

82nd System Development Committee Meeting

Date: 1 July 2021 Time: 09.00 – 13.00h Place: Web-conference:

Participants

Chairman

| 1. Ampriori | 1. | Amprion | Germany | |
|-------------|----|---------|---------|--|
|-------------|----|---------|---------|--|

Members

| Amprion | Germany |
|-------------------------|---|
| APG | Austria |
| AS Augstsprieguma tïkls | Latvia |
| Ceps | Czech Republic |
| Creos Luxembourg | Luxembourg |
| Elia System Operator | Belgium |
| Energinet | Denmark |
| Fingrid | Finland |
| HOPS | Croatia |
| MEPSO | Republic of North |
| | Macedonia |
| NOS BiH | Bosnia&Herzegovina |
| RTE | France |
| Statnett | Norway |
| TenneT TSO BV | Netherlands |
| Transelectrica | Romania |
| TransnetBW | Germany |
| VUEN | Austria |
| | APG AS Augstsprieguma tikls Ceps Creos Luxembourg Elia System Operator Energinet Fingrid HOPS MEPSO NOS BiH RTE Statnett TenneT TSO BV TransnetBW |

Subsitutes

| 19. | 50Hertz Transmission | Germany |
|-----|----------------------|-------------|
| 20. | Elering | Estonia |
| 21. | EMS | Serbia |
| 22. | IPTO | Greece |
| 23. | Litgrid | Lithuania |
| 24. | Mavir | Hungary |
| 25. | PSE | Poland |
| 26. | REE | Spain |
| 27. | REN | Portugal |
| 28. | Swissgrid | Switzerland |
| 29. | TenneT TSO GmbH | Germany |
| 30. | Terna | Italy |



Conveners RGs

| 1. | RG North Sea | Netherlands |
|----|------------------------------|----------------|
| 2. | RG Baltic Sea | Germany |
| 3. | RG Continental South East | Serbia |
| 4. | RG Continental South West | France |
| 5. | RG Continental Central South | Italy |
| 6. | RG Continental Central East | Czech Republic |

Conveners WGs and SGs

| 1. | WG Scenario Building | France |
|----|--|-------------|
| 2. | SG Scenario Building | Netherlands |
| 3. | StG Connection Network Codes | Germany |
| 4. | Offshore Development Core Group (ODCG) | Denmark |

Excused

| 1. | CGES | Montenegro |
|-----|--|----------------|
| 2. | Eirgrid | Ireland |
| 3. | Eles | Slovenia |
| 4. | ESO-EAD | Bulgaria |
| 5. | Landsnet | Iceland |
| 6. | National Grid ESO | United Kingdom |
| 7. | OST-Operatori i Sistemit te Transmetimit | Albania |
| 8. | Scottish Hydro Electric Transmission | United Kingdom |
| 9. | Seps | Slovakia |
| 10. | SONI | United Kingdom |
| 11. | Svenska Kraftnät | Sweden |
| 12. | Transmission System Operator-Cyprus | Cyprus |

Secretariat

| 1. | ENTSO-E | |
|----|---------|--|
| | | |

1. Attendance, quorum and approval of draft Agenda

The new SDC Chair, Gerald Kaendler, welcomes all participants to the 82nd SDC meeting. The SDC Chair confirms that participants can formally cast their vote via teleconference on decisions proposed during the meeting.

The SDC Chair welcomes two new Committee members from Amprion and RTE, as well as the vice-convenor of RG North Sea.

The SDC Chair informs that two colleagues from the TYNDP team in the System Development Section will leave the Secretariat over summer. He and the Committee warmly thank them for their substantial commitment in the System Development work over the last years.

The SDC Chair announces the leaving of a colleague from Seps who was member in the SDC since the very beginning and had an outstanding track record in seniority, experience and knowledge. Profound thanks are given for his commitment over 11 years to the Committee.



The SDC Chair also informs the leaving of another colleague from Seps, who was Convenor of RG Continental Central East from September 2016 until April 2021. He was strongly involved in the TYNDP 2016, 2018 and TYNDP 2020 and participated actively in the work of the TYNDP Steering Group for TYNDP 2018 and 2020.

Finally, the SDC Chair thanks the SDC members for their trust and support in his new term of office starting today. He shares his views on organisational and substance priorities for this Committee in the years to come. Ideas are given on how to organise the work in a more efficient way and how new responsibilities mainly in light of the TEN-E revision can be taken up to show TSO leadership in the energy transition. The SDC Chair and the Head of Section propose how to engage with all conveners and Committee members in coming months to capture everyone's priorities and identify opportunities for how all members can provide strategic advice and expert involvement in the various workstreams.

Provisional ideas are presented for how the Committee can meet after summer in light of Covid-19 restrictions. The meeting schedule remains as it is. If conditions allow for it, the November meeting would be organised as a physical event, which would need to be confirmed in September.

