Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology

Action Plan

in accordance with article 15 of Regulation (EU) 2019/943

by the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology

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I. Introduction

1. Introductory remarks

The secure supply of electrical energy has become a prerequisite for society while the energy system is facing a fundamental change. In 2030, Austria's electricity demand is to be covered 100 percent by renewable energy sources. At the same time, demand changes shape as well with the large scale introduction of electric vehicles and ongoing processes such as digitalisation and decarbonisation. The essential link between power generation and power consumers remains a stable electricity grid.

Due to its location in the heart of Europe and the pump-storage potential in the Alps, Austria has traditionally been a hub for electricity exchange between different countries. The liberalisation of electricity markets increased the volume of cross-zonal energy exchange, which poses a particular challenge to national and international transmission grids. This trend will intensify in the future and can only be managed by a well-developed, secure and reliable transmission network, coordinated operational planning and network operation.

In addition to the energy transformation and the associated change in characteristics of electricity generation, the interdependencies in the context of international electricity trading are also changing. The most recent requirements of Regulation (EU) 2019/943 on the internal market for electricity (hereinafter: 'Electricity Market Regulation') are aimed in particular at fostering the cross-zonal electricity trading. The Regulation stipulates that at least 70% of the available cross-zonal transmission capacity must be made available for cross-zonal electricity trading.

However, in a complex and closely interlinked technical system such as the Continental European electricity grid, it is hardly possible to consider elements in isolation. The minimum capacity available for cross-zonal trade is therefore currently not reached due to internal network congestions and uncoordinated flows in the meshed transmission system (e.g. loop-flows) on many cross-zonal as well as internal network elements in Europe.

Simply increasing the cross-zonal capacity for trade to 70% would pose massive challenges for network operation and ultimately endanger security of supply. Moreover, this would also significantly increase the financial burden in terms of re-dispatch measures which would be additionally applied to guarantee the firmness of such additional capacities. The Electricity Market Regulation recognizes this and therefore provides for transitional solutions that can be

taken until the minimum capacity available for cross-zonal trade can be safely met. These transitional solutions, along with the path that Austria has chosen to pursue in this matter with the primary objective of maintaining the Austrian bidding zone configuration, shall be presented in the following chapters.

2. Legal requirements

The Clean Energy for all Europeans package (hereinafter: 'CEP') consists of eight legislative acts that do not only mark a significant step towards clean energy and carbon-neutral economy but also seek to establish a modern design for the EU electricity market. The electricity market design elements consist of four dossiers, one of which is the Electricity Market Regulation. This Regulation introduces a number of significant changes to the EU electricity market.

Amongst other aspects, the Electricity Market Regulation aims at ensuring efficient operation and planning of the EU electricity network and providing effective price signals for new generation capacity, demand response and transmission infrastructure.

As a consequence, article 16(8) of the Electricity Market Regulation provides that Transmission System Operators (hereinafter: 'TSOs') shall not limit the volume of interconnection capacity to be made available to market participants as a means of solving congestion inside their own bidding zone or as a means of managing flows resulting from transactions internal to bidding zones. Depending on the capacity calculation methodology in use, the process of assessing compliance with the minimum capacity made available for cross-zonal trade may differ. In any case, the minimum capacity made available for cross-zonal trade is binding as of 1 January 2020.

If a TSO cannot comply with the minimum capacity made available for cross-zonal trade due to operational security risks, the TSO may request a derogation from article 16(8) of the Electricity Market Regulation from the relevant regulatory authority. Alternatively, a Member State with identified structural congestion(s) either develops an action plan in cooperation with its TSO and regulatory authority or changes the bidding zone configuration. According to article 15(2) of the Electricity Market Regulation this action plan shall ensure that cross-zonal trade capacity is increased on an annual basis along a linear trajectory until the minimum capacity according to article 16(8) is reached. That minimum capacity shall be reached by 31 December 2025. In this way, there is time to implement bridging measures and eliminate internal congestion through network optimisation and, where possible, network expansion, without jeopardising operational security by a level of cross-zonal capacity that cannot yet be achieved.

