38th Grid Connection European Stakeholder Committee (GC ESC)

5 June 2025, 10:00-15:30

Location: Thon Hotel, Rue de la Loi 75, Brussels, Belgium

Minutes

Participants		
Uros Gabrijel	ACER	Chairperson
Georgios Antonopoulos	ACER	Observer
Domen Kodric	ACER	Observer
Adriana Pop	ACEA	Member
Leonhard Bartsch	ACEA	Member Substitute
Marco Pasqua di Bisceglie	ARERA	Member
Rose Kuhn	BNetzA	Member Substitute
Thomas Schaupp	CENELEC	Member
Alberto Cerretti	CENELEC	Member
Julian Treichel	CharIN	Member
Guilherme Crispim Ferreira	CharIN	Member
Alexandra Tudoroiu-Lakavičė	COGEN	Member
Gunnar Kaestle	COGEN	Member
Florentien Benedict	DSO Entity	Member
Tony Hearne	DSO Entity	Member
Serdar Bolat	DSO Entity	Member
Andrea Hamzova	DSO Entity	Member Substitute
Jacopo Tosoni	EASE	Member Substitute
Rainer Fronius	EDF	Member
Santiago Gallego Amores	E.DSO	Member
Bernhard Schowe-von der Brelie	EFAC	Member
Freddy Alcazar	EUGINE	Member
Mélanie Auvray	EHPA	Member
Mario Ndreko	ENTSO-E	Member
Marco Zaccaria	ENTSO-E	Member
Flemming Brinch Nielsen	ENTSO-E	Member
Juan Giner	ENTSO-E	Member
Richárd Balog	ENTSO-E	Invited speaker
Lazaros Exizidis	ENTSO-E	Member Substitute
Konstantinos Vythoulkas	ENTSO-E	Guest
Sergio Martinez Villanueva	ENTSO-E	Member
Klaus Kaschnitz	ENTSO-E	Invited speaker
Emma Menegatti	EUI/FSoR	Observer
Luca Guenzi	EU Turbines	Member
Steffen Eckstein	EU Turbines	Member Substitute

Herve Biellman	EU Turbines	Member Substitute
Assiet Aren	EUGINE	Member
Thierry Vinas	EURELECTRIC	Member
Elaine O'Connell	European Commission	Member
Pavla Erhartova	Europex	Member
Mike Kay	GEODE	Member
Isabel Alcalde	Hydrogen Europe	Member
Michael van Bossuyt	IFIEC	Member
Martin Stoessl	Orgalim	Member
Catarina Augusto	Solar Power Europe	Member Substitute
Thorsten Buelo	Solar Power Europe	Member
Klaus Oberhauser	Vgbe energy e. V.	Member
Roman Bertle	Vgbe energy e. V.	Member Substitute
Vidushi Dembi	WindEurope	Member

1. Opening

1.1. Review of the agenda

The Chair (Uros Gabrijel) opens the meeting and asked for comments on the agenda.

- Klaus Oberhauser (VGB Powertech) asks to include a topic under the AOB regarding the synchronization of the Baltic region with the Continental Europe system; the request is approved.
- The Chair suggests discussing under the AOB the December GC ESC meeting venue.

The agenda is updated accordingly and approved.

1.2. Approval of minutes from 19/03/2025 meeting

The minutes of the previous meeting are approved and can be accessed here.

1.3. Follow-up actions from previous meeting

Marco Zaccaria (ENTSO-E) confirms that the members' list has been updated and uploaded on the website (link), with all associations responding except ESTELA; the Chair suggested that ACER will follow up with representatives of DG ENER, as ESTELA may have changed its name, and they could assist in contacting interested parties.

The group discussed and agreed on a new action tracker format that integrates action items into the meeting minutes; the current Excel file reporting the past actions will be then removed from the website. The participants discuss the logistics of uploading the minutes and agree to make them available in both folders (current meeting folder and the previous meeting folder) for ease of access.

