Rules for Coordination and Congestion Management

25 September 2019

Rules VS Terms & Conditions

T&C for OPA and for T&C SA include

- **the contractual rights and obligation** with respect to the data and services provided between each OPA or SA and Elia [bilateral relation].
- the **detailed processes and modalities** between OPA/SA and Elia regarding the utilization of a Technical Unit

VS

The Rules

- describe the **rights and obligation of Elia** when managing the grid in a secure way, given the impact and the use of different operations and ancillary services.
- Include **transversal activities** across all market parties.

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Scope of the Rules

The Rules concern the **coordination of Technical Units** for which the Contract OPA and the Contract SA has been signed and **congestion management by Elia for the security and reliability of the grid**.

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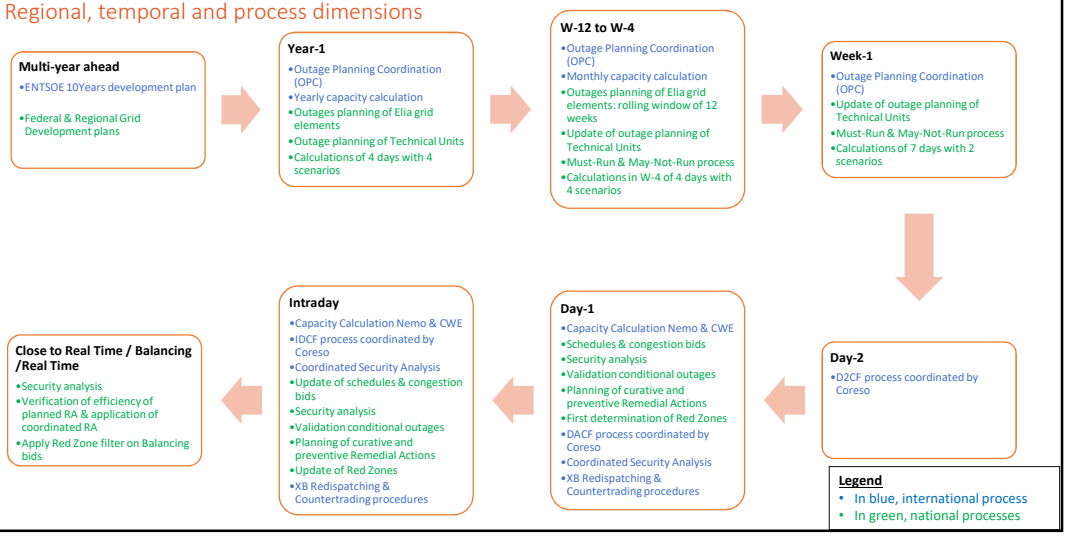
Overview of process linked with congestion management

Regional, temporal and process dimensions



Scope Rules – national (IN) vs international (OUT)

➢**Rules only** cover **"national" aspect** in Rules given that XB coordination rules are already covered by other EU/regional regulation and already approved by CREG in that capacity.

References will be provided in coordination rules :

- Overview of what falls under regulated rules demanded by network codes
- Describe remaining principles in coordination rules

Scope Rules – national process : external (IN) vs internal (OUT)

➢**Rules only** cover **"external" aspect of national processes**, namely those aspects for which an exchange with external parties is needed

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Scope Rules

	IN	OUT
ENTSO-e 10-year Network Development Plan (TYNDP)		OUT - This process is linked to Grid development and have a separate regulatory track
Federal Grid Development Plan / Regional Grid Development Plans		OUT - These processes are linked to Grid development and have a separate regulatory track
Outage Planning Coordination (OPC) of Cross-border Relevant Assets (Year-ahead; 12 to 4 weeks ahead and week ahead)		OUT - ENTSO-e methodologies following the SOGL
Outage planning of Technical Units (Year-ahead; 12 to 4 weeks ahead and week ahead) for which an OPA contract is signed	IN	
External processes steps regarding the outage planning of Elia grid elements in different time frames (Year-ahead; 12 to 4 weeks ahead and week ahead) requiring interaction with OPA	IN	
Internal processes steps regarding the outage planning of Elia grid elements in different time frames		OUT
Must-Run & (partial) May-Not-Run schedule requests possible (12 to 4 weeks ahead and week ahead))	IN	
Calculations in week - 4 (load flow, security analysis) (12 to 4 weeks ahead and week ahead)		OUT – no interaction with external parties pure internal process