3. Decision to establish an action plan

Considering the entry into force of the Electricity Market Regulation on 4 July 2019, the requirements on the minimum capacity made available for cross-zonal trade became legally binding as of 1 January 2020. Because the minimum capacity for cross-zonal exchanges could not be offered while maintaining operational security, Austrian Power Grid AG (hereinafter: 'APG') requested derogations pursuant to article 16(9) of the Electricity Market Regulation. One derogation was tailored to the circumstances in the Core Capacity Calculation Region while the other one was adapted to the Italy North Capacity Calculation Region. Both derogation requests were granted by the Austrian NRA Energie-Control Austria (hereinafter: 'ECA') on 13 December 2019[1] and are in force until 31 December 2020.

Following the approval of the derogation requests, the competent Federal Ministry for Sustainability and Tourism[2] requested of APG on 18 December 2019 to analyse whether the Austrian transmission grid would be congested in light of the application of the minimum capacity for cross-zonal exchanges. The result of such an analysis should be the basis for a report pursuant to article 14(7) of the Electricity Market Regulation. Consequently, APG carried out the requested study during the course of 2020.

On 25 August 2020 APG and Vorarlberger Übertragungsnetz GmbH (hereinafter: 'VUEN') submitted their joint report on structural congestions in the Austrian transmission system (hereinafter: 'Hotspot Report') to ECA[3]. In the study leading to this report, congestions appearing when complying with the 70% minimum capacity to be made available for cross-zonal trade were identified and analysed. Based on the outcome of the study, it was concluded that there is sufficient evidence for identifying structural congestions within the Austrian transmission grid.

On 24 September 2020 ECA approved the Hotspot Report[4] which was then submitted by APG to the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology (hereinafter: 'Federal Ministry of Climate Action') on 25 September 2020. In a nutshell, the Hotspot Report concludes that, taking into account the definition of structural congestion in article 2(6) of the Electricity Market Regulation, and applying a threshold of 5% of

[1] Decisions by the Board of Directors of 13 December 2019, V ElBM 02/19 and 03/19.
[2] In 2020, the ministry was renamed to Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology.
[3] Hotspot Bericht der österreichischen Übertragungsnetzbetreiber gemäß Artikel 14 Absatz 7 der Verordnung (EU) 2019/943 über den Elektrizitätsbinnenmarkt, Wien/Bregenz am 17. September 2020.
[4] Decision by the Board of Directors of 24 September 2020, V ElBM 03/20.

the observation period (based on the reports[5] already approved by other regulatory authorities in accordance with article 14[7] of the Electricity Market Regulation) structural congestions would occur in the Austrian transmission system when complying with the minimum capacity for cross-zonal exchanges. These congestions are geographically distributed over the entire Austrian transmission grid and affect both internal and cross-border network elements alike. Studies used as an input for preparation of the Hotspot Report showed that available remedies for alleviating such congestions were deemed insufficient. As such, by complying with the minimum capacity for cross-zonal trade, network security would be put at risk.

Subsequent to the approval of the Hotspot Report through ECA, the Federal Ministry of Climate Action organised a public workshop for stakeholders on 1 October 2020. Between 2 October and 23 October 2020 a consultation in accordance with article 14(9) of the Electricity Market Regulation was held. Upon the feedback received during the public consultation, the Federal Minister of Climate Action decided to adopt an Action Plan in accordance with article 15 of the Electricity Market Regulation.

As required by article 15 of the Electricity Market Regulation, this Action Plan comprises of the following sections:

- A methodology for calculating the starting point of the linear trajectory for the annual increase of the minimum capacity made available for cross-zonal trade until 31 December 2025;
- the calculation results concerning the starting points and annual increases;
- measures to be adopted with the aim to reduce the structural congestions identified in the Hotspot Report and;
- provisions concerning monitoring of the implementation of this Action Plan.

[5] Engpassbericht der deutschen Übertragungsnetzbetreiber gemäß Artikel 14 Absatz 7 Strommarkt-Verordnung (EU) 2019/943, Bayreuth/Berlin/Dortmund/Stuttgart, 4. Juli 2019 and Structural Congestion Report in accordance with Article 14(7) of Regulation (EU) 2019/943, TenneT TSO B.V., 12 November 2019.

II. Starting point and linear trajectory

According to article 15(2) of the Electricity Market Regulation, Member States shall ensure that the capacity made available for cross-zonal trade is increased on an annual basis until the minimum capacity provided for in article 16(8) is reached. This minimum capacity shall be reached by 31 December 2025.