The following action points still need to be addressed:

- **Action –** ACER- to follow up with ESTELA- for name change
- **Action – FMI Standards:** To open the discussion again later in 2026
- **Action – Informal Power-to-Gas discussion team:** The Chair to re-open the P2G discussion stream to discuss new topics

All other previous actions are completed.

The action tracker with the ongoing tasks is available on the last page of these minutes and will be updated at each GC ESC meeting.

2. European Commission – Updates on the Grids Connections Network Codes process

Elaine O'Connell (European Commission) informs participants that the EC is dealing with several workstreams; the amendment of the CNC is considered very important, but the adoption can take place only after the above-mentioned streams are completed. Therefore, due to the significant workload and lack of resources currently faced by the Commission's team, the work on NC RfG 2.0 and NC DC 2.0 will be postponed. The adoption of the amended CNC is not likely to take place in 2025. Timelines for new proposals and consultations remain uncertain, with the process likely to resume in 2026.

In response, stakeholders from CENELEC, COGEN Europe, ENTSO-E, EU DSO Entity, EUGINE, Eurelectric, EUTurbines, IFIEC, SolarPower Europe, and others express concerns about the potential negative impacts of this de-prioritisation, particularly regarding harmonisation across Member States and the development of consistent national requirements. Stakeholders also emphasise the importance of this process and stress the need to escalate discussions on this topic. It is also mentioned from stakeholders that it may be more effective to focus on the most essential requirements at the moment to ensure progress.

Elaine O'Connell thanks all the participants, acknowledging the received inputs. She explains that she and her colleagues understand all the points raised and would consider them during the Commission's prioritization process. However, she also highlights that the available resources are currently engaged with tasks subject to legislative deadlines.

Mario Ndreko (ENTSO-E) asks whether the de-prioritisation means that work will resume only with the NC RfG and whether the same approach will be followed for the NC DC. Elaine O'Connell emphasizes that a restart is not expected before the end of the year, potentially in 2026. Concerns are raised by ENTSO-E remarking that some Member States have already begun implementing drafts of CNC 2.0 requirements, regarding for instance the NC DC. It is highlighted that, reasonably within a year, several Member States may have updated national requirements in place, leading to significant misalignment if the harmonised framework is delayed further. Clarification is requested on how this situation will be addressed and its broader impact. In response, it is acknowledged by the DG ENER representatives that the point is fully understood. Due to necessary prioritisation, certain work streams have been postponed, but work will resume as soon as possible. No concrete deadlines are currently available.

Flemming Brinch Nielsen (ENTSO-E) asks for clarification on the expected duration of the upcoming work, assuming that activities resume in early 2026. An indicative timeline for the adoption of the new revision is also requested. In addition, he asks whether, when setting priorities, a formal risk analysis is conducted to support decisions, or whether such directions are determined at a higher level. In response, it is confirmed that prioritisation is necessary given current constraints, and further information on the detailed timeline and risk assessment approach will be provided as work progresses.

Florentien Benedict (EU DSO Entity) mentions that the delay has a significant impact. While they understand workloads and priorities, it is necessary to formally respond to the above-mentioned statements, according to the responsibility to represent the DSOs' interests. Without a harmonised EU framework (especially in the absence of RfG 2.0), DSOs may start defining their own requirements at national level, leading to fragmentation. This already creates difficulties for manufacturers and certifying bodies. Despite the intention to reduce costs, delays in the CNC adoption are likely to increase them, particularly due to postponed integration of e.g., V2G, and heat pump, and uncertainty in grid planning. DSOs are concerned that renewable connections will proceed without updated technical requirements, creating long-term risks. These are shared concerns for the DSOs and potentially the European Commission.

Juan Giner (ENTSO-E) explains that their current workload heavily depends on implementing the NC RfG and DC codes. They are progressing with related stakeholder technical groups and drafting the IGDs, which must follow after CNCs implementation. Therefore, he asks whether there is a committed timeline for the RfG publication. It is confirmed that there is no committed timeline.

