crisis;

(c) On 23 December 2019, the Malta–Sicily Interconnector was damaged by a ship's anchor causing a nationwide blackout for about three hours. The emergency gas turbines were dispatched to restore supply to consumers within a short time. The interconnector was back in operation on 13 March 2020;

(d) Several winter storms were recorded in North-Western Europe. In Germany, they occasionally caused wind generation to peak. Wind generation curtailment was occasionally necessary to ensure security of system operations;

(e) On January 2020, Hungary recorded more frequent and higher unplanned outages than usual. Furthermore, the demand increased compared to the winter of 2018/2019 despite the mild winter. A new demand record of 7105 MW was marked on 5 December 2019; and

(f) Many unplanned outages of nuclear power plants were recorded in Sweden, either due to technical failures of power plant elements or technical failures of grid elements connecting them to the power system. Nevertheless, adequacy and security margins were sufficient to cope with the situation.

3. ASSESSMENT OF THE SUMMER OUTLOOK 2020 AND WINTER REVIEW 2019-2020

3.1. Legal framework

(11) The Report was submitted for ACER's opinion pursuant to Articles 30(l)(m) and 32(2) of Regulation (EU) 2019/943. According to these Articles, ENTSO-E shall adopt seasonal adequacy assessments and submit them to ACER for an opinion. Seasonal adequacy assessments include a winter adequacy assessment and a summer adequacy assessment, as specified in Article 9(2) of Regulation (EU) 2019/941.

(12) In providing its opinion, ACER takes into account the objectives of non-discrimination, effective competition and the efficient and secure functioning of the

internal market for electricity, as required by Article 4(3)(b) Regulation (EU) 2019/942.

3.2. General remark

(13) Articles 30(1)(m) and 32(2) of Regulation (EU) 2019/943 do not explicitly refer to summer and winter reviews to be adopted by ENTSO-E and to be submitted to ACER for an opinion. However, such reviews are of utmost relevance for the preparation of future seasonal adequacy assessments and, equally, constitute a long-standing practice of ENTSO-E. Therefore, ACER deems it appropriate to consider in this Opinion not only the Summer Outlook 2020, but also the Winter Review 2019-2020.

(14) ENTSO-E published the Report on 15 June 2020, two weeks after the deadline set in Article 9(2) of Regulation (EU) 2019/941 (1 June each year). ENTSO-E informed ACER in due time about the delay, motivated by the need to perform additional analyses on the European power system to properly assess the impact of the COVID-19 pandemic on adequacy risks. ACER observes that Article 9(2) of Regulation (EU) 2019/941 does not declare a publication after 1 June 2020 as invalid. ENTSO-E also submitted the Summer Outlook 2020 to ACER for its opinion.

(15) Therefore, ACER considers the submission of the Report as valid.

3.3. Assessment of specific issues of Summer Outlook 2020 and Winter Review 2019-2020

(16) Although it is mentioned in several parts of the Summer Outlook 2020 ('Introduction remark', footnote in the "Executive summary" and 'Overview of power system in Summer 2020') that a '*stress test' to assess the recently announced maintenance reschedule under severe conditions' (including heat wave and low RES generation)*' with respect to the COVID-19 pandemic has been performed and that '*TSOs themselves do not expect that the pandemic will negatively impact adequacy during this summer*', the Summer Outlook 2020 does not include any evidence of this study or refer to additional documents. ACER observes that providing evidence and detailed explanation of such analysis would have increased transparency of the Summer Outlook 2020.

(17) Pursuant to Article 3(7) of the STSAA Methodology, seasonal adequacy assessments shall be based on any relevant metrics, including Loss of Load Expectation ('LOLE'). The Summer Outlook 2020 does not include this metric: ACER observes that the calculation of LOLE (in a given modelled zone during a given time period) would allow to better characterize the level of security of supply in the analysed area (as a complement to LOLP).

(18) Pursuant to Article 3(8)(c) of the STSAA Methodology, seasonal adequacy assessment shall include a sensitivity analysis to assess possible measures to prevent or mitigate adequacy risks, in particular with respect to the use of non-market measures to mitigate an electricity crisis. The Summer Outlook 2020 does not include such sensitivities in a systematic way, with the exception of a dedicated analysis for

Malta as described in subparagraph (9)(c) above. ACER observes that, in line with the STSAA Methodology, the role of non-market measures shall be systematically evaluated to identify the role of such measures in preventing or mitigating adequacy risks.