Those annual increases shall be achieved by means of a linear trajectory. The starting point of that trajectory shall be either the capacity allocated at the border or on a critical network element in the year before adoption of the action plan or the average during the three years before adoption of the action plan, whichever is higher. Member States shall ensure that, during the implementation of their action plans the capacity made available for cross-zonal trade is at least equal to the values of the linear trajectory, including the use of remedial actions in the capacity calculation region.

This chapter describes the implementation of article 15(2) of the Electricity Market Regulation by specifying the starting point and subsequently determining the linear trajectory for the critical network elements with associated contingencies (hereinafter: 'CNEC[6]').

In the following, whenever the term CNEC(s) is used, only CNECs located in the Austrian bidding zone are referred to.

1. Determination of the starting point

According to article 15(2) of the Electricity Market Regulation the starting point shall be either the capacity allocated at the border or on a critical network element in the year before adoption of the action plan or the average during the three years before adoption of the action plan, whichever is higher.

Therefore for the calculation of the starting point the CNECs of the different capacity calculation coordination areas of the Austrian bidding zone borders to the neighbouring member states are considered. These are the following:

[6] For the purposes of this Action Plan, the term CNEC also covers the case where a CNE (Critical Network Element) is used in the capacity calculation without a specific contingency.

a) The CNECs used in coordination area Central Western Europe (hereinafter: 'CWE'), where a flow-based capacity calculation methodology is already implemented, encompassing the Austrian-German bidding zone border since its introduction in October 2018, and
b) the CNECs used in the Net Transfer Capacity (hereinafter: 'NTC') calculation processes for the Austrian-Czech (AT-CZ), Austrian-Hungarian (AT-HU), Austrian-Slovenian (AT-SI) and Austrian-Italian (AT-IT) bidding zone borders, respectively.

The Austrian transmission system and bidding zone is located at the very centre of the Continental European electricity system, is of comparably small size, and is strongly interconnected with a high number of neighbouring countries. Hence the CNEC utilisation is heavily dependent on the surrounding conditions which are interrelated to each other. Due to these interdependencies and in order to avoid a complex and confusing application of multiple linear trajectories – both during the capacity calculation processes and ex post for monitoring purposes – one starting point will be applied to all CNECs. This starting point is calculated as the average of the results for all CNECs, according to the description hereafter. This approach increases the transparency of the starting point itself and streamlines monitoring of the capacities offered for cross-zonal trade. The linear trajectory based on this starting point will as well stay valid for the future coordinated flow based capacity calculation process of the whole Core region.

As article 15(2) of the Electricity Market Regulation refers to *allocated capacities*, the starting point has to be calculated on the basis of the cross-zonal schedules for every market time unit.

In order to obtain the allocated flows induced by the cross-zonal trade on each CNEC, the schedules on all European bidding zone borders are multiplied with the associated zone-to-zone power transfer distribution factors. By doing so, allocated flows on the considered CNECs for the period between 2017 and 2019 are determined on a per market time unit granularity.

According to article 15(2) of the Electricity Market Regulation, one value per CNEC is selected, being either the average of the allocated flows on this CNEC between 2017 and 2019, or the average of the allocated flows in the year 2019, whichever is higher. Accordingly, the average allocated flows per CNEC are determined by calculating the average of all relevant market time units for the periods from 2017 to 2019 and 2019 alone, respectively. Then the higher value of either of the two periods per CNEC is selected. Finally, the average over all those maximum values per CNEC is determined, resulting in the starting point of 18.4% for the year 2021.

2. Determination of the linear trajectory

Combining the starting point of 18.4% for the year 2021 and the requirement to reach 70% until the end of 2025 by means of annual steps along a linear trajectory, leads to an annual increase of the capacity to be made available for cross-zonal trade, as shown in Table 1.

Table 1: Linear trajectory for the determined starting point

Coordination Area	**Minimum available capacity for cross-zonal trade (minMACZT[7]) in %**					
Year	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
CWE	20	28.7	39	49.4	59.7	70
AT-CZ	18.4					
AT-HU						
AT-SI						
Italy North						

The currently applied principle of 20% minimum margin in the CWE region, as introduced in April 2018, will be maintained as long as the linear trajectory remains below 20%. Once Core day-ahead flow-based capacity calculation goes live, the values corresponding to the linear trajectory will as well be applied to the CNECs to be used in the Core capacity calculation.

[7] ACER Recommendation 01/2019 of 8 August 2019.