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Scope Rules

	IN	OUT
Day-ahead and intraday national processes - Security analysis - Validation of conditional Outages of Elia grid elements		OUT – no interaction with external parties pure internal process
Day-ahead and intraday national processes - Activation of Preventive Remedial Actions - Planning of Curative Remedial Actions - First determination of Red Zones	IN	
Close to real time / Balancing / Real time national processes - Security analysis		OUT – no interaction with external parties pure internal process
Close to real time / Balancing / Real time national processes - Apply Red Zones filter on the activation of balancing energy bids	IN	
Close to real time / Balancing / Real time national processes Verification of efficiency of planned curative Remedial Actions + apply coordinated preventive RA	IN	
Yearly & monthly capacity calculation		OUT - CCR level methodologies following the FCA
Day-ahead & intraday capacity calculation at CCR level		OUT - CCR methodologies following the CACM
Two days ahead congestion forecast process (D2CF) & IDCF coordinated at CCR level (Coreso)		OUT - CCR methodologies following the CACM

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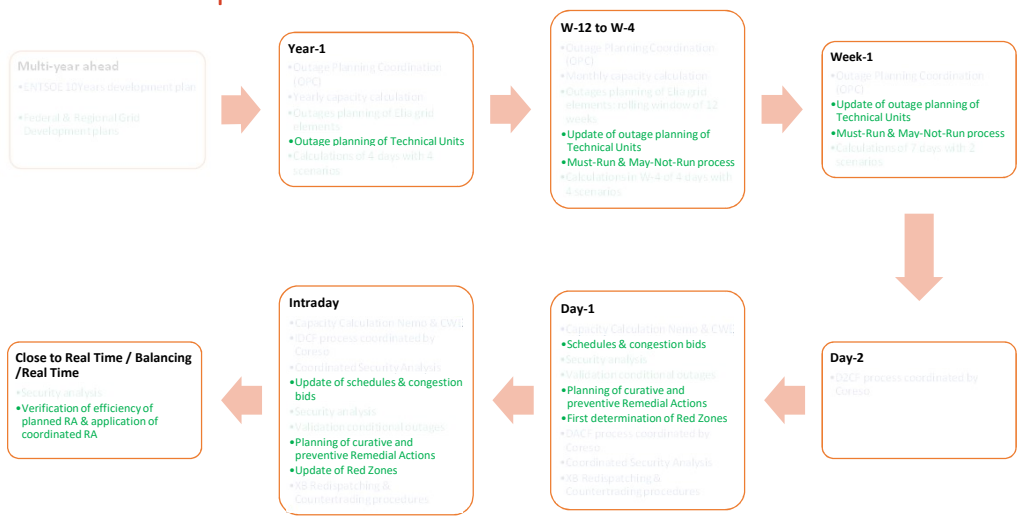
Detailed Scope Rules



Scope of the Rules

Concretely:

1. Rules for the Coordination of Technical Units — TITLE 3
   - Procedure before D-1: outage planning, MR/MNR
2. Rules for the National Management of Congestion — TITLE 4
   - Procedure in D-1/ID: means for Remedial Actions, compensation mechanism, Red zones
3. Rules for the international Management of Congestion and coordination interconnections* — TITLE 4 Art. 15
4. Overview of publication and reporting regarding Congestion Management — TITLE 5

* as far as not described in European methodologies implemented in accordance with SOGL or CACM or if related to aspects to be defined on a national level in support of those European methodologies;

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TITLE 3: Coordination of Technical Units

Goals: Compatibility check of availability plans with a special attention to:

- Matching grid element maintenance with availability plans: grid security, avoid market distortions
- Monitoring the availability of Technical Units for Ancillary Services
- Monitoring the scarcity risk
- Checking the availability restoration services

Timeframe: from year-ahead to D-1

Means:

- Amendment of availability plan
- Request of a Must-Run or (Partial) May-Not-Run

Criteria's for acceptable cost

- Reasonable
- Directly related to the request
- Demonstrable

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TITLE 3: Coordination of Technical Units – Amendment of an availability plan

Amendment requested by Elia

- Elia shall share the periods in which to avoid the unavailability of the concerned Technical Unit.
- If efficient multiple amendments of availability plans are possible to reduce one of the risks monitored, Elia will agree with the concerned Outage Planning Agent(s) on the amendment that:
  - ❑ most effectively reduces the risk underlying the amendment request,
  - ❑ without creating (other) risks of grid security,
  - ❑ and can be executed at the lowest cost.

