26th System Operation European Stakeholder Committee (SO ESC)

29 September 2023, 09:00-12:00

Hybrid, ACER premises in Ljubljana

Draft Minutes

Participants		
Uros	Gabrijel	ACER (Chair)
Eric	Dekinderen	VGB Powertech
Georgios	Antonopoulos	ACER
Maria	Barroso Gomes	ACER
Mariia	Melnychenko	ACER
Pavla	Erhartova	Europex
Marc	Malbrancke	CEDEC
Gunnar	Kaestle	COGEN Europe
Marco	Pasquadibisceglie	ARERA
Thierry	Vinas	Eurelectric
Mike	Kay	GEODE
Thomas	Holzer	BNetzA
Lisa	Dallinger	BNetzA
Tony	Hearne	Eurelectric
Klaus	Overhauser	VGB Powertech
Raju	Srinivasa	EUGINE
Freddy	Alcazar	EU Turbines
Hervé	Bielmann	EU Turbines
Luca	Guenzi	EU Turbines
Florentien	Benedict	DSO Entity
Catarina	Augusto	SolarPower Europe
Rickard	Nilsson	Europex
Goran	Drobnjak	EASE
Santiago	Gallego Amores	EDSO for smart grids
Serdar	Bolat	EU DSO Entity
Michael	Van Bossuyt	IFIEC
Jorn	Schaug-Petterson	Statnett
Bruno	Gouverneur	ENTSO-E
Cherry	Yuen	ENTSO-E
Victor	Charbonnier	ENTSO-E
Luca	Ortolano	ENTSO-E
Laurent	Rosseel	ENTSO-E
Rafal	Kuczyński	ENTSO-E
Erik	Ahlstrom	ENTSO-E
Habir	Paré Nsangou	ENTSO-E
Kacper	Kepka	ENTSO-E
James	Hellinckx	ENTSO-E
Martijn	Backer	ENTSO-E
Stefanova	Vesela	ENTSO-E
Gamze	Dogan	ENTSO-E

1. Opening

1.1. Review of the agenda, approval of last meeting minutes

The Chair (Uros Gabrijel) opens the meeting and asks for comments on the agenda. FCR topic is moved to the end of the meeting.

The following topics are added in the AOB:

- HVDC Nordlink incident presentation by Statnett
- Cogen Europe (Gunnar Kaestle) will introduce a topic on how to deal with critical situation in a system split event

The minutes of last meeting received one comment by DSO Entity (Florentien Benedict) and are approved pending the incorporation of that comment.

Actions:

- ENTSO-E will send the minutes of the last meeting.

2. Review of Actions

ENTSO-E (Cherry Yuen) presents the pending actions from previous meeting.

- On DFD, the update/material is pending, awaiting Regional Group Continental Europe (RGCE) approval
- PRA topic will be discussed in the next meeting as the report is currently being drafted

3. Update on the implementation actions at pan EU level

ENTSO-E (Cherry Yuen) presents update on:

- The reports on SO GL article 15 (operational security indicators) and article 17 (regional coordination assessment) that are due by the end of the year,
- The conclusions from the discussion on Key Organisational Roles Responsibilities Requirements (KORRR) methodology amendments proposals between ENTSO-E and DSO Entity, and notably the threshold for the real-time data exchange. No amendments proposals will be submitted formally until there is certainty on the review of the Capacity Allocation and Congestion Management Guidelines and the finalisation of the proposal for Network Code on Demand Response. The intention is not to relax the threshold for real-time data exchange but to leave it open at national level implementation.

Any upcoming discussions/developments on KORRR or data exchanged related to SO GL will be tackled in the SO ESC.

4. Update on Tmin FCR LER and FCR probabilistic dimensioning methodology

ENTSO-E (Luca Ortolano) presents the status of work in progress on the proposal for Tmin for FCR by LER. ENTSO-E Regional Group Continental Europe and Market Committee are approving the report on updated costs to be shared with the NRAs and stakeholders. The study is looking up until 2025 so far.

The report will be submitted for public consultation between November 2023 and January 2024. In parallel, ENTSO-E also carries out an update of the historical frequency data with the results of the assessment on mitigation measures/operational improvements until February 2024. Once these two workstreams are finalised, ENTSO-E will re-run the cost benefit analysis in March 2024.

FCR probabilistic dimensioning methodology topic will be discussed at next meeting due to changes in the agenda during the meeting.

Actions:

- ENTSO-E will inform SO ESC members when the public consultation starts.

