System Operation European Stakeholder Committee

Materials for meeting 13 March 2024

entsoe

Reliable Sustainable Connected

Agenda

Subject	Timing	Lead
1. Opening • Review of the agenda, approval of last meeting minutes • Review of actions	13.00 - 13.15	ACER, Uros Gabrijel ENTSO-E, Cherry Yuen
2. Update on FCR probabilistic dimensioning	13.15 - 13.25	ENTSO-E, Carmelo Mosca
3. Update on Tmin FCR LER - TF LLFD analysis	13.25 - 13.40	ENTSO-E, Luca Ortolano
4. Report on CGM Implementation	13.40 - 13.55	ENTSO-E, Habir Paré
5. Update on Wind eclipse	13.55 – 14.10	ENTSO-E, Hanna Ljungberg
6. Update on the implementation actions at pan-EU level	14.10 - 14.20	ENTSO-E, Cherry Yuen
7. AOB	14.20 – 14.45	All

1. Review of actions

ENTSO-E, Cherry Yuen

1 Review of actions SO ESC 1/4

ACTION	ANSWER	STATUS
ENTSO-E will present the next update on DFD at the meeting either in June or September	Materials to be provided separately after RGCE approval (probably by end 2023)	Ongoing
ENTSO-E will give an update to SO ESC on the probabilistic risk assessment (PRA) methodology	Done in Nov 23 meeting	Done
Implementation of Art.39 of SO GL and follow-up of RoCoF discussion: ACER will liaise with GC and SO ESC members to establish the Terms of References of the new Expert Group. (topic: a macro-economic study is provided by TSOs for adapting system operators to a net zero emissions power system)	EC will initiate a consultation on a forthcoming study which the new EG under GC and SO ESC will aim to support	Ongoing

1 Review of actions SO ESC 2/4

ACTION	ANSWER	STATUS
FCR probabilistic dimensioning methodology: If no public workshop is scheduled, ENTSO-E will provide an update at the next SO ESC, notably the outcomes of the public consultation	Done in Nov 23 meeting	Done
FCR Tmin LER: ENTSO-E will inform SO ESC members when the public consultation starts	Informal meeting with NRAs and CER then public consultation. See agenda item #3	Ongoing
Winter preparation: ENTSO-E will share information about thermo-sensitivity of electricity consumption	Update done at Nov 23 meeting	Done
Winter preparation: ENTSO-E will share information on operational risk preparedness for winter	Done in Nov 23 meeting	Done

1 Review of actions SO ESC 3/4

ACTION	ANSWER	STATUS
CGM implementation: ENTSO-E will look into the model of grid forming capability in the IGM description	CGMES deals with steady state analysis	Done
CSA ROSC: clarification with Nordic CCR concerning the use of non-costly remedial actions	Nordic CCR confirmed that CSA v1.0 is expected to Go-Live in Q2 2024 and it will not entail any type of remedial action optimization or remedial action coordination. It will focus on providing results of the contingency analysis for day-ahead timeframe with the inclusion of SIPS (System Integrity Protection Schemes).	Done
ESC members list update	ENTSO-E will circulate the current list of members to be updated by each association before updating the website	Done

1 Review of actions SO ESC 3/4

ACTION	ANSWER	STATUS
Update on the Montenegro incident	The incident is classified ICS scale 1. No report will be published.	Done
Update on the Winter outlook	The winter outlook identified only some local risks in specific situation.	Done
Update on inertia project phase II	Updates will be communicated as soon as they become available	Ongoing

2 Update on FCR probabilistic dimensioning

ENTSO-E, Carmelo Mosca

FCR probabilistic Dimensioning (Art.153(2) SO GL)
Status update

The public consultation about the TSOs proposal for a probabilistic FCR dimensioning approach pursuant Art.153(2) of SO GL has been held in the period 15th May – 15th July.

Four stakeholders provided a response. Some SHs asked for confidentiality in publicly sharing their names. Respondents are:

- An association of the electricity sector (UFE, representing producers, transmission and distribution system operators) and a producer (EDF). They provide a shared response (comments are identical).
- A provider of energy control services.
- A research institute.

The Project Team has acknowledged all received comments (from stakeholders and NRAs) and have updated both the Legal Document and the Explanatory Note where relevant.

On 28 November 2023, the RG CE Plenary approved the documents and the submission to NRAs of the methodology for probabilistic approach for FCR dimensioning.

All RG CE EU-TSOs confirmed the submission to RG CE secretariat on 30 January 2024.

