DECISION OF THE ITALY NORTH REGULATORY AUTHORITIES

ON

THE METHODOLOGY FOR LONG-TERM CROSS-ZONAL CAPACITY CALCULATION FOR ITALY NORTH CCR IN ACCORDANCE WITH ARTICLE 10 OF THE COMMISSION REGULATION (EU) 2016/1719 OF 26 SEPTEMBER 2016 ESTABLISHING A GUIDELINE ON FORWARD CAPACITY ALLOCATION

15 December 2020

I. Introduction and legal context

This document elaborates an agreement of the Italy North Regulatory Authorities (hereinafter: IN NRAs), agreed on 15 December 2020 at Italy North Energy Regulators' Regional forum, on the long term capacity calculation methodology (hereinafter: IN FCA CCM) submitted by the Italy North Transmission System Operators (hereinafter: IN TSOs) as required by Article 10 of the Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a Guideline on Forward Capacity Allocation (hereinafter: FCA)

This agreement of the IN NRAs shall provide evidence that a decision on the IN FCA CCM does not, at this stage, need to be adopted by ACER pursuant to Article 4(10) of FCA. It is intended to constitute the basis on which the IN NRAs will each subsequently issue a national decision to approve the IN FCA CCM pursuant to Article 4(9) of FCA.

The legal provisions that lie at the basis of the IN FCA CCM, and this IN NRAs agreement on the above mentioned methodology, can be found in Articles 3, 4, 9 to 15, 19, 21, 23 and 24 of FCA and in Article 5 of the 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 (recast) (in the following: Regulation 2019/942).They are set out here for reference.

FCA

Article 3

Objectives of forward capacity allocation

This Regulation aims at:

(a) promoting effective long-term cross-zonal trade with long-term cross-zonal hedging opportunities for market participants;
(b) optimising the calculation and allocation of long-term cross-zonal capacity;
(c) providing non-discriminatory access to long-term cross-zonal capacity;
(d) ensuring fair and non-discriminatory treatment of TSOs, the Agency, regulatory authorities and market participants;
(e) respecting the need for a fair and orderly forward capacity allocation and orderly price formation;
(f) ensuring and enhancing the transparency and reliability of information on forward capacity allocation;
(g) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union.

Article 4

Adoption of terms and conditions or methodologies

1. TSOs shall develop the terms and conditions or methodologies required by this Regulation and submit them for approval to the competent regulatory authorities within the respective deadlines set out in this Regulation. Where a proposal for terms and conditions or methodologies pursuant to this Regulation needs to be developed and agreed by more than one TSO, the participating TSOs shall closely cooperate. TSOs, with the assistance of ENTSO for Electricity, shall regularly inform the competent regulatory authorities and the Agency about the progress of the development of these terms and conditions or methodologies.

[…]

5. Each regulatory authority shall be responsible for approving the terms and conditions or methodologies referred to in paragraphs 6 and 7.
6. (…)
7. The proposals for the following terms and conditions or methodologies shall be subject to approval by all regulatory authorities of the concerned region:

a. *the capacity calculation methodology pursuant to Article 10;*

[…]

8. *The proposal for terms and conditions or methodologies shall include a proposed timescale for their implementation and a description of their expected impact on the objectives of this Regulation. Proposals on terms and conditions or methodologies subject to the approval by several or all regulatory authorities shall be submitted to the Agency at the same time that they are submitted to regulatory authorities. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within three months on the proposals for terms and conditions or methodologies.*
9. *Where the approval of the terms and conditions or methodologies requires a decision by more than one regulatory authority, the competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order reach an agreement. Where applicable, the competent regulatory authorities shall take into account the opinion of the Agency. Regulatory authorities shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs 6 and 7, within six months following the receipt of the terms and conditions or methodologies by the regulatory authority or, where applicable, by the last regulatory authority concerned.*
10. *Where the regulatory authorities have not been able to reach an agreement within the period referred to in paragraph 9, or upon their joint request, the Agency shall adopt a decision concerning the submitted proposals for terms and conditions or methodologies within six months, in accordance with Article 8(1) of Regulation (EC) No 713/2009.*
11. *In the event that one or several regulatory authorities request an amendment to approve the terms and conditions or methodologies submitted in accordance with paragraphs 6 and 7, the relevant TSOs shall submit a proposal for amended terms and conditions or methodologies for approval within two months following the requirement from the regulatory authorities. The competent regulatory authorities shall decide on the amended terms and conditions or methodologies within two months following their submission. Where the competent regulatory authorities have not been able to reach an agreement on terms and conditions or methodologies pursuant to paragraphs 6 and 7 within the two-month deadline, or upon their joint request, the Agency shall adopt a decision concerning the amended terms and conditions or methodologies within six months, in accordance with Article 8(1) of Regulation (EC) No 713/2009. (…)*
12. *(…)*
13. *TSOs responsible for establishing the terms and conditions or methodologies in accordance with this Regulation shall publish them on the internet after approval by the competent regulatory authorities or, if no such approval is required, after their establishment, except where such information is considered as confidential in accordance with Article 7.*

