Handbook of the Business Processes for the Coordinated Capacity Calculation of the Southeast Europe Region

CCC

June 2026

Version 2.0

Glossary of Terms

Acronym	***Definition***
BC	Base Case
BD	Business Day
CCC	Coordinated Capacity calculation
CGM	Common Grid Model
CNE	Critical Network Element
CNEC	Critical Network Element Contingency
CVA	Coordinated Validation Adjustment
DA	Day Ahead
GLSK	Generation and Load Shift Key
ID	Intraday
IGM	Individual Grid Model
LT	Long Term
MACZT	Margin available for cross-zonal trade
NTC	Net Transmission Capacity
PTDF	Power Transfer Distribution Factor
RA	Remedial Action
RAO	Remedial Action Optimizer
RCC	Regional Coordination Center
RM	Reliability Margin
SA	Security Analysis
SEE	South-East Europe
TH	Time horizon
TS	Timestamp
TSO	Transmission System Operator
TTC	Total Transmission Capacity

1 Contents

2 Document History and Status

This section provides an overview of the Coordinated Capacity Calculation handbook history, which is reflected in Table 1.

Note that this handbook is updated by SEleNe CC every time transmission system operators (TSOs) and/or the SEleNe CC decide to update/modify/enhance the existing procedures.

Table 1. Document History

Version	Date	Notes
1.0	March 2023	Public version of the CCC handbook.
2.0	June 2026	Addition of 70% rule in DA CCC

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3 Introduction

The main scope of this handbook is to provide all necessary details concerning the business processes that should be implemented by all South-East Europe (SEE) Transmission System Operators (TSOs), namely ESO, IPTO, and TEL, as well as the Southeast Electricity Network Coordination Center (SEleNe CC) in order to calculate the Capacity in the SEE. CCC for the SEE is computed according to "SEE CCR Common capacity calculation methodology for the day-ahead and intraday market time-frame" (SEE CCM).

4 Provision of Required Inputs

The CCC process is foreseen in the CCC module of the SEleNe CC Tool and the SEleNe CC Tool for NTC Adjustment. The CCC module of the SEleNe CC Tool and the SEleNe CC Tool for NTC Adjustment use multiple inputs, which must all be available prior to the starting of the processes. More specifically, for CCC the following inputs are required in the following steps:

- ✓ CGM
- ✓ GLSK files
- ✓ CNEC files
- ✓ Final RAs file
- ✓ AAC files
- ✓ ANC file
- ✓ Splitting factors: define splitting ratios for each border and direction.
  - GSK splitting factors
  - NTC splitting factors
- ✓ Long term NTC
- ✓ RM
- ✓ The Minimum Margin from each TSO in percentage for the NTC Adjustment process of the DA CCC
- ✓ Market document file for the NTC Adjustment process of the DA CCC

In case there are no CNEC, Final RAs and/or GSK files, then the last available ones should be considered.

The mandatory inputs are as next:

- ✓ CGM
- ✓ GLSK files
- ✓ CNEC files
- ✓ Splitting factors
- ✓ Long term NTC (only for the D-2 TH)
- ✓ RM
- ✓ The Minimum Margin from each TSO in percentage for the NTC Adjustment process of the DA CCC

4.1 CGM

4.1.1 CGM creation process

For DA (D-2 TH), ID1 (D-1 TH) and ID2 (ID TH) processes, IGM files from all EU and non-EU TSOs are received on a daily basis (D2CF, DACF and IDCF files respectively). The merged file is scaled based on the net position information provided on the Market document file, which is received (and constantly updated) automatically by the SEleNe CC Tool. In case the IGM files from a TSO are missing for a particular TH, they are substituted using the latest available IGM files according to the agreed substitution rules. The Market document is an xml file with market data containing the latest balanced Net Position information for the whole Continental Europe and It is needed in order to create a properly balanced CGM. After the IGMs are merged, they are scaled based on the Net Position values declared on the Market document, in order to minimize any imbalances and produce a Transmission System representation with no Net Position inconsistencies.

4.1.2 Improved CGMs after CSA process

Once a TS is concluded in CSA (i.e. all TSOs have accepted the TS results), then the resulting improved CGM containing all proposed RAs shall be automatically generated by the tool. The resulting improved CGM shall be used for the **ID2 CCC** and the **ID1 CCC**.

