

Nordic System Operation Agreement (SOA) – Operational Procedure for Nordic Outage Planning Coordination (OPC)

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1 Background

This document is the common operational procedure for regional outage planning coordination within Nordic outage coordination region (hereafter referred to as "Nordic OCR" as defined in chapter 4.2 of OP Annex) in accordance with article 83 of SO Regulation..

2 Objective

Outages having impact on the transmission capacity or system security between the transmission systems, such as but not limited to at least all relevant assets (grid elements, power generating modules and demand facilities), shall be coordinated timely in advance between the Nordic TSOs. The regional outage planning coordination process shall determine availabilities and un-availabilities of at least all relevant assets that interact with the interconnected system and that have a significant impact on cross-border operation of the transmission systems of the Nordic TSOs.

Nordic TSOs perform with the support of Nordic RCC outage planning coordination in order to monitor the availability status of at least all relevant assets and coordinate the availability plans to ensure transmission capacity and operational security of the Nordic transmission system.

Unless otherwise decided by Nordic TSOs, the term "outage plan" shall be used since it reflects the existing situation in Nordic outage planning coordination. The term "availability plan" will be introduced in the regional outage planning coordination process at a later stage.

3 Roles and Responsibilities

Several roles are involved in the regional outage planning coordination (hereinafter referred to as "OPC"). The Nordic TSOs are the main stakeholders of the coordination process. Nordic RCC supports the regional outage planning coordination of the Nordic TSOs. Distribution system operators (hereinafter referred to as "DSO") and outage planning agents (hereinafter referred to as "OPA") are other relevant stakeholders in the regional outage planning coordination. The roles and responsibilities of Nordic TSOs and Nordic RCC are described in more detail below.

3.1 Nordic TSOs

The Nordic TSOs operate the transmission systems and are responsible for the security of supply within their control area. All Nordic TSOs participate in the Nordic outage planning coordination of Nordic OCR and apply this Operational Procedure for Outage Planning Coordination.

The main responsibilities of the Nordic TSOs in the regional outage planning coordination are the following:

- Share all relevant information amongst Nordic TSOs on at least all relevant assets such as power generating modules, demand facilities and grid elements, and if necessary, on new assets, which have a significant impact on the operation of the transmission system of another TSO within Nordic OCR;
- Provide relevant information and data to Nordic RCC to support Nordic TSOs in the regional outage planning coordination;

- Assess the relevance of assets and establish lists of relevant assets for Nordic OCR;
- Plan, coordinate and assess the outage requirements of at least all relevant assets and establish preliminary and a final outage plans for at least all relevant assets in the Nordic OCR;
- Coordinate with Nordic RCC to resolve outage planning incompatibilities (hereinafter referred to as "OPI") by applying appropriate measures;
- Inform all relevant stakeholders about lists of at least all relevant assets and final outage plans..

3.2 Nordic RCC

Nordic RCC supports Nordic TSOs in regional outage planning coordination within Nordic OCR.

The main responsibilities of Nordic RCC in the regional outage planning coordination are the following:

- Perform operational security analysis based on information provided by Nordic TSOs in order to support Nordic TSOs in detecting outage planning incompatibilities;
- Coordinate the assessment of relevant assets with Nordic TSOs;
- Identify and assess OPIs and propose solutions to Nordic TSOs to solve outage planning incompatibilities;
- Coordinate analysis on outage planning incompatibilities with other regional security coordinators (hereinafter referred to as "RCC") of adjacent CCRs;
- Prepare in coordination with Nordic TSOs an annual report about the number of OPIs detected during the regional outage planning coordination and submit it to ENTSO-E.