Article 9

Capacity calculation time frames

All TSOs in each capacity calculation region shall ensure that long-term cross-zonal capacity is calculated for each forward capacity allocation and at least on annual and monthly time frames.

Article 10

Capacity calculation methodology

1. *No later than six months after the approval of the common coordinated capacity calculation methodology referred to in Article 9(7) of Regulation (EU) 2015/1222, all TSOs in each capacity calculation region shall submit a proposal for a common capacity calculation methodology for long-term time frames within the respective region. The proposal shall be subject to consultation in accordance with Article 6.*
2. *The approach used in the common capacity calculation methodology shall be either a coordinated net transmission capacity approach or a flow-based approach.*

3. *The capacity calculation methodology shall be compatible with the capacity calculation methodology established for the day-ahead and intraday time frames pursuant to Article 21(1) of Regulation (EU) 2015/1222.*
4. *The uncertainty associated with long-term capacity calculation time frames shall be taken into account when applying:*
   (a) *a security analysis based on multiple scenarios and using the capacity calculation inputs, the capacity calculation approach referred to in Article 21(1)(b) and the validation of cross-zonal capacity referred to in Article 21(1)(c) of Regulation (EU) 2015/1222; or*
   (b) *a statistical approach based on historical cross-zonal capacity for day-ahead or intraday time frames if it can be demonstrated that this approach may: (i) increase the efficiency of the capacity calculation methodology; (ii) better take into account the uncertainties in long-term cross-zonal capacity calculation than the security analysis in accordance with paragraph 4(a); (iii) increase economic efficiency with the same level of system security.*
5. *All TSOs in each capacity calculation region may jointly apply the flow-based approach for long-term capacity calculation time frames on the following conditions:*
   (a) *the flow-based approach leads to an increase of economic efficiency in the capacity calculation region with the same level of system security;*
   (b) *the transparency and accuracy of the flow-based results have been confirmed in the capacity calculation region;*
   (c) *the TSOs provide market participants with six months to adapt their processes.*
6. *Where a security analysis based on multiple scenarios is applied for developing the capacity calculation methodology in a capacity calculation region, the requirements for the capacity calculation inputs, the capacity calculation approach and the validation of cross-zonal capacity as provided for in Article 21(1) of Regulation (EU) 2015/1222, except Article 21(1)(a)(iv) where relevant, shall apply.*
7. *When developing the capacity calculation methodology, the requirements for the fallback procedures and the requirement provided for in Article 21(3) of Regulation (EU) 2015/1222 shall be taken into account.*

Article 11

Reliability margin methodology

The proposal for a common capacity calculation methodology shall include a reliability margin methodology which shall meet the requirements set out in Article 22 of Regulation (EU) 2015/1222.

Article 12

Methodologies for operational security limits and contingencies

The proposal for a common capacity calculation methodology shall include methodologies for operational security limits and contingencies which shall meet the requirements set out in Article 23(1) and (2) of Regulation (EU) 2015/1222.

Article 13

Generation shift keys methodology

The proposal for a common capacity calculation methodology shall include a methodology to determine generation shift keys which shall meet the requirements set out in Article 24 of Regulation (EU) 2015/1222.

Article 14

Methodology for remedial actions

If remedial actions are taken into account in the long-term capacity calculation, each TSO shall ensure that those remedial actions are technically available in real time operation and meet the requirements set out in Article 25 of Regulation (EU) 2015/1222.

Article 15

Cross-zonal capacity validation methodology

The proposal for a common capacity calculation methodology shall include a cross-zonal validation methodology which shall meet the requirements set out in Article 26 of Regulation (EU) 2015/1222.