Thomas Schaupp (CENELEC) agrees with the previous comments and stresses two points: massive renewable and battery connections are happening now without harmonised RfG 2.0 requirements, leading to inconsistent national requirements and likely retrofits later. Also, recent grid events (like in Spain) might be linked to inadequate connection conditions — issues that RfG 2.0 could address, yet valuable time keeps being lost.

Alberto Cerretti (CENELEC) agrees with Thomas' comment adding that as connections are continuously progressing, they cannot be delayed until RfG 2.0 or DCC 2.0 are finalised.

Flemming Brinch Nielsen (ENTSO-E) supports the previous points and stresses that new requirements are based on current system needs. Rapid changes in renewable and storage connections risk making them obsolete before they take effect. This, along with non-harmonised national requirements, could cause major problems.

The Chair inquires participants whether there has been any contact with Member State ministries to raise awareness of these known risks, since this is ultimately a political issue.

Mario Ndreko (ENTSO-E) confirms that the issue has been internally discussed within ENTSO-E and highlights that TSOs in different member states may develop requirements if system security risks are observed. With high renewable and storage penetration, waiting longer to deploy new capabilities would create security risks. Many TSOs are already working with ministries and setting national requirements under their legal obligations. It is remarked that the topic of delayed adoption of CNC 2.0 must be escalated and should be addressed at a higher level, beyond the working groups and the GC ESC framework. Flemming Brinch Nielsen (ENTSO-E) confirms that in Denmark the DUR and DEA had been informed about ENTSO-E concerns. Thierry Vinas (EURELECTRIC) remarks that EDF has started discussing already with the French authority, also considering the French peculiar mix including several rotating machines; further delay is considered very impactful, given that electrification needs clear requirements in place.

Assiet Aren (EUGINE) agrees on the serious impact of any further delays, especially due to non-harmonised requirements. He suggests classifying requirements by urgency: prioritise harmonising critical aspects (like FRT and RoCoF) at EU level, while leaving less critical ones to national handling, to avoid blocking progress on key issues.

Flemming Brinch Nielsen (ENTSO-E), reacting to a comment shared by Gunnar Kaestle (COGEN) on standards, disagrees on the potential approach of substituting the CNC with relevant standards. Indeed, the CNC are considered key to secure the needs and requirements from SA system point of view. Gunnar Kaestle (COGEN) clarifies that his comment has been referred to an example similar to the one reported in the following link, which combines the binding nature of a legal document but provides also the overall technical direction, while further details are developed and maintained by the round table of standardisation. The aim would be achieving maintenance of the content via an easier way than via a pan-European legislative process.

Mario Ndreko (ENTSO-E) remarks that ensuring a level playing field is very important, particularly concerning the NC DC. A huge problem could be related to different costs when countries set different requirements for electrification projects, as in the case of power-to-gas demand facilities, battery energy storage systems, EVs and Heat Pumps.

Catarina Augusto (Solar Power Europe) asks on the status of the inertia project, noting that recent discussions have increasingly focused on flexibility. She inquires whether there are defined next steps for the inertia report, whether related activities will continue this year, or if the topic will be postponed while other files are closed. In response, it is confirmed by DG ENER that a workshop on inertia was held with broad stakeholder participation. Consultants have revised the draft report based on feedback and are now finalising it. Publication is expected in the coming weeks or months, and the report will be shared with the committee once available. The report is intended as an informative contribution to the broader debate on inertia and future system services, without establishing a dedicated work programme at this stage.

The discussion ends with a final remark from Elaine O'Connell (European Commission): thanking stakeholders for sharing comments, she highlights that feedback on the potential higher costs across EU linked to the de-prioritization of the CNC adoption will be considered.