Once the RCC operator triggers the **ID2 CCC** or the **ID1 CCC**, the tool identifies the TSs for which improved CGMs are available from the ID CSA and the D-1 CSA, respectively. For these TSs the improved CGMs are used for ID1 CCC or the ID2 CCC, while for all other TSs the original CGMs (that are available after the CGM creation prior to the CSA) are used.

4.2 GLSK file

The purpose of the GLSK file is the definition of the generators or loads which will be used for generation and load shifting. The system supports two methods for shifting that can be specified in GLSK file:

- Proportional shifting according to actual base case generation in the model (**PROP**): The system will proportionally distribute the total amount of shifting to the listed equipment respecting the maximum generation capacity of the generation nodes. Base case is the generation pattern of the CGM which is input to the CC process. For the generation nodes, if the imbalance exceeds the available generation capacity (Pmax), the remainder will be distributed proportionally to positive loads. For the load nodes only the PROP method is used. The shift in defined generation/load nodes is proportional to the base case generation/load within an area.

- Proportional shifting based on remaining available generation margin (**PRAG**): The system distributes the total amount of shifting to the listed equipment proportionally to remaining available generation margin. This method is applicable only for generation nodes (GSK). The margin is calculated as the difference between the base case generation and the maximum capacity (Pmax), defined in the CGM. Base case is the generation pattern of the input CGM. If the imbalance exceeds the available generation capacity, the remainder will be distributed proportionally to positive loads.

4.3 CNEC file

The file defines the critical cases (a predefined contingency or N-x scenario of a particular element), the monitored elements and the RAs. Each involved SEE TSO provides a CNEC file which is used for all THs (ID, D-1 and D-2).

The critical cases (a predefined contingency or N-x scenario of a particular element), the monitored elements and the RAs are defined as follows:

- CO: The contingency cases (outages/ N-x scenarios) examined during the security analysis are defined
- CNEC: Links of critical cases (CO) with critical branches (CNE) that must be monitored within the specific case are defined. The operational limits of the monitored elements are defined as well.
- RA PST: Remedial actions that are based on manipulation with PST transformers are defined. The RA can be either preventive or curative.
- Topological RA: Non costly remedial actions that are based on branch/switch connections, disconnections are defined. The RA can be either preventive or curative.
- RA_CNE: The relation between a preventive remedial action and a CNE is specified. It determines which preventive RAs should be taken into consideration during the Remedial Action Optimizer (RAO) in the evaluation in order to reduce the overload of critical branches.

When a CO is examined, it is excluded from the model, and Load Flow analysis is performed by the tool monitoring the specific elements of the model which are linked to this CO within the CNEC file. The operational limits of the monitored elements defined in the CNEC sheet must be respected.

4.4 Final RAs file

The Final RAs file contains all the costly and non-costly RAs which will be taken into consideration for the RAO step (step 4) of NTC Adjustment process. In case that non-costly RAs are defined in the file, they will be appended to the remaining non costly RAs which were not applied in the Initial CCC process and subsequently they will be evaluated only for the RAO step (step 4) of NTC Adjustment process. Each involved SEE TSO provides a file which is used only for the **DA CCC** process.

4.5 AAC and ANC

AAC and ANC files are provided for each border on a daily basis for two days ahead (D-2) and for the day ahead (D-1) respectively. AAC files deliver information on the Already Allocated Capacities, while ANC files deliver information on the Already Nominated Capacities.

4.6 Splitting Factors & RM

GSK splitting factors, NTC splitting factors and Reliability Margins are defined by the involved SEE TSOs every year for the next calendar year. However, they can be different during the weeks of the year if the TSOs want to update them. The values shall be provided at the end of the year (for the next calendar year) or whenever an update is deemed necessary.

4.7 Long Term NTC

Long Term NTC values are specified for all borders and directions and are used as a fallback solution in the Day-ahead (D-2 TH) Capacity Validation procedure. They are computed based on the Long Term CCC procedure of the SEE according to the "SEE CCR TSOs' common capacity calculation methodology for the long term market time-frame" (SEE LT CCM).

4.8 Market document

The Market document file contains the market data related to the Schedules between control zones. It is used for the determination of the exchanges of the non-coordinated areas when calculating the Margin available for cross-zonal trade (MACZT) in the DA NTC Adjustment process.