III. Measures to reduce structural congestions

In accordance with article 15(1) of the Electricity Market Regulation, this Action Plan lists the planned measures to reduce the structural congestions identified in the Hotspot Report. These are the following:

a) Network reinforcement/optimisation
b) Network expansion
c) Coordinated capacity calculation
d) Network reserve
e) Coordination of remedial actions

In the following description, these measures are grouped into two main fields of action: Network development and optimisation, encompassing points a) and b), and improvements related to congestion management, encompassing points c) to e). A timetable in the Annex lists the foreseen measures including their planned completion.

1. Network development and optimisation

In order to meet future challenges stemming amongst others from the new requirements according to article 16(8) of the Electricity Market Regulation, a sustainable extension of the grid infrastructure is a key element. The transmission network is subject to constant further development. In a cyclical process, future needs are identified and corresponding measures are developed. According to article 37 of the Austrian Electricity Act 2010[8] the necessary network development projects are summarized in Network Development Plans (hereinafter: 'NDP') established by the Austrian transmission system operators APG and VUEN on an annual basis. These NDP have to be approved by ECA.[9] These measures aim at increasing the transmission capacities, reducing the overall amount of congestions in the grid and facilitating the achievement of the intended goals. They can be distinguished into grid reinforcement/optimisation measures and the development of new transmission infrastructure. A strong and reliable grid is an essential factor to achieve the minimum capacity

[8] Elektrizitätswirtschafts- und –organisationsgesetz 2010 (ElWOG 2010), BGBl. I Nr. 110/2010.
[9] The NDP 2020 were recently approved. The approval decisions for each year are published on the website of ECA.

to be made available for cross-zonal trade according to article 16 (8) of the Electricity Market Regulation.

a. Network reinforcement/optimisation

In the coming years, a number of existing transmission lines and substations are planned to be reinforced or optimized. This includes especially the preparation for the application of dynamic line rating (hereinafter: 'DLR'), which allows the consideration of weather conditions in order to optimize the actual available capacity and therewith to relieve highly loaded transmission lines. In most cases these optimization measures can be implemented with reasonable efforts and relatively short lead times. By that means, depending on the weather condition, additional operational reserves on the existing network can be provided while maintaining secure grid operation. The concretely planned measures can be found in the actual network development plans.

b. Network expansion

In addition to the reinforcement and optimisation measures on the existing grid infrastructure, the latest approved network development plans also foresee both, the construction of new transmission lines as well as the installation of new transformers. New or up-rated transmission lines are planned to be built within Austria to strengthen the internal grid and also across borders with neighbouring member states for increased cross-border capacity. Additional transformers are as well foreseen to be constructed in already existing substations in order to strengthen the interconnection of the 380 kV and 220 kV transmission infrastructure in Austria. These new assets are the main and sustainable measure to provide additional transmission capacities and, by that, contribute to resolving congestions.

c. Planned infrastructure projects

A detailed overview and description of all planned network development projects and optimisation measures, including a timetable, can be found in the latest regulatory approved Network Development Plans[10] of APG (chapter 4.3 and 4.4) and VUEN (chapter 4).

Figure 1 and Figure 2 depict the planned reinforcement/optimization measures and network expansion projects foreseen to be implemented during the duration of this Action Plan and as contained in the latest network development plan.

[10] NDP 2020 of APG and VUEN.