3. EU DSO Entity updates

3.1. Supporting Grid Forming Document and EU DSO Entity Updates

Florentien Benedict (EU DSO Entity) presents the work of DSO Entity's Expert Group on the existing network codes in the last three months. She informs participants about three key topics, consisting of grid-forming capability, EG on Certification EV/EVSE and HPs, and DSO Entity's view on the expected timeline for the Grid Connections Network Codes revision adoption

EU DSO Entity has prepared a supporting document: "Advice for DSOs to guide DSOs in contributing to the national grid forming roadmaps". It provides risk assessment advice for integrating grid-forming power park modules (GFC PPMs) into distribution networks.

The Expert Group on Certification of EVs, EVSE, and Heat Pumps is chaired by Mike Kay (EU DSO Entity), with Erno Leväniemi (EU DSO Entity) and Florentien Benedict as co-chairs, and includes 55 experts. The draft RfG 2.0 introduces mandatory certification for vehicle-to-grid (V2G) EVs and their associated supply equipment. Similarly, NC DC 2.0 mandates certification for V1G EVs, related EVSE, and heat pumps. As a note, the presentation and updates on the Expert Group progress from Mike Kay is on topic 5.

Additionally, Florentien emphasizes the urgency of adopting the revised NC RfG 2.0 and NC DC 2.0 into EU law. With the rapid growth of technologies such as energy storage, EVs, and heat pumps, the absence of harmonized EU legislation risks leaving member states and DSOs to develop their own, potentially inconsistent, rule sets. The DSO Entity has submitted a letter (dated 17 January 2025) requesting the Commission's support in avoiding further delays to the entry into force of the CNC 2.0, mentioning that without timely EU regulation, national or local adaptations will undermine harmonization.

Tony Hearne (EU DSO Entity) continues the updates focusing on Grid Forming Capabilities. During the last ESC meeting, comments from IFIEC (Michael Van Bossuyt) and SolarPower Europe (Catarina Augusto) were addressed, and the proposed changes have been communicated. A bilateral meeting with ENTSO-E on 5 May 2025 led to productive discussions, with the EU DSO Entity incorporating most of ENTSO-E's feedback and sharing the updated text. This version is now considered the final first version, taking into account the timing of RfG 2.0 entry into force. The EU DSO Entity also raises the discussion held in the Technical Group on Grid Forming Capability about distribution anti-islanding protection on 24 April 2025. Following expert input, active anti-islanding detection methods were considered ineffective for distribution networks. Additionally, the topic of hosting both GFM (Grid Forming) and GFL (Grid Following) on a single inverter was raised by Alberto Cerretti (CENELEC). While ENTSO-E expressed limited interest in including this in the main report, the DSO Entity proposed referencing it in an annex outlining potential future implications.

Alberto Cerretti (CENELEC) notes that work on the national roadmap in Italy has started with a kick-off meeting. It was mentioned that the CPPM Final Report FG Draft, discussed earlier and considered very useful for DSOs, is currently missing. They are also awaiting the GFC final documents expected around July. The RfG process has already begun, which creates challenges on how to proceed in this context.

The presentation on EU DSO Entity updates is accessible here.

Update on Grid Forming Capabilities can be accessed here.

4. ENTSO-E

4.1. Iberian Peninsula black-out investigation

Richárd Balog (ENTSO-E) provides an update on the investigation into a blackout incident affecting the Iberian Peninsula on 28 April 2025. A chronology of the events leading to the collapse of the Iberian electricity system and the subsequent restoration process is shared. The event began with the disconnection of about 2.2 GW of generation in southwest Spain, which was subsequently followed by voltage and frequency fluctuations, the full activation of LFDD (Low Frequency Demand Disconnection) within three seconds, and ultimately the grid separation from France. Despite the clarity on the sequence, it is noted that data collection is still ongoing, particularly from the generation units (both transmission and distribution connected) that were tripped in southwest Spain. As a result, the root cause of the initial 2.2 GW generation loss is still under investigation.

Richárd Balog (ENTSO-E) emphasizes the importance of high-frequency, time-synchronized and good quality data for accurate assessments and the need for collaboration among stakeholders to also improve future incident responses. Stakeholders express some concerns regarding the fact that the data from the relevant generation has not yet been collected and analysed. Richárd Balog (ENTSO-E) remarks that, based on the current methodology, ENTSO-E is firstly promoting data collection from the involved TSOs due to the mandate of all relevant parties to provide the data; if not possible, alternative solutions will be promoted. However, at this stage, ENTSO-E is confident to be able to collect all the needed data to complete the incident assessment.