5 CCC

The CCC is an iterative process aiming to achieve the highest possible TTC on every TS, for each border and direction while maintaining grid security. Specifically, the iterative process shifts power generation from one zone to the other, increasing the transferred power on the interconnection between these zones. The process starts with an initial TTC value and increases or decreases the next candidate TTC value if the grid is secure or unsecure, respectively. Grid security is checked on every iteration both for BC and for predefined N-1 scenarios during the SA, monitoring the loading on every critical network element, defined on CNEC files. In case of an insecure grid situation, the SEleNe CC Tool applies possible RAs. The RA selection is performed by the RAO and is fully automated, selecting RAs derived from the CNEC files of each involved SEE TSO. The CCC converges to a TTC value during the iterative process and concludes when the difference between two consecutive TTC candidate values becomes smaller than a predefined threshold. This process is performed for all three THs for the determination of TTC. However, after the conclusion of the iterative process, an additional process is executed for D-2 TH only, namely NTC Adjustment which is described in Section 5.1.

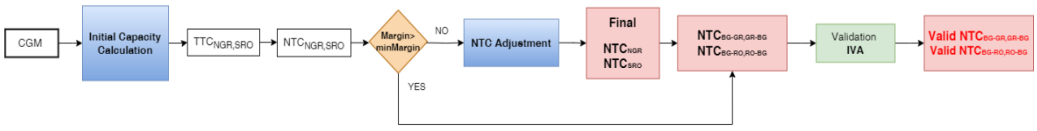


Figure 1. CCC process

The CCC Handbook document is developed following the daily shift procedure timeline. Indeed, the CCC processes are presented as they are performed by the Operator on shift each calendar day, starting with the ID2, followed by the ID1 and the DA CCC. All processes and deadlines are stated in Eastern Europe Time (EET/EEST). The aggregated Timeline for all CCC THs is depicted on Figure 3. In the DA (D-2) the capacity for the next two days-ahead BD is calculated, for the ID1 (D-1) the capacity for the next BD is calculated and for ID2 (ID) the capacity is calculated for the last 12 TSs of the current BD. In addition, all the respective hours mentioned in the par. 5.5-5.10 are the same ones depicted on Figure 3Figure 3. CCC Timeline for all THs. and shall be considered as time in EET/EEST.

5.1 CCC - NTC Adjustment

The NTC Adjustment is a part of the DA CCC process including several steps to implement the 70% rule, by calculating the margin (MACZT) of the limiting CNEC above the CGM resulting from the iterative CCC process and comparing it with a minimum margin. This minimum margin can be 70% or another configurable percentage (if there is a derogation/action plan from the TSO) of the maximum admissible power flow of the CNEC.

In case the margin is greater or equal to the minimum margin, the final NTC values are calculated. After that, the NTC of the whole border NGR/SRO is split using the NTC splitting factors for each border and direction RO-BG and BG-GR as they are defined by the SEE TSOs.

In case the margin is lower than the minimum margin, then the subsequent steps of the process are performed as they are shown in Figure 2 and described below:

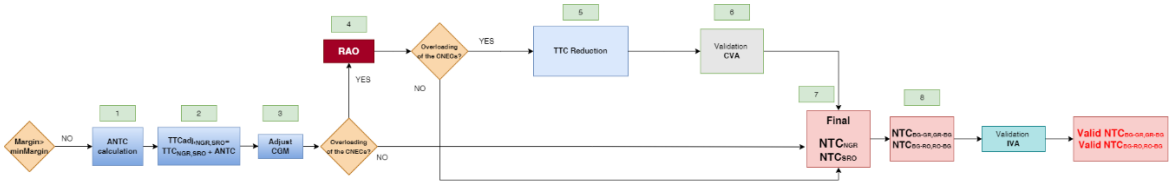


Figure 2. NTC Adjustment process

- Step 1

  The **ANTC** is calculated. It is the value that will be added to the initial TTC in order to satisfy the margin rule.

- Step 2

  The **adjusted TTC** is calculated for the relevant NGR/SRO borders and is equal to the TTC calculated in the Initial CCC plus the calculated ANTC.