Amendment requested by OPA

- Elia verifies the acceptability of the request monitoring the compatibility check (see previous slide)
- If the Technical Unit is XB Relevant Asset, Elia will coordinate with other TSO's.

TITLE 3: Coordination of Technical Units – Must-Run & May-Not-Run*

Must-Run Active Power Schedule

Elia may request a MR on a Technical Unit in order to:

- Ensure a net offtake of the Technical Unit for scarcity risks purpose during a planned maintenance on the grid
- Ensure the operational readiness of the Technical Unit for Ancillary Services

(Partial) May-Not-Run Active Power Schedule

Elia may request a (Partial) MNR in order to ensure that no active power or not more than a maximum level of active power will be produce on the Technical Unit facilitation a maintenance on the grid.

Elia may request MR and MNR only on Technical Unit whose status is "available" in the availability plan.
The concerned Scheduling Agent may inform Elia of conditions that must be met in order to agree to the MR or MNR requested by Elia.

If efficient multiple MR or MNR are possible to reduce one of the risks monitored, Elia will agree with the concerned SA on the amendment that:

- ❑ most effectively reduces the risk underlying the amendment request,
- ❑ without creating (other) risks of grid security,
- ❑ and can be executed at the lowest cost.

*Depending on the procedure engaged, MR and MNR have different names in T&C

- MR: Stand by Reserved (in Stand by procedure) and Ready to Run Reserved (in Ready to run procedure)
- MNR: May Not Run (in Stand by procedure) and May Not Ready-to-Run (in Ready to run procedure)

TITLE4: Congestion management

Goals:

Based on the results of contingency analyses and operational security analyses, the national congestion management serves the following purposes:

- Avoiding / revolving physical congestions
- Ensuring a level of security in line with the operational guidelines.

TITLE4: Congestion management – Remedial Actions

Means

- Internal action by Elia
  - Amendment of outage planning of a grid element
  - Topological modification and/or tap changes of PST
- Activation of a congestion bid
- Curtailment of an electricity generating Technical Unit*
- Activation of balancing bids for purpose other than balancing
- Coordination of Remedial Actions with neighboring TSO

Selection

RA are selected the purpose of effectively and efficiently resolving the Congestion risk

- Preference for non-costly RA over costly RA (direct costs)
- Preference for RA without international impact over RA with international impact

Reservation of some non-costly topological actions (mainly PST taps range) for timeframes remaining after capacity calculation

*Technical Unit subject the modalities concerning grid connection with flexible access and in accordance with article 170 of the Federal Grid Code, article III.2.4.5 of the "Technisch Reglement Plaatselijk Vervoernet van Elektriciteit Vlaams Gewest", article III.3.3.25 of the "Technisch Reglement voor de Distributie van Elektriciteit in het Vlaamse Gewest"

TITLE4: Congestion management – Remedial Actions

Curative or Preventive Remedial Action

As Curative and Preventive Remedial Actions are the result of an operational planning process, Elia prepares both in advance in order to be ready for activation if needed, regardless of the actual moment of activation.

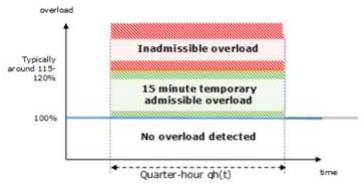
Activation of Curative RA:

- if the expected overload is a Transitory Admissible Overload and, upon activation, the Remedial Action can be completely implemented within the defined duration of the Transitory Admissible Overload;
- and if there is no significant risk that the Remedial Action will not be available after occurrence of the Contingency.

Activation of Preventive RA

- if the above conditions are not met
- or for reasons of optimizing the grid topology
- or for the purpose of international coordination

The threshold and the accepted duration between Transitory Admissible Overload and the inadmissible overload is specified per grid element



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TITLE4: Congestion management – Compensation mechanism

Elia aims to minimize the effect of Congestion Management on the system imbalance via a compensation mechanism when activating flexibility.