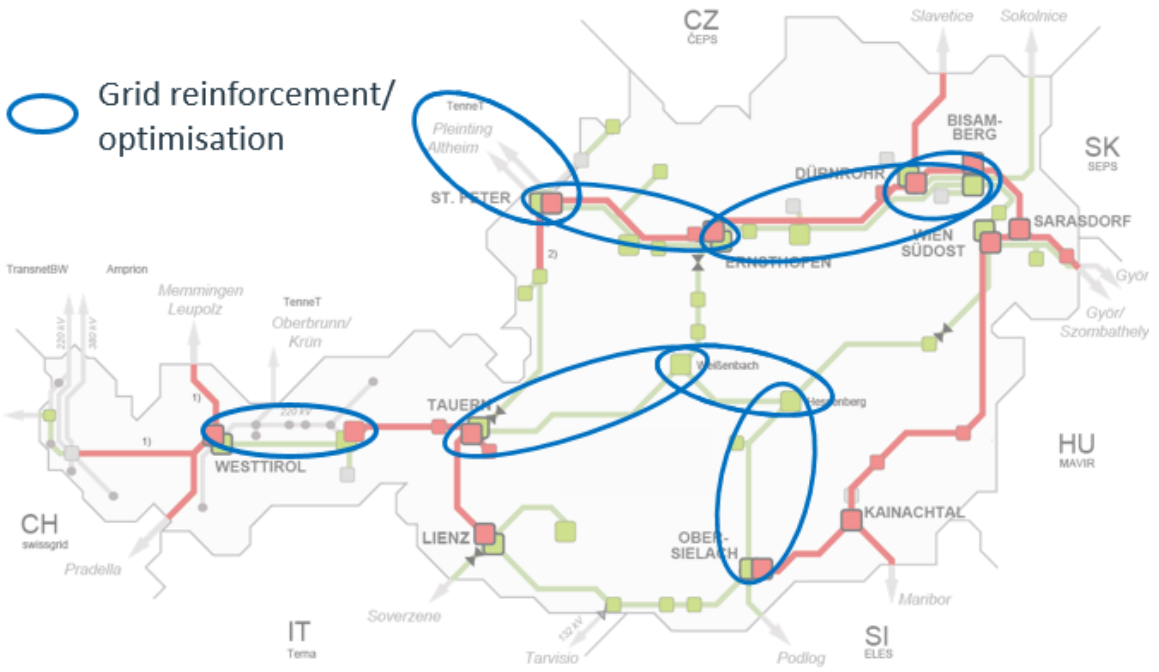

Figure 1 – planned projects for network reinforcement and optimisation

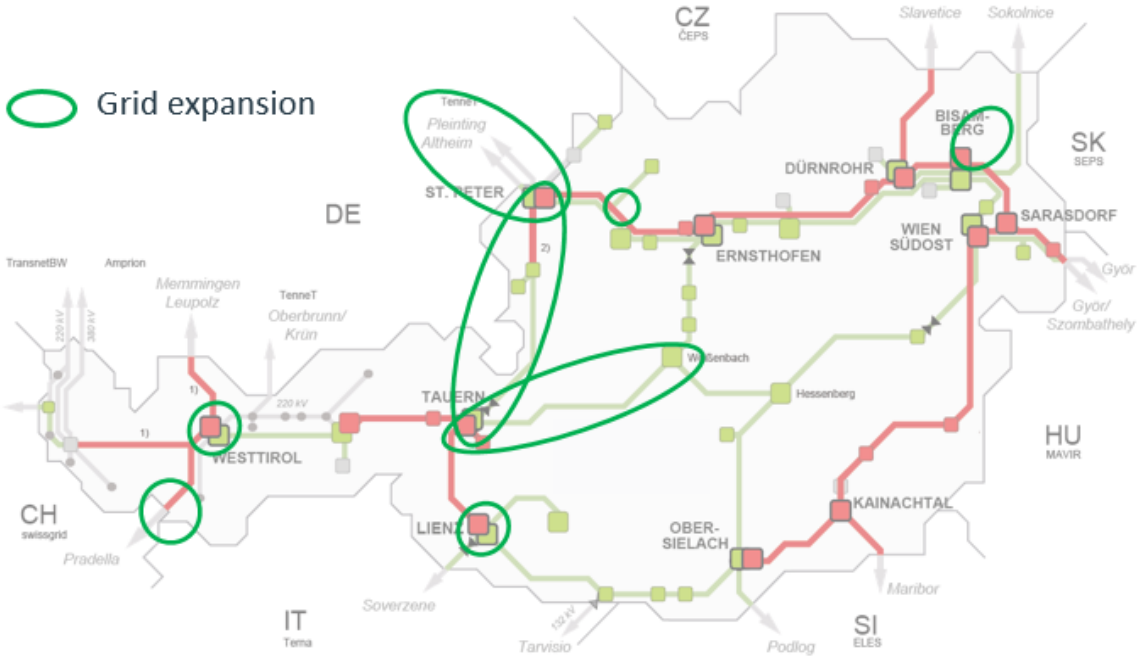

Figure 2 – Planned projects for network expansion

2. Measures to improve congestion management

With the implementation of the Third Energy Package, congestion management methods are to be coordinated within Capacity Calculation Regions. These Capacity Calculation Regions were defined pursuant to article 15 of Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management (hereinafter: 'CACM GL)[11]. Austria was assigned to two Capacity Calculation Regions, namely Core and Italy North. These two regions are depicted below.