The SDC Chair presents the agenda for this meeting which is accepted with no additional comments raised. Members raise attention that a lot of information is provided in the Session File and ask to review how information sharing is done in future to allow TSOs to prepare efficiently ahead of a meeting for approvals.

Take note

Since 29/41 of the TSOs represented in the System Development Committee are attending, the Chairman states that the Committee meeting reaches the necessary quorum of half its members.

2. SDC Project Dashboard 2021

The Head of Section draws particular attention on the TYNDP2022 resources, the scenario building progress, the CBA methodology approval process with the EC, and the staffing of the WG D&M teams. The TYNDP2022 project manager informs the Committee on an internal webinar in June where input of SDC members was captured regarding priorities for the various scenarios in the CBA assessment. The WG Scenario Building Convener notes the need for proper quality checks of the two top-down scenarios before publication as draft and later on as final scenarios. Committee members will be asked to review the draft scenarios during August, aiming at a public consultation of the draft Scenario report starting in September.

The Head of Section also gives the status of calls for membership and convenorship in different projects and groups issued by the Secretariat since 1 June 2021. He thanks the TSOs who nominated members and draws the attention of the Committee on the groups where there are insufficient contributions still.

3. Future TYNDP resourcing – follow-up from SDC, Resources committee, Board and Assembly, June meetings

The need for a new TYNDP resourcing approach was presented to the Resource committee of 9 June 2021, in the Board meeting of 10 June, and in the Assembly meeting of 30 June. The interim programme Manager presents the feedback from these meetings and informs the Committee on the status of ongoing assessments (resource gaps in various TYNDP activities) and options considered. These options will be further elaborated over summer by the interim Programme Manager, the SDC Chair and the Secretariat. Strategic, legal and financial perspectives will be taken so that a preferred way forward can be discussed in the September SDC meeting and feed into the final 2022 budget to be approved by the Assembly in October. The SDC Chair



underlines that an effective set-up is essential to deliver on the ambition of the anticipated new TEN-E requirements.

4. WG Data & Models

4.1. Climate change updates to PECD (methodology and external cooperation), including feedback from webinar 17 June and mini retreat.

The TF PECD was created to include climate change considerations into SDC studies. This is particularly important for the prospective studies looking into 2025 and beyond. Ongoing TYNDP and ERAA analyses already apply a PECD adaptation (called v3.1) that covers climate change trends in the various load and generation profiles. A more extensive approach (v4.0) would rely on actual climatic models. The TF PECD identified strategic options, including close collaboration with Copernicus Climate Change Service (C3S). The WG D&M Convener and TF PECD Convener present these options. TF PECD experts recommend a strong collaboration with C3S across all project phases as the preferred way forward. The SDC approves this approach.

Decision

| Approval | Purpose/notes |
|---|--|
| ➤ The SDC approves Option 1 as presented in the meeting as the preferred way forward for the development of PECD 4.0. | > n/a |
| Actions requested | Responsible body/Date of expected report |
| ➤ The SDC mandates TF PECD and Secretariat to liaise with C3S and establish cooperation agreements where necessary. | > WG D&M and TF PECD |

4.2. Plexos – tool continuation or alternative options

The WG D&M Convener presents the current state on market modelling tools used for various ENTSO-E studies across TSOs and within the Secretariat in particular. Several years ago, a decision was taken to implement and apply PLEXOS. As study needs and costs have evolved, a review of tools is recommended in terms of continuation, alternatives and/or possible use of multiple tools. PLEXOS remains in use for the coming year in ongoing TYNDP and ERAA studies into 2022. A strategic discussion needs to be picked up after Summer for longer-term directions.

4.3. TYNDP Grid model data requests process

WG D&M proposes an update to the current process of validating disclosure of the 3rd Party Grid Model. The process remains as is for any party requesting the model, based on the agreed principles of data transparency and a clear NDA. Additional transparency is given to SDC members for requests originating from non-ENTSO-E member countries.

Decision

| Approval | Purpose/notes |
|--|---------------|
| ➤ The SDC approves the proposed disclosure | > n/a |
| procedure for Grid Models prepared for 3 rd | |
| Parties, differentiating requests originated | |
| from ENTSO-E member countries and those | |
| from other regions. | |



4.4. Data request from Research Institute

The WG D&M Convener informs the Committee on a recent request from a European research organization to receive access to detailed market modelling outcomes of the TYNDP2018 scenarios. The SDC debates that data transparency is a starting principle for any request. Clear guidance needs to be given to anyone receiving such data, this information is not misinterpreted and that modelling assumptions and constraints are understood. The requested data can be shared under clear NDA to the extent ENTSO-E is not bound by own NDA restrictions to third parties (e.g. the case of meteorological data) and provides a reasonable level of aggregation (e.g. no per unit information).