- Step 3

  The **CGM is adjusted** so as the TTC in the borders of the CGM (NGR, SRO) to be equal to the adjusted TTC using the GSK files and the GSK splitting factors. Then, it is examined if there is overloading in the CNECs through an AC security analysis. In case there is no overloading of the CNECs then the Final NTC for NGR/SRO will be calculated from the TTC_adj (skipping directly to step 7).

- Step 4

  In case there are any overloadings, the **RAO process** (Remedial Action Optimization) is performed to bring the loading of the limiting CNEC as close as possible to the maximum loading, and to eliminate the overloadings on all CNECs without violating the permissible limits defined in the CNEC files. The RAs that are used are the remaining non-costly RAs till this step from the initial CNEC file and all the non-costly and costly RAs defined in the Final RAs file. Only the generators which have the ability for redispatch will be considered as costly RAs.

- Step 5

After the execution of the RAO, the overloadings on the CNECs are checked:

- If the overloadings in all CNECs cannot be alleviated e.g. due to the complexity of the calculation, input data quality issues or in case there are not enough RAs available to solve all congestion, then the CGM is adjusted in order to be congestion free through an iterative process which is the **TTC Reduction** step. In this step, the TTC is decreased by an iterative method and in each iteration a N-x security analysis is performed. The TTC from which the reduction process will start is the TTC derived from the CGM created after the RAO.
- If there are any remaining overloadings after Step 4, the **RAs provision window** is enabled before the iterative process, namely TTC Reduction, begins. This window allows the TSOs to evaluate the results after the RAO and propose new non-costly RAs accordingly. Only these proposed RAs will be considered in the iterative process for calculating the TTC_adjusted,red. They should be linked with specific CNEs, as done in the Initial CCC. The provision of new non-costly RAs during the RA window is optional and is done through a dedicated CNEC file, namely Step 5 CNEC. If no CNEC for Step 5 files are provided, the remaining available RAs from previous steps are used in the TTC Reduction step.
- In case there are no overloadings in all CNECs after Step 4, then the iterative process is skipped and the Final NTC values for NGR/SRO are calculated (step 7) considering as TTC the TTCadj values.
- In case during the iterative process there is no secure solution above the initial TTC then the Final TTC equals to the initial TTC, and this value is used in step 7.

➢ Step 6

The **CVA** is calculated and it should be not higher than the ANTC. It is calculated only if the TTC is reduced during Step 5.