4 Nordic outage planning coordination

4.1 Long-term outage planning coordination

Each TSO shall assess long-term indicative outage plans for internal relevant assets at least two years prior to the start of the corresponding year-ahead coordination process.	SOGL 93
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All TSOs shall exchange information on relevant projects with impact on outage planning coordination and outage plans of relevant grid elements, and, if necessary, TSOs may coordinate with each other.	SOGL 83(4)
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All TSOs shall assess the market information of at least all relevant assets from production and consumption owners according to articles 4, 7 and 15 of Regulation on submission and publication of data in electricity markets ((EU) No 543/2013). This shall be done at least two years before the start of the	SOGL 93
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year-ahead outage planning coordination and then every year until the start of the year-ahead outage planning coordination

Each TSO shall analyse long-term outage plans in order to detect any outage planning incompatibility. All TSOs shall coordinate their assessment of long-term outage plans when they affect cross-border operational security. All TSOs in cooperation with Nordic RCC shall propose solutions for solving outage planning incompatibilities.

4.2 Year-Ahead outage planning coordination

4.2.1 Definition and update of list of relevant asset

Each TSO shall assess the relevance of assets such as power generating modules, demand facilities and grid elements applying the methodology for assessing the relevance of assets for outage planning coordination pursuant article 84 SO GL (hereinafter referred to as "RAOCM"). All TSOs shall define the list of at least all relevant assets for power generating modules, demand facilities and grid elements subject to regional outage planning coordination within Nordic OCR.

SOGL 85
SOGL 87

Each TSO shall consider chapter 5.3 and 5.4 of RAOCM when determining relevant assets connected outside its control area whose outage can threaten the system security of its control area;

RAOCM 5(3)
RAOCM 5(4)

Each TSO shall reassess the relevance of assets every year. All TSOs shall jointly update the list of at least all relevant assets before 1 August of each calendar year.

SOGL 86
SOGL 88

All TSOs shall publish the list of at least all relevant assets on ENTSO-E operational planning data environment (hereinafter referred to as "OPDE").

SOGL 85
SOGL 87

4.2.2 Deadlines for year-ahead regional outage planning coordination

All TSOs agree on the following timeframes for year-ahead regional outage planning coordination on at least all at least all relevant assets:

SOGL 94

- Provision of year-ahead outage plans proposals by OPAs other than TSO or DSO before 1 August of each calendar year;
- Provision of preliminary year-ahead outage plans before 1 November of each calendar year;
- Final year-ahead outage plans before 1 December of each calendar year

All TSOs may jointly agree to adopt and implement a timeframe for the year-ahead outage planning coordination that deviates from the timeframes as defined above.

4.2.3 Coordination of outage planning with DSOs

Each TSO shall coordinate the outage planning of at least all relevant assets with concerned DSOs. | SOGL 90

4.2.4 Provision of year-ahead outage plan proposals

Each TSO shall thereafter assess those outage plans and take them into account when establishing the year-ahead coordination of relevant grid elements. | SOGL 95
Each TSO shall assess the request of OPA for amendment of an outage plan and shall coordinate with the other TSOs if necessary. | SOGL 96

4.2.5 Year-ahead coordination of outage plans

The year-ahead coordination of the outage plans shall start after 1 August and shall be accomplished to preliminary plans before 1 November of each calendar year. | SOGL 95
| SOGL 96

Each TSO shall provide the preliminary year-ahead outage plans for all internal relevant assets to the other TSOs, to Nordic RCC and to ENTSO-E OPDE before 1 November of each calendar year | SOGL 97

4.2.6 Validation of year-ahead outage plans

The validation of year-ahead outage plans shall be accomplished before 1 December of each calendar year | SOGL 98

All TSOs in cooperation with Nordic RCC shall perform operational security analyses taking into account all the preliminary year-ahead outage plans in order to detect any outage planning incompatibilities. Nordic RCC shall coordinate the analyses with other regional security coordinators if necessary. Nordic RCC in cooperation with all TSOs shall establish a list of detected outage planning incompatibilities..