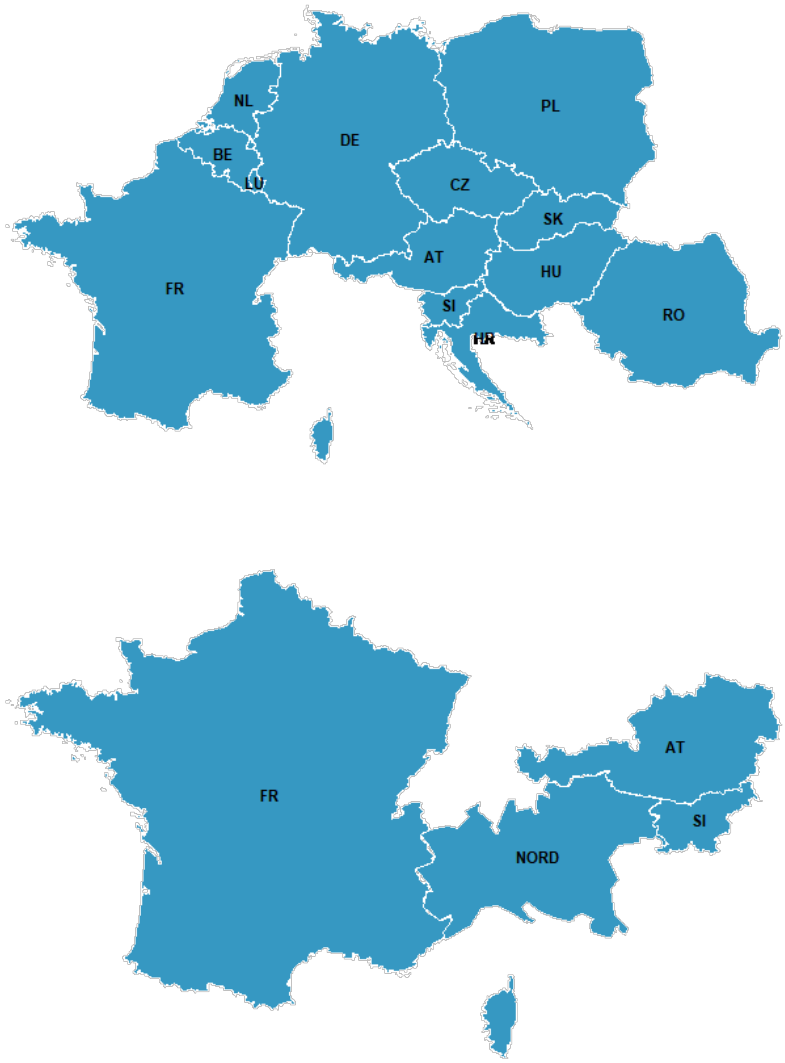

Figure 3 - Capacity Calculation Regions Core (top) and Italy North (bottom)

[11] ACER Decision 06/2016 of 17 November 2016 and ACER Decision 04/2019 of 1 April 2019, amending ACER Decision 06/2016.

a. Coordinated capacity calculation

Methodologies for coordinated cross-zonal capacity calculation for the day-ahead and intraday timeframe pursuant to article 20 of the CACM GL in both regions have been approved by the competent regulatory authorities[12,13]. The time scale for implementation can be found in corresponding documents for Core Region and Italy North Region. These methodologies are currently in the course of implementation in the Capacity Calculation Regions Core and Italy North Region, respectively.

According to the CACM GL coordinated capacity calculation has either to follow the flow based or the coordinated NTC approach.

The coordinated day-ahead and intraday cross-zonal capacity calculation methodologies in the Core region are based on the flow-based approach. In line with this concept, the available margins on network elements (such as transmission lines and transformers), that are sensitive to cross-zonal exchanges within the region, are determined. These available margins are then made available for cross-zonal trade in the capacity allocation process. In contrast to the flow-based approach, the coordinated NTC concept limits cross-zonal exchanges ex-ante constrained per bidding zone border.

A coordinated approach to capacity calculation within a region is expected to provide the following advantages over the currently applied regimes, when computing cross-zonal capacities:

- Common forecast and, by that, harmonised assumptions,
- computation of cross-zonal capacities based on a common grid model and
- coordination of remedial actions in order to maximise cross-zonal capacities while maintaining secure network operation.