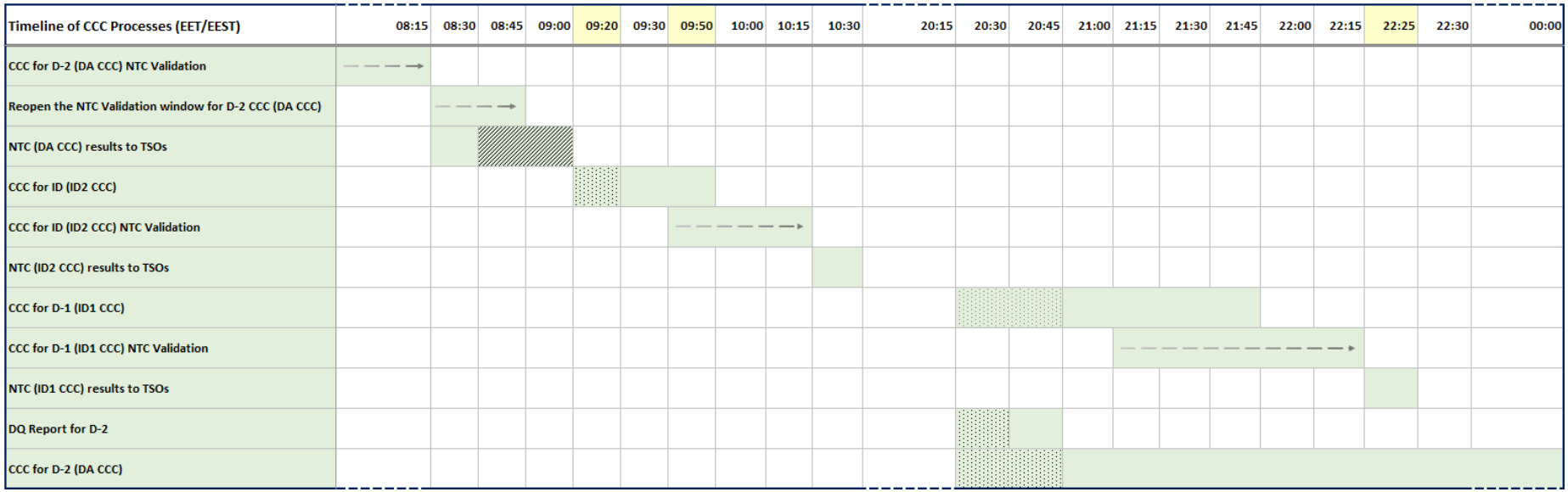
➢ Step 7

The **Final NTC for NGR/SRO** is calculated with usage of the reliability margin values for NGR and SRO borders respectively.

➢ Step 8

When Final NTC values for NGR/SRO are calculated from the process described above, then using the NTC splitting factors the NTC for each border and direction BG-GR/GR-BG and RO-BG/BG-RO is calculated. This NTC is the final calculated NTC value that goes for validation.

In cases of failure due to e.g. RAO issues, failure of TTC reduction process or no secure TTCadjusted,red value is found, then the fallback value for the NTC Adjustment process is applied which is equal to the initial TTC calculated in the Initial CCC process.



Right after the previous BP is concluded or all mandatory input data is available

In case validation window reopening request is received by TSOs

Figure 3. CCC Timeline for all THs.

5.2 ID2 & ID1 CCC

The CCC execution as well as the report generation, email notification and NTC Validation procedures are identical for both ID and D-1 THs. If convergence issues occur, or the algorithm fails during the iterative process, fallback value is provided as solution for the particular TS. Fallback values are predefined and are specific for each of the TH of CCC:

- ID1 CCC: fallback solutions are validated values from DA CCC for the same BD.
- ID2 CCC: fallback solutions are validated values from ID1 CCC for the same BD.

Once the CCC is finished, the SEleNe CC operator extracts all relevant reports for all borders and directions and produces the Results Summary Reports.

- Detailed Reports
- Overview Reports
- Forecast Report
- Results Summary Reports

The SEleNe CC operator shall notify via e-mail all involved TSOs, including the Results Summary Reports.

5.3 DA CCC

The daily capacity calculation process for D-2 TH consists of two parts. The first part is the **Initial capacity calculation** process, namely Initial CCC, that is identical to the ID1 and ID2 CCC process, whereas the second one is the additional **NTC Adjustment** process where the Initial calculated NTC is examined if it fulfills the 70% criterion and is performed after the conclusion of the Initial CCC.

5.3.1 Initial CCC

The Initial CCC process is identical to the process executed for both ID2 and ID1 CCC. If convergence issues occur, or the algorithm fails during the iterative process, fallback value is provided as solution for the particular TS. Fallback values are predefined and are specific for D-2 TH of CCC:

- DA CCC: fallback solutions are LT NTC values (the monthly values).

Once the CCC is finished, the SEleNe CC operator generates the Detailed reports for all borders and directions and the Forecast report. The Detailed reports are then retrieved by the SEleNe CC Tool for NTC Adjustment.

5.3.2 NTC Adjustment

The NTC Adjustment process is executed after the conclusion of the Initial CCC process. For the D-2 TH the report generation, the email notification and the NTC Validation procedures are performed after the conclusion of the NTC Adjustment process. If one or more TSs appear to be stuck in a specific step of the process, SEleNe CC operator may terminate and reinitiate the process for the specific TSs. The

process is also reinitiated if one or more TSs conclude to fallback, only for the specific TSs. If the remaining time is not sufficient, or fallback persists after the re-calculation, **or fallback occurs after the RA window is closed**, the fallback solution is accepted.

The SEleNe CC operator checks that all the required inputs for the NTC Adjustment are available in the SEleNe CC Tool for NTC Adjustment. If any issue is observed, then the SEleNe CC operator contacts the corresponding TSO via phone and email to report the issue.

CGM Inputs

The required CGM files for the NTC Adjustment process should be uploaded automatically to the SEleNe CC Tool for NTC Adjustment from the SFTP as soon as they are available. The SEleNe operator should ensure that all the CGMs are visible on the Input Data Monitor screen of the SEleNe CC Tool for NTC Adjustment before triggering the process. Input CGMs are distinguished in two categories:

- **Initial CGMs** – The CGMs resulting from the Initial CCC process for each TS and Border direction; 96 files in total (4 x 24). The NTC Adjustment process will be performed on these CGMs.
- **Base case CGMs** – The CGMs derived from the CGM creation process of CGM module of the SEleNe CC Tool. They are the input CGMs for the Initial CCC as well; 24 files in total. Base case CGMs are used **only** for calculating the margin (MACZT).