Catarina Augusto (SolarPower Europe) asks about the dates expected for the publication of the first and second version of the investigation reports. Richárd Balog (ENTSO-E) remarks that there are no fixed deadlines yet, but estimates suggest the first report may be available by the end of summer or early September. By statute, the initial report on the incident must be completed within six months and will contain purely factual information. A final report, including a comprehensive analysis of the incident and recommendations, is expected 2 to 3 months thereafter.

In relation to the restoration and how it is being investigated, Tony Hearne (EU DSO Entity) asks to what extend DSOs were involved. Richárd Balog (ENTSO-E) mentions that DSOs had not been involved yet. Moreover, TSOs are the key entities responsible for escalation and representing the data providers.

Thomas Schaupp (CENELEC) inquired about access to the data from the converters. The response is that there is hope to receive this data soon given the key role of this data in the investigation. The main challenge is not the lack of data but accessing this data and the consequent thorough assessment and analysis of the collected information.

Michael van Bossuyt (IFIEC) comments on the expenses related to blackouts, remarking that cost should not raise to introduce further protections. Information on the damage and the estimation of the total costs sustained by the industry would be very relevant to be included in the report, as well as having visibility on how LFDD was performed. Richárd Balog (ENTSO-E) replies that the root causes will be part of the ENTSO-E factual report and LFDD will be part of the report; other aspects might not be part of the report and will be considered if relevant.

Klaus Oberhauser (VGB Powertech) remarks the importance of stakeholders' engagement in such investigations, also suggesting organizing a dedicated workshop. Richárd Balog (ENTSO-E) replies that the issue is under discussion aiming at assessing the possibility of inviting stakeholders for sharing relevant feedback.

Alberto Cerretti (CENELEC) highlights the practical challenges of gathering and analysing protection data. It was noted that, for effective analysis, all protection information needs to be consolidated, including system protection, internal plant protection, and inverter protection, all synchronised together. He explains that, in the past, data was recorded by a single device, providing synchronised information. Furthermore, Alberto cautions against drawing conclusions or evaluating costs without understanding the causes of frequency or voltage issues. He suggests waiting for the final analysis to ensure statements are based on facts rather than opinions.

Marco Pasqua di Bisceglie (ARERA) remarks that a regulatory framework to collect data is already in place via the SO GL real time data collection guideline; the main challenge is implementing it, also considering potential derogations to the regulation.

Uros Gabrijel (ACER) refers back to Tony's intervention at the beginning of the meeting and reiterated Santiago Gallego's (E.DSO) offer made yesterday during the SO discussions. He notes that Santiago, given the involvement of distribution system operators in the incident, offered the support to the expert panel, including any input or assistance that may be required.

The presentation on the Iberian Peninsula black-out investigation can be accessed here.

5. *ESC EG on Certification on EVs/HPs updates*

Mike Kay (GEODE) provides an update on EG on Certification on EVs and HPs. The EG has met three times since the last ESC meeting, with the latest meeting on 27 May. The EV/EVSE group focuses on resolving remaining standards issues to ensure interoperability, relying mainly on a modified EN50549-10 for NC RfG 2.0 compliance. Meanwhile, the Heat Pumps group concentrates on testing requirements for NC DC 2.0 due to a lack of existing standards. Following discussions with the Commission in March 2025 the EV/EVSE workstream drafted a technical annex for NC RfG 2.0 in April, identifying issues requiring further guidance from the European Commission. These concerns were formalized in a letter, including shared points from the Heat Pumps workstream.