All TSOs in cooperation with Nordic RCC shall propose and assess solutions for solving outage planning incompatibilities. If necessary, Nordic RCC shall coordinate the analyses with other regional security coordinators. All TSOs shall confirm the final solutions for solving the outage planning incompatibilities. Each TSO shall consider confirmed solution and update the year-ahead outage plans for at least all relevant assets accordingly in order to solve any outage planning incompatibility. All TSOs in cooperation with Nordic RCC shall continue the coordination until all outage planning incompatibilities have been resolved or incompatibilities are acceptable and manageable in real-time operation..

Each TSO shall provide the final year-ahead outage plans for all internal relevant assets to the other TSOs, to Nordic RCC and to ENTSO-E OPDE before 1 December of each calendar year.

All TSOs and Nordic RCC shall consider the final year-ahead outage plans in the month-ahead and week-ahead outage planning coordination process.

4.3 Updates to the final year-ahead outage plans

Each TSO shall be able to launch a request for amending the final year-ahead outage plan of a relevant asset. The requesting TSO shall prepare a proposal for amendment to the year-ahead outage plan and shall submit its proposal to the other TSOs.

SOGL 100

All concerned TSOs shall coordinate and assess the proposal for amendment to the year-ahead outage plan prior to a coordination process with Nordic RCC. If necessary, all concerned TSOs in cooperation with Nordic RCC shall perform operational security analyses considering the requested amendment to the final year-ahead outage plan in order to detect any outage planning incompatibilities. If necessary, Nordic RCC shall coordinate the analyses with other regional security coordinators.

All concerned TSOs in cooperation with Nordic RCC shall propose and assess solutions for solving any outage planning incompatibilities. All concerned TSOs shall confirm the final solutions for solving the outage planning incompatibilities. The requesting TSO shall withdraw the request for amendment to the final year-ahead outage plan in case no solution has been found for solving the outage planning incompatibilities.

All concerned TSOs shall consider confirmed solution and update the year-ahead outage plan accordingly. Each TSO shall provide the updated outage plan to the other concerned TSOs, Nordic RCC and to ENTSO-E OPDE. The updated outage plan shall always be considered in the outage planning coordination process.

4.4 Nordic week-ahead and month-ahead outage planning coordination

All TSOs have agreed to establish a week-ahead and month-ahead outage planning coordination between the TSOs and Nordic RCC in order to confirm and if necessary, to update the year-ahead outage plans before real-time execution.

SOGL 83

Each TSO shall ensure that the year-ahead outage plan is up-to-date and shall provide an updated outage plan to the other concerned TSOs, Nordic RCC and to ENTSO-E OPDE. If necessary, all TSOs in cooperation with Nordic RCC shall detect based on the latest available outage plans any outage planning incompatibilities and propose solutions for updates to the outage plans

Week-ahead and month-ahead outage planning coordination shall take place in a weekly conference call between the TSOs and Nordic RCC. The objective

of this call is to confirm the updated year-ahead-plan and to identify any unforeseen changes to the plan. Any changes to the year-ahead-plan shall be exchanged in the call.

The results of the week-ahead outage planning coordination shall be documented by Nordic RCC and provided to TSOs¹.

Each TSO shall inform its neighbouring TSOs about forced outages and any other outages which have not been considered neither in the year-aheadplanning nor in the week-ahead and month-ahead planning and which could have an impact on the neighbouring grid. Forced outage means the unplanned removal from service of a relevant asset for any urgent reason. In case of forced outage, a coordination/assessment shall be performed between the affected TSOs. The concerned TSOs shall inform Nordic RCC about the forced outage when appropriate.

4.5 Pan-European outage planning coordination

The pan-European outage planning coordination will be operated by several European regional security coordinators as a service on a rotating principle. Nordic RCC shall provide the service on pan-European outage planning coordination to the other RCCs and other TSOs.

For the time being until OPDE has been put into full operation Nordic RCC shall submit TSO's outage planning data to the common RCC platform.

¹ Details of such a weekly conference call will be agreed upon in an operational instruction.