If convergence issues occur to any of the steps of the process, fallback value is provided as solution for the TS, which is the respective NTC value derived from the Initial TTC calculated in SEleNe CC Tool for Initial CCC.

After the RAO process (step 4) is finished and in case there are remaining overloadings, the Overview reports for Overloaded CNECs and the Final Data Quality reports are generated and sent to TSOs. At the same time, the RAs provision window for TTC Reduction (step 5) opens.

Once the calculation process is finished, the relevant reports are generated automatically for all borders and directions.

- Detailed Reports
- Overview Reports
- Forecast Reports
- Results Summary Reports
- Area Balance reports
- PTDF reports

5.4 CCC NTC Validation

After the CCC is finished and until the NTC Validation window closure, all involved SEE TSOs shall access the SEleNe CC Tool for Initial CCC for ID and D-1 TH and the SEleNe CC Tool for NTC Adjustment for D-2 TH to validate the NTC results for each TS. In case a NTC value calculated by the tool is lower that the fallback NTC value, then the fallback value is considered as outcome of the SEleNe CC Tool. Involved SEE TSOs can validate at either higher or lower values than the outcomes of the Tool. If one of the TSOs or both of them do not validate the NTC results, then the value

proposed by the Tool is considered as automatically accepted and validated by this TSO/TSOs. The highest value between the calculated and the fallback value is used as the final validated value of the TSO. In case of manual validation of NTC by both TSOs, the tool uses the lowest of value provided by the TSOs. In case only one TSO manually validates the NTC value then the lower between the manual and the automatic is the final validated value.

In cases where TSOs provide lower NTC values compared to the calculated ones, reasons for reduction shall be provided at the end of the quarter/year to the respective quarterly/yearly report.

As soon as the Validation window has elapsed, there is a **15 minute** period (for the ID2 and DA CCC process) and a **10 minute** period (for the ID1 CCC process) for the SEleNe CC operator to generate the relevant reports, for all borders, and to provide the results to the Market Departments of the SEE TSOs.

SEleNe CC operator shall publish the validated results on SEleNe CC website, for all borders and directions, including the following reports:

- Detailed Reports
- Overview Reports produced **after** NTC Validation
- Forecast Report
- Results Summary Reports
- PTDF reports (only for **D-2 TH**)

5.5 2nd ID CCC (ID2) execution

The 2nd ID CCC process is initiated by **09:20** or after the ID CSA is finished, for TSs 12:30-23:30, for all borders and directions, including RAs. After the process is finished, SEleNe CC operator proceeds with the report generation and the email notification.

In case the capacity calculation progress is exceptionally slow and the results are not available until **09:50**, SEleNe CC operator shall notify all involved TSOs accordingly. In any case, the 2nd ID CCC process shall be completed until **10:05**, allowing the minimum sufficient time (10 minutes) for the NTC Validation by the TSOs. For any remaining TSs the fallback solution will be used.

5.6 2nd ID CCC (ID2) NTC Validation

By **09:30**, or as soon as the CCC process is finished, and up until **10:15**, all involved SEE TSOs shall validate the 2nd ID NTC results for each TS of all borders and directions. The NTC Validation process can be performed until **10:15**. At **10:15**, the validation window is closed, and no changes can be performed on the NTC results afterwards.

From **10:15** to **10:30** SEleNe CC operator, generates the relevant validated reports, for all borders and provides the results to the Market Departments of the TSOs.

5.7 1st ID CCC (ID1) execution

The 1st ID CCC process is initiated by **20:45**, or after the D-1 CSA is finished, for all TSs, for all borders and directions, including RAs. After the CCC process is finished, SEleNe CC operator proceeds with the report generation and the email notification.

In case the capacity calculation progress is exceptionally slow and the results are not available until **21:45**, SEleNe CC operator shall notify all involved TSOs accordingly. In any case, the 1st ID CCC process shall be completed until **22:00**, allowing sufficient time (15 minutes) for the NTC Validation by the TSOs. For any remaining TSs the fallback solution will be used.