(19) Pursuant to paragraph (14) of Annex I to STSAA Methodology, the convergence of the Monte Carlo method exploited in the probabilistic assessment of short-term and seasonal adequacy outlooks shall be assessed by the calculation of the coefficient of variation on the Expected Energy Not Serve ('EENS') adequacy metric: in particular, paragraph (16) of the aforementioned Annex I requires that the number of analysed Monte Carlo samples and the values of the coefficient of variation as a function of the number of analysed Monte Carlo samples shall be reported along with the results of adequacy assessments. However, the Summer Outlook 2020 does not provide such information. ACER observes that, in line with the STSAA Methodology, the robustness of the seasonal assessment results can only be ensured if the probabilistic assessment converges.

(20) The dedicated analysis for Malta in the Summer Outlook 2020, the role of non-market measures in mitigating adequacy risks is highlighted. However, no details are provided with respect to what type of reserves are expected to be deployed to mitigate adequacy risks. ACER observes that a proper characterisation of the resources modelled in seasonal assessments ensures a better understanding from relevant stakeholders.

(21) Pursuant to Article 9(1) of the STSAA Methodology, the seasonal assessment report shall be exhaustive and informative. While ACER recognizes that the Summer Outlook 2020 is the first seasonal adequacy assessment carried out by ENTSO-E by partially implementing the STSAA Methodology, ACER also observes that the level of description and explanation of the results is rather limited. ACER observes that an appropriate description and discussion of the results is of paramount importance to highlight possible adequacy risks and, eventually, potential mitigation measures, to relevant stakeholders.

(22) With respect to the import capacity with non-explicitly modelled systems, it is not clear from the Summer Outlook 2020 to what extent such capacities are included in the modelling exercise: in particular:

(a) Pursuant to paragraph (22) of Annex I to STSAA Methodology, "*Supply shall be considered as all available generation units and storage units in the assessed system and expected available imports from non-explicitly modelled neighbouring countries*"; and

(b) According to p. 13 of the Report, "*import capacities with non-modelled systems (not coloured in figure* [10] *) are not considered*".

ACER observes that a proper and consistent characterisation of how imports/exports from/to non-explicitly modelled systems are accounted in seasonal assessments is of paramount importance to properly reflect adequacy risks at pan-European level.

(23) With respect to the data provided as annexes to the Report and detailed in subparagraphs (3)(b)-(3)(h) above, ACER praises the effort from ENTSO-E to ensure transparency of inputs for seasonal adequacy assessments. On the other hand:

(c) ACER observes that this information does not follow standardised data formats (e.g. database management systems, comma-separated values files, etc.) that could facilitate systematic and automatic data processing from relevant stakeholders; and

(d) ACER observes that ENTSO-E has not specified the data licensing or has stated clear data re-use rights. In this respect, ACER highlights that, on February 2019, a data policy on ENTSO-E Transparency Platform has been implemented[16].

4. CONCLUSION

(24) ACER did not identify such elements in the Report that would suggest that the Summer Outlook 2020 and the Winter Review 2019-2020 have negative effects on non-discrimination, effective competition, and efficient and secure functioning of the electricity market.

(25) In line with the assessment provided in Section 3.3 above and with the STSAA Methodology, ACER found that the informative value of future seasonal adequacy assessments and reviews can be further enhanced as follows:

(a) The level of detail in the results should improve. In particular, the impact of the COVID-19 pandemic should be properly analysed and communicated in the upcoming Winter Outlook 2020-2021;

(b) All relevant adequacy metrics should be computed;

(c) The impact of non-market measures shall be systematically evaluated;

(d) Representation of non-explicitly modelled systems should be consistent and clearly described;

(e) Data should be provided in a user-friendly manner; and

(f) Data licensing should be specified,

HAS ADOPTED THIS OPINION:

1. ACER considers that the Summer Outlook 2020 and the Winter Review 2019-2020 are in line with the requirements of Article 4(3)(b) of Regulation (EU) 2019/942.

[16] https://www.entsoe.eu/news/2019/02/01/tsos-increase-number-of-open-data-available-through-entso-e-s-transparency-platform/

2. This Opinion is addressed to the European Network of Transmission System Operators for Electricity.

Done at Ljubljana, on 10 December 2020.

- SIGNED -

For the Agency
The Director

C. ZINGLERSEN