NRAs approval process can legally take up to six months. Shouldn't NRAs request any amendment, the expected final approval is possible by 2024.

3 Update on Tmin FCR LER – LLFD analysis

ENTSO-E, Luca Ortolano

Update on LLEFD TF analysis

Update on TF LLEFD analysis

Background information:

- TSOs performed an analyses of the 20 **worst LLEFDs** of 2017-2021, with a focus on their **root causes** (involved Blocks, trigger, causes of underperforming reserve activation).

TF LLEFD activities:

- The task is to go through the list of LLEFDs and to **highlight the mitigation actions** (either already existing or to be implemented) which would have had an impact on each event.
- The TF drafted a **report** on countermeasures against LLEFDs, describing how the system has improved in the meanwhile (or will improve in the future) in order to reduce the probability that similar events occur again or to reduce their severity (duration, amplitude).
- Based on the scheduled activities, the report will be sent to the NRAs by 31 March 2023. A **dedicated workshop with stakeholders**, as requested by NRAs, will be also arranged.

CBA data input and assumptions

CBA rerun activities – data input and assumptions

- The cost update analysis has been updated by the PT using **more recent input data.**
- In their RfA, the NRAs asked to **update the frequency input for the CBA rerun** to take into account the mitigation measures put in place by TSOs and described in the aforementioned report. In the informal meetings, the NRAs also stated **that the input data for CBA and Probabilistic FCR Dimensioning shall be the same.**
- About the **outages**, for the CBA rerun it is proposed to align the CBA methodology input to the probabilistic FCR dimensioning methodology.
- The next steps include the **approval by RG CE of the CBA data input and assumptions**, which will be included in the **public consultation** foreseen starting by the end of March 2024 for at least two months.
- A dedicated **workshop with Stakeholders** will be held during the consultation period, presumably in April.

Next steps

The next steps consists of:

- **approval by RG CE** of the report on countermeasures against LLEFDs and CBA data input and assumptions
- **Submission of the report** on countermeasures against LLEFDs to NRAs by 31 March.
- Launch of the **public consultation on the detailed data and assumptions** considered for running the CBA by 31 March.
- Organization of the **public workshop with Stakeholders** to present the main conclusions of the **report on countermeasures** against LLEFDs and the **detailed data and assumptions for CBA rerun,** presumably in April

4. CGM Implementation and CGMES Readiness

ENTSO-E, Habir Paré

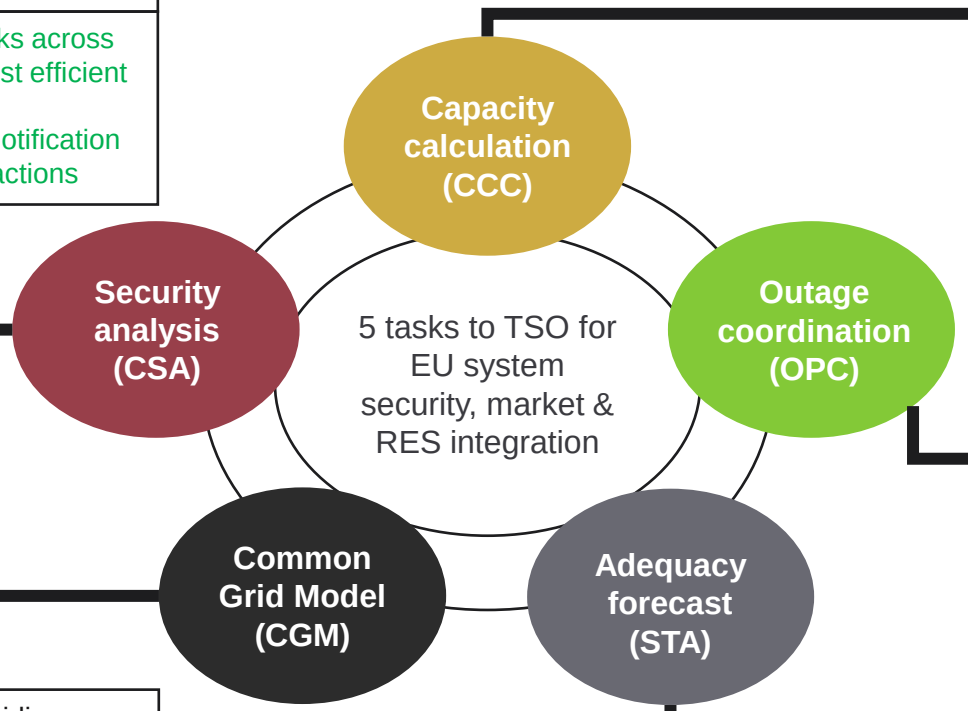
Why is regional coordination important?