5. Update on Winter 22/23 preparation

ENTSO-E (Laurent Rosseel) presents the content of the interim report with the lessons learned and the recommendations based on existing procedures and possible future developments. The coordination between TSOs and RCCs is a key aspect to improve as well as the development of relevant trainings. The coming winter is expected to be less problematic than last year, but TSOs are already implementing the recommendations of the report to improve risk-preparedness.

Eurelectric (Thierry Vinas) asks about more details on the operational coordination with ENTSO-G. ENTSO-E explains that ENTSO-G organises daily/weekly operational calls to which ENTSO-E is invited. This allows to inform at an early stage in case there is a gas shortage somewhere in Europe.

Cogen Europe (Gunnar Kaestle) asks if ENTSO-E has information on varying levels of electricity consumption at different temperatures. ENTSO-E does and those are incorporated in the seasonal outlook.

Actions:

- ENTSO-E will share information about thermos-sensitivity of electricity consumption.
- ENTSO-E will provide an update on operational risk preparedness for winter in November SO ESC meeting.

6. Common Grid Model (CGM) Implementation

ENTSO-E (Habir Paré Nsangou) presents the status of CGM Implementation. Main focus areas for 2023 and their implementation are presented:

- OPDE delivery and usage: the release of OPDE is ongoing and ENTSO-E supports TSOs to ensure their participation.
- Grid modelling: continuous review takes places to improve the effectiveness of all TSO-RCC modelling.
- Use of CGM in operational processes.

More and more operational processes are intended to be connected to OPDE. A new version of CGM implementations Guide was approved helping to increase quality of IGM for HVDC modelling.

CogenEurope (Gunnar Kaestle) asks about the model used to simulate grid forming capability. ENTSO-E CGM Building Process does not address this functionality since the current RCC tasks do not cover dynamic studies.

CogenEurope (Gunnar Kaestle) asks if TSOs accounts for stability issues in their IGM. ENTSO-E explains that the CGM is a load flow calculation which does not address dynamics.

EU Turbines (Luca Guenzi) ask if FSM (primary control for frequency that equips synchronous generators participating in the wholesale market) is taken into account in CGM creation. ENTSO-E clarifies that the CGM is a steady state analysis (load are represented statically for the different nodes of the transmission grid). It does not provide dynamics analysis, but it can support other type of analysis e.g., short-term adequacy analysis. However, the ENTSO-E CGM OPDE TT is not involved in those processes.

Actions:

- ENTSO-E will look into the model of grid forming capability in the IGM description.

7. Overview of ROSC methodologies implementation

ENTSO-E (Erik Ahlstrom) presents the status of the implementation and specificities of ROSC in each CCR. Some regions are more advanced than others with their specifications. Regional differences are expected as there is no common principle for redispatching in CSA.

Action:

- Eurelectric (Thierry Vinas) will send his questions to ENTSO-E to follow-up on it.
- ENTSO-E (Erik Ahlstrom) will ask Nordic CCR about clarity on the reported lack of implementation of (costly?) remedial actions.
- ENTSO-E will upload the most recent slides on the website including a list of abbreviations.

8. *Frequency impact of sudden and large swings of vRES infeed*

ENTSO-E (Martijn Backer) presents the background of the project, initially called Wind eclipse. Some regulations lead to RES being disconnected suddenly; the project team approach for investigating this issue was presented as well as the expected next steps.

Eurelectric (Thierry Vinas) suggests to study the impact and propose mitigating measures that can reflect on the variety of plant operators and triggering conditions (existing vs. new). He suggests to account somehow for the forecasting errors. The Chair mentioned that the data exchange agreement between ACER and ENTSO-E currently being updated will include KPIs on forecasting accuracy.

EU Turbines (Freddy Alcazar) asks how and when the results will be presented. ENTSO-E explains the tentative timeline is to have results by the SO ESC meeting in Q1 2024, and they will be made public.

COGEN Europe (Gunnar Kaestle) suggests that ideally DSOs would also provide data for this project because many generators in scope of the study are connected at distribution level.

IFIEC (Michael Van Bossuyt) asks if PV data will also be analysed. ENTSO-E clarifies that yes it is intended to be in the scope of the project.

As every country has a different regulatory framework, the results might be specific to it. The study will be transparent on that.

ENTSO-E (Cherry Yuen) specifies that the purpose is to know the impact on the pan EU level to determine if actions on operational processes need to be taken at this level.

The Chair encourages the project team to consider the "polluter's pay principle" when addressing the measures.

9. *Update of SO ESC ToR*

The Chair presents the main changes that it proposes to the Terms of References (ToR) of the SO ESC:

- Involvement of the EU DSO Entity as co-organiser alongside ENTSO-E for the SO ESC.
- Clarification for the involvement of non-SO ESC member as introduced in the MESC ToR.