5.8 1st ID CCC (ID1) NTC Validation

By **21:45**, or as soon as the CCC process is finished, and up until **22:15**, all involved SEE TSOs shall validate the 1st ID NTC results for each TS of all borders and directions. The NTC Validation process can be performed until **22:15**. At **22:15**, the validation window is closed and no changes can be performed on the NTC results afterwards.

From **22:15** to **22:25** SEleNe CC operator, generates the relevant validated reports, for all borders and provides the results to the Market Departments of the TSOs.

5.9 DA CCC (DA) execution

The DA CCC process consists of two calculation parts; the Initial CCC which is performed in the SEleNe CC Tool for Initial CCC and the NTC Adjustment which is performed in the SEleNe CC Tool for NTC Adjustment, and starts by **20:30**, or after the D2CF CGM creation is finished. The timeline of the execution for the whole DA CCC process is presented in Figure 4.

5.9.1 Initial DA CCC execution

The Data Quality Reports for Initial CCC for all TSs and all borders and directions are generated by **20:30**. After Data Quality Report creation process is complete, the reports are sent to the involved SEE TSOs for assessment. The Data Quality Reports contain information regarding the input files that are used for the Initial CCC (i.e. CGMs, GLSKs, CNECs).

The report indicates a wide range of events. Starting from these rules the elements in the input files (CNEC and GLSK) will be checked based on CGM. It is worth noting that the data quality report will point out if a generator node has a generation equal to 0 MW or lower than Pmin or the node is not found in the CGM. Moreover, in the report it is presented if the contingencies, the CNEs and the RAs (i.e. the data of the CNEC files) are not mapped correctly in the CGM. The report also aims to check the status of the RAs (i.e. Status “On” is already set in the CGM) and to inform the operator about the disconnected COs and CNEs.

Before the Initial CCC process execution an e-mail is sent to the TSOs with the Data Quality Report (downloaded from the “Data quality overview” screen of the SEleNe CC Tool for Initial CCC) for each border and direction where the CGM, the CNEC and the GLSK files which are used in the process are presented.

The DA CCC process starts at **20:45** for all borders and directions, including RAs.

5.9.2 DA NTC Adjustment execution

After the conclusion of the Initial CCC, the resulting CGMs from the Initial CCC along with the respective Detailed Reports are imported automatically to the SEleNe CC Tool for NTC Adjustment.

The Initial Data Quality Reports for NTC Adjustment for all TSs and all borders and directions are generated by **21:45** or as soon as the Initial CCC is finished. After the Initial Data Quality Report creation process is complete, the reports are sent to the involved SEE TSOs for assessment. The Initial Data Quality Reports contain information regarding the validation rules that are applied in the input files that are used for the NTC Adjustment i.e. the Final RAs files, the CNEC files and the GLSK files. The validation rules are similar to the ones applied in the Initial CCC.

Before the execution of the NTC Adjustment process an email is sent to the TSOs with the Initial Data Quality Report for each border and direction where the CGM, the CNEC, the Final RAs and the GLSK files which are used in the process are presented.

After receiving the e-mail, TSOs should inform the SEleNe CC operator by **22:00** (within 15 minutes) only if they intend to provide an updated Final RAs file. In that case, the file should be uploaded by **22:15** (within 30 minutes in total). If no e-mail is received from the TSOs, the SEleNe CC operator will trigger the NTC adjustment process at **22:00**. If at least one Final RAs file is uploaded, the SEleNe CC operator will send the updated Initial Data Quality Reports for NTC Adjustment and wait 15 minutes for the TSOs to inform if they intend to upload a new Final RAs file. TSOs should inform the SEleNe CC operator via phone call, followed by the respective e-mail, as a reply to the email sent by the SEleNe CC operator.

After the completion of Step 4 (RAO) and in case there are remaining overloadings, the Overview reports for Overloaded CNECs and the Final Data Quality reports are generated automatically. If there is at least one border with remaining overloadings after Step 4, the RAs provision window is enabled. In this case, the TSOs are informed that the RAs provision window opens for **15 mins**. The RAs provision window shall be opened by **23:00**.