Enabling reliable and efficient grid operations …

What: Identify risks to operational security in the vicinity of borders and identify efficient remedial actions as recommendations to affected TSOs

Benefits: Identification of operational security risks across all participating TSOs and identification of the most efficient remedial

- ***Risk identification***: operational security risk notification
- ***Efficiency***: identification of efficient remedial actions



What: calculation of available electricity transfer capacity across borders (either flow-based or net transfer capacity methodologies)

Benefits: Consideration of full grid =>

- ***Accuracy*:** more accurate calculation of available cross-border capacity
- ***Efficiency*:** more efficient utilisation of available capacity
- ***Responsiveness***: greater responsiveness to system conditions

What: single register of planned outages for grid assets and coordinated collaboration with respect to implications and options for outages

Benefits: Systematic and coordinated approach to outages, enabling:

- ***Efficiency***: optimised maintenance of outages across borders
- ***Transparency***: identification of issues caused by incompatible outages

What: Consistent pan-European grid model, providing an hourly view of grid assets (generation, consumption, transmission)

Benefits: single, consistent grid model across all affected TSO jurisdictions – a critical input to accurate outcomes from the other RCC tasks

- ***Consistency***: consistent, single, transparent grid models

What: forecast adequacy and remedial actions

Benefits: pan-EU view of adequacy and available remedial actions:

- ***Early warning***: reducing risks of serious grid disruption
- ***Consistency***: single view of adequacy for TSOs, avoiding bilateral engagement with other TSOs

2022 2023 2024

2024 Priority Focus Areas

- Priority technical/security improvements to facilitate robustness and compliance

Technical / Security

- Efficiency and performance improvements in management of Ruleset Library/Validation Module and identified amendments to rulesets to facilitate greater robustness in CGM build process

File/Model Validation

- Provision of changes to OPDE to facilitate DC model exchange/processing based on the approved/combined AC/DC Implementation Guide being developed via BP ST
- Facilitation of exchange of EQ-DIFF files via OPDE

Model exchange extension

- Various identified enhancements to QAS operation, to facilitate more efficient/effective process – and/or replacement of QAS with Kibana-based solution and inclusion of these enhancements

QAS Operation

- Provision of single source of Master Data (in a defined format) for use in all OPDE applications

BMA Masterdata

- Extension of the 2022 delivered OPDE Archive solution to facilitate ACER data provision requirements -> solution implementation in progress.

OPDE Archive

OPC

- Changes to OPDE to facilitate use of CGM in OPC processes and relevant data exchanges via OPDE

STA

- Changes to OPDE to facilitate use of CGM in STA processes and relevant data exchanges via OPDE

CSA

- Changes to OPDE to facilitate use of CGM in CSA processes and relevant data exchanges via OPDE

CCC

- Changes to OPDE to facilitate use of CGM in CCC processes (where applicable) and relevant data exchanges via OPDE

PEVF Operation

- Various identified enhancements to PEVF operation, to facilitate more efficient/effective process

W-1 CGM Build Process

- Changes to CGM/OPDE to facilitate W-1 CGM build process (for D-3 to D-7 with selected applicable timestamps)