Article 19

Scenarios

1. *All TSOs in capacity calculation regions, where security analysis based on multiple scenarios pursuant to Article 10 is applied, shall jointly develop a common set of scenarios to be used in the common grid model for each long-term capacity calculation time frame.*
2. *When developing the common set of scenarios, the relevant requirements set in Article 18 of Regulation (EU) 2015/1222 shall apply.*

Article 21

General provisions

1. *[…]*
2. *The coordinated capacity calculators established in Article 27 of Regulation (EU) 2015/1222 shall calculate long- term cross-zonal capacities for their capacity calculation region. For this purpose, no later than six months after the approval of the capacity calculation methodology for long-term time frames referred to in Article 10, all TSOs in each capacity calculation region shall jointly develop operational rules for long-term capacity calculation time frames supplementing the rules defined for the operation of the coordinated capacity calculators pursuant to Article 27 of Regulation (EU) 2015/1222.*
3. *The relevant requirements set in Article 27 of Regulation (EU) 2015/1222 shall apply for long-term capacity calculation time frames.*

Article 23

Regional calculations of long-term cross-zonal capacities

1. *Where TSOs apply the statistical approach pursuant to Article 10, the process for the calculation of long-term cross-zonal capacity shall include at least:*
   (a) a selection of historical day-ahead or intraday cross-zonal capacity data sets from a single period or a set of periods and order the data into a duration curve;
   (b) a calculation of capacity corresponding to the risk level for the selected data set;
   (c) a calculation of long-term cross-zonal capacity to be offered to forward capacity allocation taking into account a margin to reflect the difference between historical cross-zonal capacity values and forecasted long-term cross-zonal capacity values;
   (d) common rules to take into account available information about planned outages, new infrastructure and generation and load pattern for the long-term capacity calculation time frames.
2. *Where TSOs apply the security analysis based on multiple scenarios pursuant to Article 10, the requirements set in Article 29 of Regulation (EU) 2015/1222, except Article 29(4) where relevant, shall apply to long-term capacity calculation time frames in capacity calculation regions.*

3. *Each coordinated capacity calculator shall split the calculated long-term cross-zonal capacity for each forward capacity allocation by applying the methodology for splitting cross-zonal capacity pursuant to Article 16.*
4. *Each coordinated capacity calculator shall submit the calculated long-term cross-zonal capacity and the splitting of long-term cross-zonal capacity for validation to each TSO within the relevant capacity calculation region pursuant to Article 24.*

Article 24

Validation and delivery of cross-zonal capacity and split cross-zonal capacity

1. *Each TSO shall validate the results of the calculation for long-term cross-zonal capacity on its bidding zone borders or critical network elements for each long-term capacity calculation time frame pursuant to Article 15.*
2. *Each TSO shall validate the results of the calculation for splitting of long-term cross-zonal capacity on its bidding zone borders or critical network elements pursuant to Article 16.*
3. *Each TSO shall send its capacity validation and validated splitting of this capacity for each forward capacity allocation to the relevant coordinated capacity calculators and to the other TSOs of the relevant capacity calculation regions.*
4. *Validated splitting of long-term cross-zonal capacity shall be provided by each coordinated capacity calculator for the execution of forward capacity allocation pursuant to Article 29.*
5. *TSOs shall, upon request, provide to their regulatory authorities a report detailing how the value of long-term cross-zonal capacity for a specific long-term capacity calculation time frame has been obtained.*

Regulation 2019/942

Article 5

Tasks of ACER as regards the development and implementation of network codes and guidelines

[…]

3. *Where one of the following legal acts provides for the development of proposals for terms and conditions or methodologies for the implementation of network codes and guidelines which require the approval of all the regulatory authorities of the region concerned, those regulatory authorities shall agree unanimously on the common terms and conditions or methodologies to be approved by each of those regulatory authorities:*
   (a) a legislative act of the Union adopted under the ordinary legislative procedure;
   (b) network codes and guidelines that were adopted before 4 July 2019 and subsequent revisions of those network codes and guidelines; or
   (c) network codes and guidelines adopted as implementing acts pursuant to Article 5 of Regulation (EU) No 182/2011.

   The proposals referred to in the first subparagraph shall be notified to ACER within one week of their submission to those regulatory authorities. The regulatory authorities may refer the proposals to ACER for approval pursuant to point (b) of the second subparagraph of Article 6(10) and shall do so pursuant to point (a) of the second subparagraph of Article 6(10) where there is no unanimous agreement as referred to in the first subparagraph.