The draft ToR have been circulated and SO ESC members are asked to review it until the next meeting where they will be finalised. Because the ToR of GC ESC need to be changed with the same edits, the Chair proposes to organise a joint SO-GC ESC session in December to approve the ToRs simultaneously.

Draft proposal to be sent 2 weeks in advance of the joint session. Members to propose any changes via email.

Actions:

- ENTSO-E will circulate with GC ESC the draft ToR of SO ESC.
- SO ESC members are asked to comment of the ToR, preferably via email.
- SO and GC ESCs members will be provided with a new versions of the ToRs for final review two weeks prior to the joint session.
- ENTSO-E will circulate the current list of members to be updated by each association and then, put on the website.

10. *Update on Montenegro ICS scale 2 incident*

ENTSO-E (Laurent Rosseel) presents the sequence of events leading to the incident and the analysis pursuant to it. An expert panel will be established and develop recommendations by the end of this year.

Several lines in Montenegro and with the border with Bosnia tripped. This had a cascading effect on several DC lines which was mitigated by a decrease of HVDC line capacity by 300 MW. There was no load shedding or significant impact on the neighbouring countries.

Significant differences between scheduled and physical flows were observed prior to the incident. This tends to occur often in this part of the synchronous area and the expert panel will investigate this further. The exact reason/trigger for the tripping of the lines is still unknown.

Eurelectric (Tony Hearne) asks if this incident was successfully mitigated thanks to the implementation of the recommendations regarding a similar incident in Croatia in 2021. ENTO-E explains most recommendations are indeed implemented, while others are still under implementation. ENTSO-E monitors the implementation of those recommendations.

The Chair has already asked ENTSO-E to publish an interim report on the implementation of the recommendations from the 2021 Expert Panel final reports. This will provide more transparency and insights to stakeholders.

EU Turbines (Luca Guenzi) asks for clarification about the definition of scheduled flows and if the tripping had other impacts on system security than voltage violation. ENTSO-E explains that the report of the expert panel will provide an overview of these (impact on frequency, dynamics, etc); but the first analysis reveals insignificant impact on frequency and n-1 compliance.

ENTSO-E (Cherry Yuen) further explains that ENTSO-E will submit to ACER next month amendments proposals to the Coordinated Security Analysis methodology that should help with the preparedness of TSOs e.g., inclusion of busbar couplers in the contingency list.

Eurelectric (Tony Hearne) observed significant incidents in the UK which had impact on HVDC lines and asks if ENTSO-E will investigate them too. ENTSO-E explains that there will be an analysis but no dedicated report because they are not considered ICS scale 2.

EU Turbines (Luca Guenzi) asks if there is a public record of the grid incidents. The Chair explains that all relevant incidents are reported annually in accordance with ENTSO-E's Incidents Classification Scale (ICS) methodology' .

Actions:

- ENTSO-E will share the ICS report with the SO ESC when published.

11. AOB

The first topic discussed is about Nordlink incidents. Statnett (Jorn Schaug-Petterson) presented an introduction, the statistics in hand when an incident occurs and how those can be improved.

- Incident of Friday 17 February 2023:

  The FASIT report of the incident was presented. First, a temporary fault on an AC line with successful auto-reclosure occurred. Then, an overload led to reverse the Nordlink active power.

  This will be avoided by shortly shutting down active power if large voltage drop occurs.

- Incident of 8 June 2023:

  HVAC disconnection of both links on both sides. Automatic switching failed and skipped local grid to go directly to EG1 (Diesel) which failed to resynchronise as it was missing voltage measurement. The one min UPS back-up emptied thus cooling and fans stopped. This led to link tripping.

EU Turbines (Luca Guenzi) asks if disturbance recordings of incidents could be shared with manufacturers such as recordings from PMUs or relays in order to fine-tune their models based on real incidents.

Statnett (Jorn Schaug-Petterson) clarifies that those data are sensitive and that each TSO would have to decide if they want to disclose their data or not.

The second topic is about RoCoF, EU Turbines (Luca Guenzi) asks clarification on the potential expert group to be created. The Chair clarifies that once Inertia study phase II is ready, there will be sufficient information to discuss the stability issues and look into establishment of a dedicated expert group. ENTSO-E will organise a workshop to discuss the results of phase II.

COGEN Europe (Gunnar Kaestle) presented his paper and ask for experts to look into it in order to know if the issue needs to be investigated or not.

Actions:

- ENTSO-E will share the paper with SPD experts for comments.
- ENTSO-E will propose dates for next year's meeting.