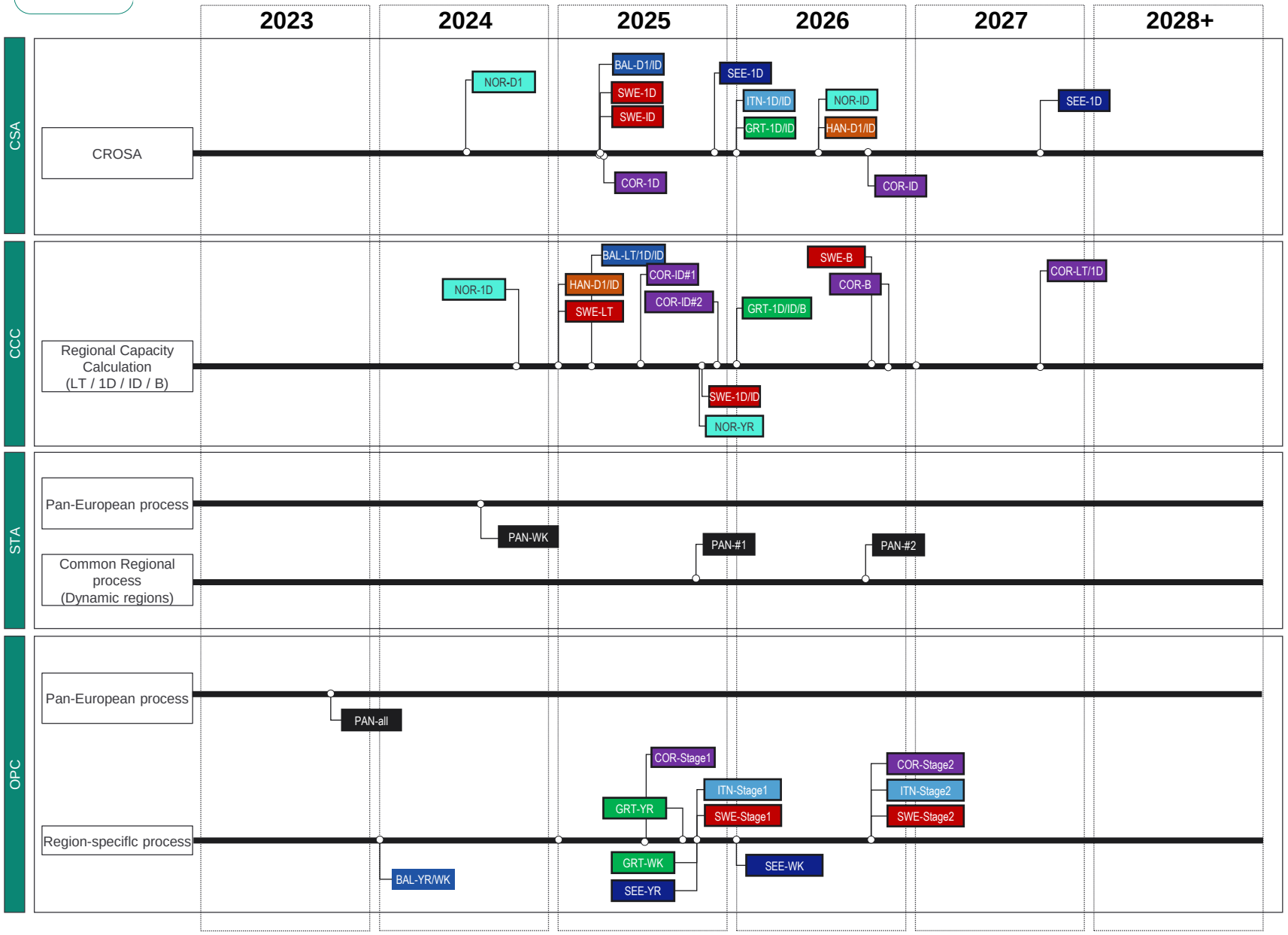
Central Authentication Solution

- Greater efficiency for all OPDE Users, enabling integrate of local authentication solutions with OPDM Client for user management (reducing process overheads)

Most recent update: 14 Nov 2023

Roadmap

SERVICE ROADMAP



REGIONS

BAL = Baltic
COR = Core
GRT = GRIT
HAN = Hansa
ITN = Italy North
NOR = Nordic
PAN = Pan-European/common delivery
SEE = South East Europe
SWE = South West Europe

TIMEFRAMES

LT = Long Term (YR, MO)
YR = Year-Ahead
WK = Week-Ahead (3D to 7D)
2D = Two days-ahead
1D = Day-Ahead
ID = Intraday

NB

* Core decision in 2024 whether go-live of DA CROSA will be postponed and introduced together with ID CROSA
* Nordic CSA based on Nordic CGM with a simplified version without RAO; full ROSC scope to be added later

Important Note:

This summary is based on the latest input available from November 2023 and may be an update to any version that is currently in review/awaiting written voting approval. Any such updates will be incorporated into the next version issued for review/approval.

Achievements and Challenges

Main achievements during the period (October 2023 - Feb 2024)

1. **TSO-RCCs CGM process participation survey** : main blockers have been identified and work is on-going on defining the associated actions.
2. **RCC weekly calls and RCC debugging sessions**: Regular troubleshooting performed by RCCs relating to IGMs inclusion in the CGM
3. **Drafting of the OPDE release process:** to bring clarity on the OPDE releases.