It is further planned to integrate third countries into the capacity calculation processes in Core and Italy North. Such an integration would further reduce uncertainties in the capacity calculation process by expanding the regional scope of the capacity calculation processes.

The abovementioned major advancements in the coordination of cross-border capacities are expected to reduce the uncertainties and lead to a more precise determination and allocation of available cross-zonal capacities optimizing the overall process and, consequently, allowing to

[12] ACER Decision 02/2019 of 21 February 2019.
[13] Methodology for a common D-2 capacity calculation in accordance with Article 21 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management within Italy North CCR.

increase the capacity made available for cross-zonal trade, while always maintaining the secure operation of the electricity system.

APG is actively involved in the implementation and the enhancement of capacity calculation methodologies.

b. Utilization of remedial actions

When network congestions appear on short term, these congestions are mitigated by deploying remedial actions. Remedial actions change the power flow pattern and may include measures, among others changing tap position of phase shifting transformers, adapting the topology of the power grid and especially redispatching. Offering the required minimum capacity for cross-zonal trade might lead to congestions in the grid. In that, remedial actions are essential to ensure safe operation of the power system.

When applying redispatch, the power infeed or consumption of power plants and/or loads is altered such that congestions are alleviated. By changing the power flow distribution in a targeted manner, redispatching is an effective means of mitigating congestions and by that ensuring operational security. In order to be able to rely on redispatch measures to be available for managing congestions, a certain redispatch potential needs to be at the disposal of the system operator.

c. Network reserve

Austria is currently working on implementing a network reserve, which shall enable that sufficient and reliable redispatch capacity is available for congestion management to ensure the secure operation of the electricity network, provided that it is necessary and also taking cost efficiency into account.

On 16 September 2020, a legislative draft establishing the network reserve was sent into public consultation. The consultation period ended on 28 October 2020 and based on the results, the draft was then amended. This draft is currently also undergoing state aid review by the European Commission. Assuming that the European Commission approves of the network reserve, it is planned to enter into force by the beginning of 2021.

For the coming years, this system shall provide the necessary framework for the needed level of reliable redispatching capacities and thus help to ensure the safe operation of the electricity grid. Notwithstanding certain amendments due to state aid provisions, the relevant legal provisions consist of following key elements:

The Austrian Control Area Manager is obliged to carry out a yearly system analysis until the end of each year in order to determine the amount of capacity that is needed for network reserve.

The required capacity shall then be procured in a competitive bidding process, which is also open to loads and aggregators. In case the demand cannot be met in the procurement procedure, redispatch capacities may also be selected based on a cost review that is carried out by ECA. In any case, the respective participants shall then receive a contract under which they are obliged to make their capacities available for redispatch.

d. Coordination of remedial actions

The implementation of the Methodology for Coordinated Redispatching and Countertrading (hereinafter: 'RD&CT') in accordance with article 35 of the CACM GL in conjunction with the Common Provisions for Regional Operational Security Coordination (hereinafter: 'ROSC') in accordance with article 75 and 76 of Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation (hereinafter: 'SO GL') in both, the Core Capacity Calculation Region and the Italy North Capacity Calculation Region, are expected to lead to more coordinated and efficient operation of the power system. In analogy to coordinated capacity calculation, the following major points of improvement are:

- Input from a preceding coordinated capacity calculation process and cross-zonal capacity allocation,
- determination of congestions on a common grid model for the entire region and
- optimisation and coordination of remedial actions in order to alleviate congestions in the entire region.

The focus of these three methodologies is the joint determination of congestions and the optimisation of remedial actions across bidding zone borders (such as redispatch and regulation of phase shifting transformers) in order to alleviate congestions as observed during a well-coordinated grid security analysis. Such a coordinated approach in the region is expected to solve congestions with the most effective remedial actions – irrespective of whether a certain congestion and remedial action is located in the same bidding zone or in different ones. Having such processes established will facilitate the possibilities to offer the required minimum capacity for cross-zonal trade without jeopardizing operational security.

The regional approach for short-term operational planning following RD&CT and ROSC is further improved by the foreseen cross-regional coordination as laid out in the methodology for Coordinated Security Assessment pursuant to article 75 of the SO GL.

Especially for the Austrian Power System, which is located in the very centre of the continent and therewith strongly affected by the developments and the respective current energy economic situations in the surrounding environment, well-coordinated measures to evaluate and alleviate the resulting congestions are a key component for secure grid operation.