   The Director or the Board of Regulators, acting on its own initiative or on a proposal from one or more of its members, may require the regulatory authorities of the region concerned to refer the proposal to ACER for approval. Such a request shall be limited to cases in which the regionally agreed proposal would have a tangible impact on the internal energy market or on security of supply beyond the region.

[…]

6. *Before approving the terms and conditions or methodologies referred to in paragraphs 2 and 3, the regulatory authorities, or, where competent, ACER, shall revise them where necessary, after consulting the ENTSO for Electricity, the ENTSO for Gas or the EU DSO entity, in order to ensure that they are in line with the purpose of the network code or guideline and contribute to market integration, non-discrimination, effective competition and the proper functioning of the market. ACER shall take a decision on the approval within the period specified in the relevant network codes and guidelines. That period shall begin on the day following that on which the proposal was referred to ACER.*

II. The Italy North TSOs proposals

The IN FCA CCM was consulted by the IN TSOs through the website of ENTSO-E for one month from 10 February 2020 to 13 March 2020, in line with Article 10 and Article 6 of FCA[1]. The proposal was received by the last Regulatory Authority of the Italy North Capacity Calculation Region on 1 July 2020. Article 4(9) of FCA requires IN NRAs to consult and closely cooperate and coordinate with each other in order to reach an agreement and take a decision within six months following receipt of submissions of the last Regulatory Authority concerned. A decision is therefore required by 1 January 2021.

As per the day-ahead and intraday capacity calculation, IN FCA CCM is based on a coordinated NTC approach. A statistical analysis of the historical cross-zonal capacity made available in day-ahead and intraday capacity calculation is preferred to a security analysis based on multiple scenarios for the following reasons:

a) the statistical approach directly benefits from the improvements in the forecasts in the short term timeframe;
b) long term cross-zonal capacity values computed by the mean of a statistical analysis incorporate the same reliability margin as the day-ahead and the intraday values; with a scenario based approach a proper reliability margin should be computed, likely resulting in an higher margin with respect to the short term ones and in a lower final capacity;
c) with a scenario-based approach, IN TSOs would be obliged to use reference scenarios according to FCA built as ad-hoc cases for the whole continental Europe and not representing any situations which may be meaningful for a long-term capacity calculation in Italy North CCR;
d) the reference scenarios should be improved in order to be congestion free; as a consequence, the Remedial Action Optimization process would have to be adapted for the long-term timeframe, which requires an unreasonable technical effort.

The statistical analysis consider the cross-zonal capacity values made available in day-ahead and intraday timeframes during the previous three years:

a) samples related to not significant hours (i.e. hours affected by allocation constraints, errors in capacity calculation processes, capacity reductions requested by TSOs) are discarded;
b) the remaining samples are adjusted to an equivalent full network by filtering out the effect of maintenance plan and by adding the contribution of new investments commissioned during the historical time window;
c) the adjusted samples are divided in four seasonal periods (winter peak, winter off-peak, summer peak and summer off-peak) and a full yearly NTC value for the target year is computed for each seasonal period assuming a 3% risk level;

[1] The public consultation is available on the ENTSO-e website: https://consultations.entsoe.eu/markets/art-10_fca_ccr_italy_north/

d) before the starting of the year, the yearly NTC profile is defined by combining the yearly NTC value for each seasonal period with the effect of the maintenance plan and of the allocation constraints relevant for the considered year;
e) before the starting of each month, the monthly NTC profile is computed, by updating the maintenance plan and the allocation constraints according to the most recent forecasts;
f) the contribution of new investments commissioned during the target year is included only in the monthly computation: a percentage of the increase of the capacity associated to the new interconnector is considered assuming the same 3% risk level used for the yearly NTC value;

In case the long-term capacity calculation fails, as a fallback measure each TSO computes the yearly and monthly capacities on its own and the lowest bilateral value by border and direction is taken.

The methodology will be implemented within 12 months from the approval by IN NRAs. Once implemented, all the relevant information on the computation process (among others, duration curve of the samples, profiles associated to maintenance plan and new investments) will be published.

The proposal includes a description of its expected impact on the objectives of FCA, in line with Article 4(8) of FCA.