Main challenges identified

1. **Ensuring process timing alignment :** between CGM Building process and other Operational processes (OPC, STA, CCC, CSA)
2. **Ensuring operational quality :** of the IGMs and CGMs are usable for other operational process

5. Update on Wind Eclipse

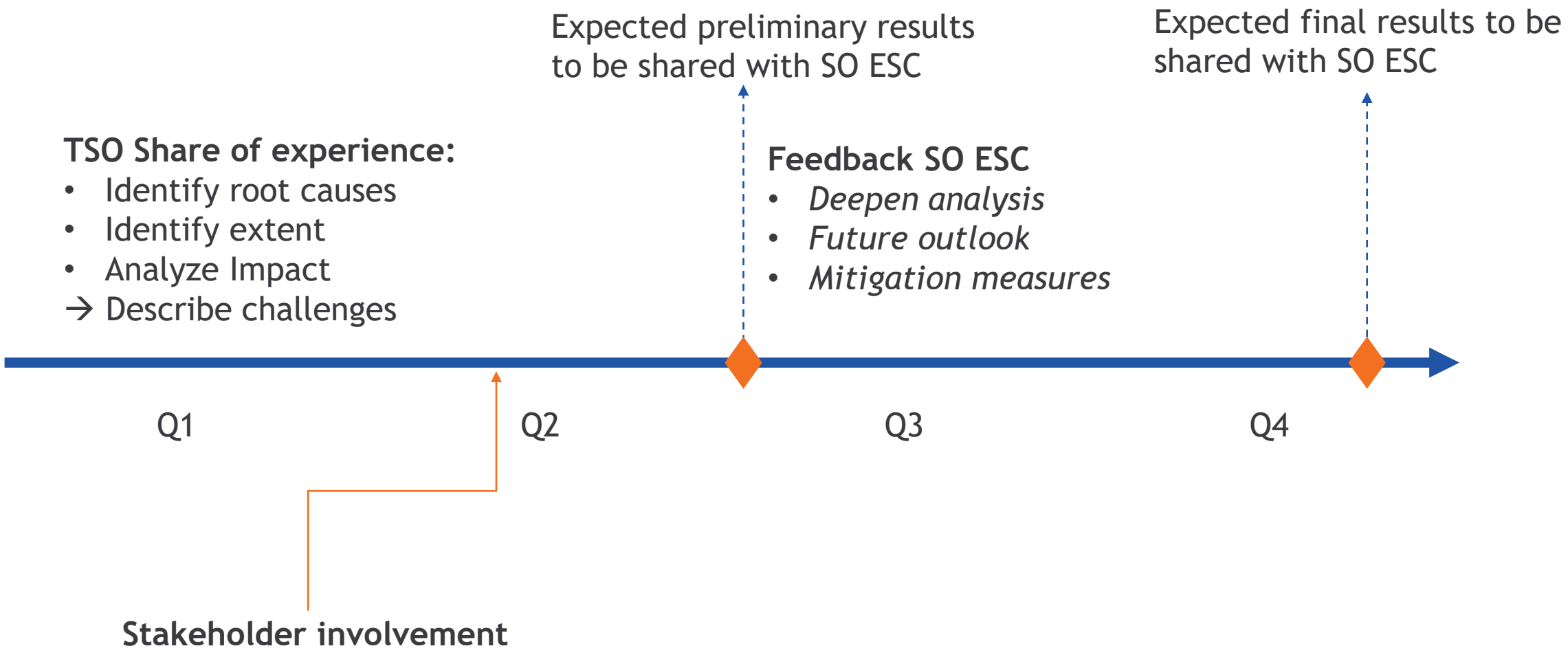
ENTSO-E, Hanna Ljungberg

Frequency Impact of Sudden and Large Swings of vRES infeed.

- Focus on determining root causes, extent, impact.
- Initial focus: countries with occurrence of negative prices and high vRES penetration
- General observabilities:
  - Triggered by negative prices (limited in terms of noise, animal protection)
  - Low observability on behavior of vRES installed at low voltages
  - Forecast/estimation challenges of TSOs

- Next steps
  - Continue collecting information on TSO experience
  - Complement with data analysis to determine impact.

Indicative timeline



6. Update on the implementation actions at pan-EU level

ENTSO-E, Cherry Yuen

Pan-European or regional deliverables 2023: SOGL/NCER

CSAm (Article 44.5)

Secure data collection and validation platform being set up for the PRA (Probabilistic Risk Assessment) methodology expected in 2027

- Biennial report published in December 2023 - link

Operational Agreements

Ukraine/Moldova:

Emergency Energy Supply MLA concluded

Impact on Continental Europe Synchronous Area after synchronisation is closely monitored and reported regularly to ACER and NRAs

Ukrenergo: SAFA has officially replaced the previous interconnection agreement.