For the purpose of a fair bearing of the cost related to the necessary remedial actions, a Methodology for Redispatching and Countertrading Cost Sharing (hereafter: 'RD&CT Cost Sharing') pursuant to article 74 of the CACM GL is to be implemented in both the Core and Italy North region in parallel to the other listed methodologies.

The methodologies for the Core region on RD&CT, ROSC and RD&CT Cost Sharing are approved by ACER[14] and the methodologies for the Italy North region are as well approved[15]. The time schedule for implementation can be found in corresponding documents for the Core region and Italy North region.

[14] ACER Decision 33/2020 of 4 December 2020, ACER Decision 35/2020 of 4 December 2020 and ACER Decision 30/2020 of 30 November 2020.

[15] Approved Methodologies for Italy North ROSC and RD&CT. The RD&CT Cost Sharing Methodology is still in development.

IV. Monitoring

Article 15(4) of the Electricity Market Regulation states that on an annual basis, during the implementation of the Action Plan and within six months of its expiry, the relevant TSO shall assess for the previous 12 months whether the available cross-border capacity has reached the linear trajectory or, from 1 January 2026, the minimum capacities provided for in article 16(8) have been achieved. These assessments shall be submitted to ACER and to the relevant regulatory authorities. Before drafting the report, each TSO shall submit its contribution to the report, including all the relevant data, to its regulatory authority for approval.

Pursuant to this article the Federal Ministry of Climate Action, ECA and APG as the relevant TSO according Article 15(4) of the Electricity Market Regulation have agreed that APG shall submit its yearly assessment of capacity made available for cross-zonal trade to ECA for approval by 1 April on a yearly basis for the preceding year, starting with 1 April 2022 for the year 2021.

Based on the outcome of the monitoring process additions or amendments can be made to this Action Plan. The assessments by APG will be made public upon approval by ECA.

V. Annex

Table 2: Planned commissioning of network development and optimisation projects

DLR/NDP-No.	Project-Name	Commissioning[16]
DLR	220-kV-Leitung St. Peter - Ernsthofen	2021
DLR	220-kV-Leitung St. Peter - Deutschland	2021
19-2	Seiltausch 220-kV-Leitung Tauern – Weißenbach[17]	2021
DLR	220-kV-Leitung Tauern - Weißenbach	2021
DLR	220-kV-Leitung Weißenbach - Hessenberg	2021
DLR	220-kV-Leitung Ernsthofen – Bisamberg	2021
DLR	220-kV-Leitung Westtirol - Zell/Ziller	2021
15-3	UW Lienz: 3. 380/220-kV-Umspanner	2021
DLR	220-kV-Leitung Hessenberg - Obersielach	2022
DLR	380-kV-Leitung Dürnrohr - Bisamberg	2022
11-8	Netzraum Weinviertel	2022
14-2	Neues 220-kV-SW Weibern	2023
11-12	Reschenpassprojekt	2023
11-7	380-kV-Leitung St. Peter - Staatsgrenze DE (Ottenhofen/Isar)	2024
11-9	UW Westtirol: 2. 380/220-kV-Umspanner	2024
11-10	380-kV-Salzburgleitung NK St. Peter - NK Tauern	2025

[16] Expected year of commissioning according to the latest approved NDP.
[17] Part of the NDP Project 19-2 (Generalerneuerung 220-kV-Leitung (Tauern) Reitdorf – Weißenbach).

Table 3: Planned Go-Live dates of measures to improve congestion management

Regional/ National	**Measures to improve congestion management**	**Planned Go-Live date**
National	Network reserve	2021
Italy North	Methodologies for coordinated cross-zonal capacity calculation for the day-ahead timeframe	2021
Italy North	Methodologies for coordinated cross-zonal capacity calculation for the intraday timeframe	2021
Core	Methodologies for coordinated cross-zonal capacity calculation for the day-ahead timeframe	2022
Core	Methodologies for coordinated cross-zonal capacity calculation for the intraday timeframe	2023
Core	RD&CT in conjunction with ROSC and RD&CT Cost Sharing (phase 1)[18]	2023
Core	RD&CT in conjunction with ROSC and RD&CT Cost Sharing (phase 2)	2025
Italy North	RD&CT in conjunction with ROSC	2025
Italy North	RD&CT Cost Sharing (methodology still in development)	Not yet defined

[18] Information about phase 1 and 2 can be found in article 37 of the approved Core ROSC Methodology.