III. The Italy North Regulatory Authorities position

NRAs shadow opinion

During the public consultation, IN NRAs issued a shadow opinion containing a number of suggestions and remarks:

a) providing a more robust justification of the choice of the statistical analysis versus the multi-scenario approach, by justifying with data and figures the incremental costs and efforts IN TSOs should face in case the scenario approach was adopted and by adding the details about the pre-congestions in ENTSO-E models;
b) clarifying the different scope of the reliability margin versus the risk level relevant for defining the NTC values;
c) preparing a technical annex reporting all the details about the methodology that were originally reported only in the explanatory note;
d) foreseeing a yearly report by mid-December Y-1 with the details about the long-term capacity calculation for year Y (with the expected reduction profiles for outages, the contribution of new investments and the expected allocation constraints profile);
e) foreseeing a yearly report by January Y+1 with the details about the long-term capacity calculation for year Y (with the expected reduction profiles for outages, the contribution of new investments and the expected allocation constraints profile) and a comparison between the effective outages and allocation constraints profile with the forecasted one adopted for long term capacity calculation;
f) foreseeing a specific report to be sent every time a fallback measure is triggered.

NRAs position

IN NRAs are broadly satisfied with the submitted IN FCA CCM: all the remarks and suggestions highlighted in the shadow opinion were included in the legal documents and a proper robust and solid justifications about the efficiency of the statistical analysis according to Article 10(4)b of FCA is given.

Nonetheless while assessing the proposal, IN NRAs spotted an inconsistency between the definition of peak and off-peak hours reported in the IN FCA CCM and the definition usually adopted by Terna while publishing the yearly NTC values relevant for the long-term timeframe. Namely Terna defines the peak hours as all the hours from Monday to Saturday from 7.00 till 22.59, while the IN FCA CCM refers to Monday to Friday from 8.00 till 19.59.

Upon a quick check with IN TSOs, Terna's definition was found to be the right one: the IN FCA CCM proposal thus needs to be amended.

IN NRAs consider it efficient to directly amend the proposal by exploiting the provision included in Article 5(6) of Regulation 2019/942, about the duty for regulatory authorities to revise terms and conditions and methodologies where necessary, before approving them: issuing a standard RfA would delay the approval of the IN FCA CCM by some months, resulting in a potential delay in the implementation of the methodology.

NRAs amendments

Along with the update of the peak hours definition, as per Terna's version, IN NRAs catch the occasion to include further amendments in order to:

a) remove the word proposal, since the methodology is directly changed by the NRAs and can no longer be considered as a TSO proposal;
b) improve the overall readability and understandability of the proposal, by adding some definitions and ensure the consistency of the wording across the entire document;
c) clarify that any change to the risk level assumed for computing the NTC value shall lead to an amendment of the IN FCA CCM;
d) distinguish between the new investments commissioned during the historical time window (that are considered to adjust the samples before the commission date) and the new investments commissioned in the target year (that are considered on top of the yearly and monthly NTC profiles computed according to the risk level, the expected maintenance plan and the expected allocation constraints);
e) include the publication of a comparison between the NTC profiles computed in the yearly timeframe and the NTC profiles updated in the monthly timeframe; this provision was included in the splitting methodology submitted in accordance with Article 16 of FCA, but it's worth including it in the IN FCA CCM since related to the capacity calculation process;
f) delete Article 13 of the IN FCA CCM about the efficiency of the statistical analysis: the provisions are shifted in the whereas section, keeping the reference to the details reported in Annex 2;

The amendments were scrutinised by IN TSOs that suggested some further editorial changes, mainly to clarify that the OPC process has been in force since 2020 and that a generic outage coordination process was run before. These suggestions were accepted by IN NRAs.

IV. Conclusions

IN NRAs have consulted, closely cooperated and coordinated to jointly agree that they amend and adopt the IN FCA CCM submitted by IN TSOs pursuant to Article 10 of FCA: the legal basis for the direct amendments by IN NRAs lies on Article 5(6) of Regulation 2019/942. IN NRAs must make their national decisions to adopt IN FCA CCM, on the basis of this agreement.

Moreover, IN NRAs remind that, while approving the second release of the capacity calculation methodology pursuant to Regulation 2015/1222, IN TSOs were required to create and organize a *Consultative Forum* open to all market participants, in which recent progress about developments and implementation having an impact in the Italy North CCR shall be shared with all the parties, as well as the way forward.

IN NRAs deem it useful that the scope of this *Consultative Forum* also includes this IN FCA CCM.