Flexibility available for compensation may be:

- The flexibility put at the disposal of Elia in accordance with the Terms and Conditions for the Scheduling Agent in compliance with article 248 of the Federal Grid Code to be activated as a compensation bid before the earliest balancing gate closure time for aFRR or mFRR.
- The flexibility offered but not reserved for balancing during the concerned quarter-hour.
- Other means available (if any) in compliance with the ID market rules.

In order to avoid creating Congestions, Elia does not activate the availability flexibility in a zone determined as Red Zone similar to the limitations set on market parties

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TITLE4: Congestion management

Priority of Dispatch

- When activating downward flexibility, Elia will aim to comply with the requirements for priority of dispatch for electricity produced from renewable energy sources or high-efficiency cogeneration.
- Elia will prioritize electricity produced from these energy sources, meaning not activate downward flexibility on such Technical Units, provided that alternative actions are available at an acceptable cost and do not endanger the security of the grid

Cost-based Redispatching for day-ahead timeframe

- Non market based mechanism for activation of flexibility
- The following bid prices for flexibility are accepted:
  - For incremental activation: the additional operating cost
  - For decremental activation: the maximum of the additional operating cost and the financial support that would have been received for the electricity volume.

Market-based Redispatching for intraday-ahead timeframe

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TITLE4: Congestion management
Countertrading & Cross-border Redispatching

These rules are subject to changes following the entry into force of new ENTSO-e methodologies at CCR level

- After D-1 coordinate security analysis, Elia may request Countertrading or cross-border Redispatching as a Preventive, Curative, or Restoring Remedial Action if
  - in line with European methodologies for the concerned Capacity Calculation Region (CCR)
  - or with the bilateral agreement with the concerned TSO
- The requesting TSO can decrease the ID available transfer capacity on the affected border during the period of the activation and in the direction of the Congestion, without jeopardizing the firmness of already allocated capacities.
- Elia in agreement with the concerned TSO must specify the position of cross-border Redispatching and Countertrading within the order list of Remedial Actions created based on the principles for activation of remedial actions. The position can be:
  - either Countertrading or cross-border Redispatching if no other effective and efficient Remedial Actions are available to Elia;
  - or a cost-based order of internal RD and CT or XB RD if equally effective to solve the Congestion risk. In this case at least indicative prices are to be exchanged between the TSOs in order to enable a cost optimization by the requesting TSO.

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TITLE4: Congestion management – Red Zones

- A Red Zone is the status of an electrical zone, for a defined direction (upwards or downwards) and for a defined period during the day, in which a constraint in MW has been set with regards to production program adaptation on the Technical Unites situated in this electrical zone.
- Elia determines Red Zones based on the schedules from D-1 and updates the status of the zones during day D based on new information.
- Amendments request of Schedules on Technical Units located in a Red Zone are only approved by Elia if the deviation is smaller than the Red Zone margin. This margin is dispatched on a 'first come first serve' basis.
- Elia applies Red Zones filter on the activation of balancing energy bids

TITLE 5 : Reporting – Monitoring obligations (receiver CREG)

- Quarterly report on Congestion Management
  - Content :
    - Information on the quality of forecasts used as operational input data for the creation of the Individual Grid Models (IGM)
    - Information on the quality of output data
    - Information about the timing, power, location, purpose and justification for activations of costly remedial actions by Elia (including activations and justification for downward Redispatching using Technical Units subject to the priority of dispatch)
    - Historical values of a selection of relevant KPIs.
- Yearly report regarding developments towards market-based Redispatching and towards a reduction of the need for downward Redispatching of generating installations using renewable energy sources or high-efficiency cogeneration.

TITLE 5 : Reporting – Publication of information

- ENTSO-e Transparency Platform : publication of information regarding
  - Congestion management measures
  - Unavailability of generation and production units

- Elia website
  - Quarterly report on Congestion Management including:
    - KPI on the quality of forecasts used as operational input data for the creation of the Individual Grid Models (IGM)
    - KPI on the quality of output data
    - Information about the timing, power, location, and purpose for activations of costly remedial actions by Elia (including activations for downward Redispatching using Technical Units subject to the priority of dispatch)
    - Historical values of a selection of relevant KPIs.