On 29 April 2025, a letter was sent to the network codes and heat pump experts in DG ENER, with ACER copied. The letter addresses:

- The functional distinction between EV and EVSE;
- Progress on product standards for EV/EVSE and heat pumps;
- Interoperability requirements for EV/EVSE;
- Certification pathways, including NC 2.0 drafting, CE marking, and vehicle homologation;
- The scope of certification;
- Specific recommendations related to these topics.

A key issue concerns the ownership of certification schemes for EVs and heat pumps. The EG proposed that these schemes could be managed by the GC ESC. The stakeholders raised no immediate strong or principled objections but were invited to consider the broader implications.

Mike Kay (GEODE) remarks that DG ENER officers explained that, from a legal perspective, including a technical annex to a regulation would be a common approach already adopted.

It was mentioned that there are some policy issues that can only be resolved with input from the EC. Elaine O'Connell (European Commission) agreed to follow up on this topic after the meeting.

The full presentation can be found here.

Action – Mike Kay to follow up with the Commission in discussing certification policy issues.

6. *ACEA – Considerations in the Requirements for Generators and Demand Connection Network Codes on regulations revision*

Adriana Pop (ACEA) presents ACEA's considerations of the NC RfG and NC DC revisions. She explains that the automotive sector wishes to build upon the valuable work already being conducted by Certification Expert Group. ACEA's goal is to bring in the automotive industry's perspective, especially as EVs become integral components of the energy system, not just a transport means. The integration of EVs into the grid raises crucial questions about how to shape this new era of mobility in a sustainable and future-proof way.

In mid-May, the automotive sector sent a joint letter to DG Energy and DG GROW regarding the ongoing revisions of the NC RfG and NC DC. While ACEA is engaged in productive dialogue with DG Energy, they believe DG GROW's involvement is essential, particularly for certification discussions, given their experience with vehicle type approval and certification processes.

A major concern for the automotive industry is the current lack of clarity around certification for EVs providing grid services. ACEA calls for clarity in questions such as who will certify these vehicles, how their compliance will be verified, and how such certificates will be recognised across Europe. Concerns also arise from the fact that EVs are mobile devices connecting to a stationary energy system, introducing a new level of regulatory complexity. Therefore, manufacturers need legislative support to address this gap and to ensure vehicles can be brought to market reliably.

Adriana Pop explains that as developing new vehicle platform takes years, ACEA welcomes a three-year transition period following the publication of harmonised EU standards before mandatory compliance is required. It is essential for manufacturers to plan, invest, and innovate. In consequence, ACEA urges the European Commission to integrate EV grid-relevant certification into the vehicle type approval framework, ensure stability and long-term planning security.

Certified EVs must be able to connect, charge, and disconnect reliably at any compatible charging station across the EU—not only today but throughout their 15–20-year lifetime. Interoperability is essential to protect the integrity of the single market and consumer trust. Diverging national rules, especially for AC-connected bidirectional charging, risk fragmenting the market and undermining the free movement of EVs.

To fully unlock the potential of V2G technology, automotive industry needs harmonised technical requirements and a common EU-wide certification procedure. Legislation must not only set ambitious goals, but it must also define the clear path to reach them, based on the expertise of those at the table.

Elaine O'Connell (European Commission) acknowledged the comments and confirmed that the Commission is in close contact with colleagues from DG GROW on the matter. She acknowledged the receipt of the letter and confirmed that, at working level, there is full awareness of the issues raised and expressed appreciation for the comments shared. She assured the participants that the points will be brought back internally and duly considered, emphasizing that the ongoing coordination with DG GROW should serve as a point of reassurance.

Thomas Schaupp (CENELEC) provides a short remark in his capacity as a long-standing expert on certification and standardisation within the group. He expresses concern that there may be a lack of clarity among some participants regarding the definition of an EU harmonised standard. He explains that, despite the term suggesting a general standard that is harmonised, an EU harmonised standard is, in fact, one that has been developed and published by CEN or CENELEC, and subsequently assessed by a harmonised standards consultant of the European Commission. Such a standard is then formally cited in the Official Journal of the EU as being in conformity with specific requirements of a relevant directive and serves as a technical specification to support compliance with that directive or regulation.