RAs provision window coordination

TSOs should inform SEleNe CC operator within **10 mins** after the opening of the RAs provision window if they uploaded a CNEC file or intend to upload a CNEC file for the SEleNe CC operator to extend the window for extra **30 mins.** Thus, the RAs provision window will be open for **45 mins** in total. During the first **30 mins** period the CNEC files should be uploaded to the tool.

In case a step 5 CNEC is uploaded, the Final Data Quality Reports for Step 5 of NTC Adjustment for all TSs and all borders and directions are generated manually by the SEleNe CC operator and sent to the involved SEE TSOs for assessment in order to check the new non-costly RAs that will be used in Step 5. Then, the TSOs should inform SEleNe CC operator within **10 mins** after the Data Quality reports are sent that they uploaded a new step 5 CNEC file or they intend to upload a new CNEC file for the SEleNe CC operator to extend the window for another 30 mins.

After the RAs provision window is closed, the tool automatically proceeds to Step 5 of the process. When the NTC Adjustment process is finished, the relevant reports are generated automatically.

5.10 DA CCC (DA) NTC Validation

Please note that the timeline is stated with reference to the calendar date on which the DA CCC process is executed. By **00:00** (beginning of the next calendar day), or as soon as the CCC process is finished, all involved SEE TSOs may access the SEleNe CC Tool for NTC Adjustment and validate the DA NTC results for each TS of all borders and directions.

The validation window is open until **08:15** in the morning of the next calendar date. From **08:15** to **08:30** SEleNe CC operator generates the relevant validated reports, for all borders and provides the results to the Market Departments of the TSOs.

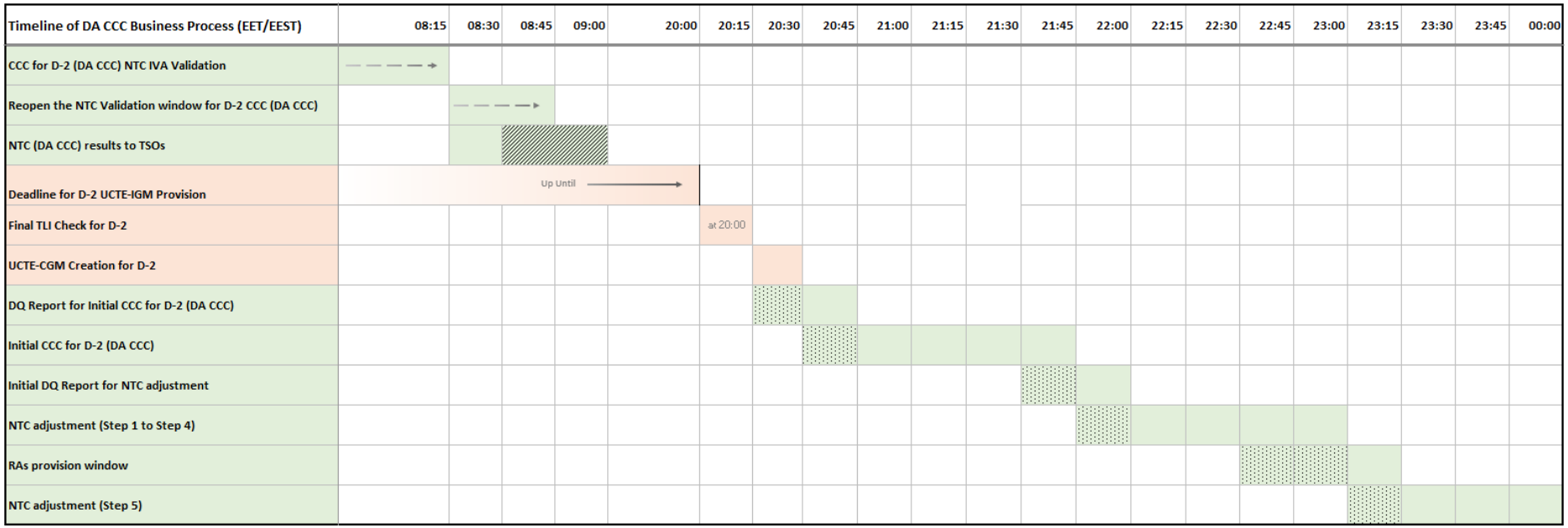


Figure 4. DA CCC Timeline.

Right after the previous BP is concluded or all mandatory input data is available

In case validation window reopening request is received