Leonhard Bartsch (ACEA) clarifies that, while the automotive industry supports generator requirements under the NC RfG, there is uncertainty due to the lack of necessary standards for certain aspects, especially where DSOs might impose vehicle-level requirements. To address this, the technical annex is being developed to clarify and bridge these gaps, outlining how solutions could be implemented in practice. He emphasizes that this effort is not intended to delay progress but to ensure feasible implementation, as car manufacturers are concerned about potential local restrictions on vehicle charging that could confuse customers and complicate compliance. The annex aims to facilitate a faster rollout of generator requirements while recognizing that further discussion is still needed.

Mario Ndreko (ENTSO-E) suggests that since the original NC RfG was developed in 2016, it may be beneficial for the Commission's legal team to adopt a modular approach to the code. He proposes that amendments could be decoupled and implemented sequentially for specific categories (e.g., heat pumps, bidirectional chargers), allowing updates to happen more flexibly and efficiently. This approach could reduce time and complexity by allowing targeted updates without revising the entire code at once.

The slides are accessible at the following link here.

7. EU Turbines – Position on the Draft Report Assessment of Policy option for Securing Inertia presented on the 6th May 2025.

Luca Guenzi (EUTurbines) delivers a feedback presentation on the draft Assessment of Policy option for Securing Inertia study. He stresses that the draft remains under development. He acknowledges the high informational density of the draft document, describing it as comprehensive and technically rich. His presentation aims to provide a concise summary and focuses primarily on a few technical aspects, including: Synchronous generators, RoCoF stability and design considerations, Frequency limits (upper and lower), Global vs. local RoCoF requirements, and RoCoF withstand capabilities.

One of his primary observations concerns a statement in the draft suggesting that all synchronous condensers would be connected via GFC, which he suspected may be a simple drafting error. He clarifies that synchronous generators are not only rotating machines but include associated masses across the shaft line. While acknowledging the expected reduction in synchronous generation due to decarbonisation, he emphasises that technologies such as hydro units and renewable gas-fed systems would likely remain operational, hence synchronous machines are not expected to disappear.

Another key point raised was the lack of consideration given to how technological limitations affect system evolution. He encourages further stakeholder discussion on this issue, including regional variations in RoCoF behaviour. The study's indication of differing regional RoCoF expectations should take into account topology and local system characteristics.

Luca Guenzi questions the treatment of frequency thresholds in the draft, highlighting that the indicated values of 47.5 Hz to 51.5 Hz are already tight. However, the proposed 52.5 Hz (for 10 seconds) threshold is, in his view, excessive and exceeds the bounds of what can be reasonably considered a transient condition. He recommends adhering to current frequency limit frameworks.

He also addresses the issue of inertia allocation and the role of operational solutions, such as defence plans, in managing high RoCoF zones. He cautions against proposals to raise the global RoCoF target (e.g., to 1.5 Hz/s), noting that while it may appear to reduce inertia requirements, such a move could lead to problematic multipliers at the local level.

In closing, he summarises the following key messages:

1. The potential mistake regarding synchronous condensers and GFC should be clarified.
2. RoCoF requirements must consider technology limitations and avoid setting unattainable targets.
3. Frequency limits should align with realistic operational expectations.
4. Prioritisation should start locally and build upwards ("bottom-up" rather than "top-down").
5. The concept of a global Hmin (i.e. inertia constant), as described in the draft, may not be a feasible general approach.

Flemming Brinch Nielsen (ENTSO-E) expresses doubts about the idea and the statement of connecting condenser through power electronics. He comments on the frequency limits, questioning how significant the current stricter limits are, given that they used to be wider (47–53 Hz) before the introduction of recent codes. He notes that a small, temporary increase in the upper limit was added (for 10 seconds) to prevent unintended disconnections during frequency swings, but overall, he finds the concern over frequency limits somewhat strange, given the wider operational range used not long ago.

Full slides can be accessed here.

8. SolarPower Europe – View on Policy Options for Securing Inertia with regard to PV and Storage

Thorsten Buelo (SolarPower Europe: SPE) presents SPE's view on the draft Assessment of Policy option for Securing Inertia study with regards to PV and Storage. He emphasises that, while some inverter-based technologies are still developing, others already have a high technology readiness level, particularly in areas like grid-forming batteries and grid-supporting PV systems. These technologies can complement each other: batteries provide stability and power reserves, while PV systems focus on efficient electricity generation and can also support services like voltage control and frequency damping.

SolarPower Europe advocates for better recognition of these capabilities in the report and supported a harmonized European approach. Specifically, they recommend that grid-forming battery systems and grid-supporting PV systems are deployed complementarily: batteries providing system stability and reserves, and PV systems delivering efficient generation alongside voltage and frequency services.

In terms of policy recommendations, SolarPower Europe calls for:

- Re-engagement with stakeholders to reassess Technology Readiness Level evaluations.

- Clear classification and distinction of technology readiness levels among grid-forming technologies, reflecting their varying levels of maturity and contribution to system services.
- Consideration of technology-agnostic technology readiness level frameworks, such as those developed by ARENA, to include global best practices beyond the European grid.

A point raised by Vidushi Dembi (Wind Europe) is the overly simplistic treatment of all inverter-based resources as having the same technology readiness level, which is inaccurate. Variability exists across technologies and even among wind turbine types. Further technical challenges, such as the potential wear and tear on drivetrain components from grid-forming operations, are also acknowledged.

A market-based approach to support deployment is also highlighted by Thorsten Buelo (SolarPower Europe). Gunnar Kaestle (COGEN) shows concerns about the terminology suggests 'converter' as a more accurate term than 'inverter' for bidirectional power electronic devices. Finally, Thorsten also highlights that certain systems, particularly HVDC, are generally TSO-owned and not market-linked, except in rare third-party ownership cases. Therefore, it is suggested to exclude HVDC from the inertia-related market discussion and focus instead on PPMS and ESM technologies.

The slides are accessible here.

9. AOB

Under the AOB, an inquiry is raised by Klaus Oberhauser (VGB Powertech) regarding the synchronization of the Baltic region with the Continental Europe system, which occurred in February 2025. Specifically, concerns are noted about discrepancies in voltage values listed in RfG 1.0 and RfG 2.0 for different synchronous areas, including the Baltic region. ENTSO-E members offer to investigate the issue and report back.

The slides are accessible here.

Action – ENTSO-E to investigate synchronization of the Baltic region with the Continental Europe system and report back during the next meeting on the requirements that currently apply to the Baltic region.

Thomas Schaupp (CENELEC) highlights that there is no publicly available information on ENTSO-E website regarding the Expert Group on Certification on Electric Vehicles and Heat Pumps.

Action – Share the ToR and main deliverables from the WG on Certification within ESC GC

Finally, the Chair opens the discussion regarding the December 2025 meeting format, following a request from the EU DSO Entity to hold a physical gathering. It was agreed that the December meeting will be further discussed in the next ESC in Ljubljana, at ACER premises.

Annex: Action Tracker

#	Raised on	Topic	Description
1	GC ESC 05/06/2025	ACER- follow-up on the EG participants	ACER- to follow up with ESTELA- for name change
2	GC ESC 19/03/2025	FMI standards	To open the discussion again later in 2026
3	GC ESC 19/03/2025	Informal Power-to-Gas Meetings	The Chair to re-open the P2G discussion stream to discuss new
4	GC ESC 05/06/2025	Certification of heat pumps and electric vehicles	Discuss policy implications with appropriate Commission perso
5	GC ESC 05/06/2025	Baltic region synchronization with the Continental Europe system	To investigate synchronization of Baltic region and report back next meeting on the requirements that currently apply to the B region
6	GC ESC 05/06/2025	WG on Certification within ESC GC	Arrange to publish the EG ToR in the EG area on the ESC web pa