| Decision | | | | |
|---|---|--|--|--|
| Approval | Purpose/notes | | | |
| The SDC approves the disclosure generation profiles as requested for profit organization with key focus at the European energy sector analyse. The SDC approves the disclosure profiles as requested for a organization with key focus activities European energy sector analyses. | or a non- tivities on c. of load non-profit | | | |
| Actions requested | Responsible body/Date of expected report | | | |
| The SDC asks the Secretariat to pro the signature of NDA with EMPA release of the approved datasets. | | | | |
| The SDC mandates the Secretariat t decision as basis for similar requests | | | | |
| The SDC asks the Secretariat to re-indevelopment of an internal document to handle such requests in a clear non-discriminatory manner. | guidance | | | |
| | Take note | | | |
| The SDC takes note that the hourly temperature profiles which were requested are obtained by ENTSO-E under an own non-disclosure agreement. Hence these cannot be disclosed. | | | | |

4.5. Data transparency with ACER

In the framework of ERAA and ACER's role in reviewing the assumptions and results, ENTSO-E has been engaging at working level with ACER to bring further insights regarding our methodologies. As part of these interactions, ACER requested documentation about ENTSO-E's demand forecast methodology and tools, as well as part of the data behind the forecasts. The SDC confirms the need to have a constructive working relationship with ACER and supports the sharing of the requested information, subject to final checks by the ERAA Steering Group. The SDC acknowledges that the methodologies will be further improved in the future based on learnings and stakeholder feedback, thus some TSOs also use additional/other methodologies.



Decision

| Approval | Purpose/notes |
|--|--|
| The SDC approves the sharing of the demand methodology and data with ACER, subject to final checks by ERAA SG. The SDC approves the sharing of TRAPUNTA Theory and User manuals with ACER. | ➤ n/a |
| Actions requested | Responsible body/Date of expected report |
| ➤ The SDC mandates the ERAA 2021 Steering Group to deal with further data and methodology requests by ACER related to ERAA, while respecting data property rules (e.g. no unit-by-unit data) and considering impact/precedent on other ENTSO-E products. | ERAA 2021 Steering Group |

4.6. CGMES validation tools governance group: Call for Convener and volunteers

A CGMES validation tools governance group was created under the CIM Expert Group. This is a cross-section, cross-committee group that includes also RSCs, and has as main objectives to coordinate release management of the CGMES validation tools and ensure quality and compliance with CGMES. WG D&M invites interested TSOs to join the group by contacting the Secretariat support staff.

5. Project Inertia

5.1. Updates on the development of the study and drafting of the report

The DT PS Convener reports to the Committee on the status of the SOC/SDC report on system inertia. Based on the TYNDP2018 long-term scenarios and market studies, the report investigates, under a set of assumptions, a very large set of possible combinations of system split cases between market nodes in the synchronous area of Continental Europe. From this innovative analysis and available results, it will be possible to take forward the discussion regarding risk and manageability of a system split in Continental Europe and whether minimum required inertia needs to be established or alternative mitigation actions should be taken.

The report is planned to be completed by the end of June/early July and then sent out for cross-committee review (SDC and SOC) for 3 weeks. The Project Team will hold a workshop on 15 July for SDC and SOC members, allowing an open discussion with the project team and TSOs. The final report is scheduled to be communicated publicly end of September.

The SDC confirms this is a crucial topic for future system design and it is imperative ENTSO-E communicates on this in a correct manner.

6. WG System Design Strategy

6.1. Optimal Energy System Planning

The Leader of the Core Team presents the status of the activity and the options for the way forward. The SDC confirms that the topic of Optimal Energy System Planning is a priority and that timely implementation is critical. Because of to the current resources' availability issues in TYNDP workstreams and the risk of draining resources further, the SDC members express their favour toward an efficient and realistic expansion of existing scenario building and IoSN processes as a TYNDP innovation track (Option 2). No separate team



should be created (Option 1). The SDC asks the WG SDS and the Core Team to further define the details of this expansion. It is still the ambition to deliver results by March 2022.

Decision

| | Approval | | Purpose/notes |
|-------------|---|---|--|
| > | The SDC acknowledges the high priority of the study and asks that WG SDS develops a more detailed proposal for Option 2 by the September SDC meeting, in particular on level of depth of the study. | > | n/a |
| | Actions requested | | Responsible body/Date of expected report |
| > | The SDC requests WG SDS with the Core Team to finalize the Terms of Reference for the next SDC meeting in September. | > | WG SDS / Core Team |

6.2. 2-steps approach communication

The Chair presents a note developed by PCG which can be included in TEN-E deliverables to give context to inherent uncertainties and assumptions made.

Decision

| Approval | Purpose/notes |
|---|--|
| The SDC approves the communication note on the 2-steps approach to the TEN-E tasks. | > n/a |
| Actions requested | Responsible body/Date of expected report |
| The SDC invites the relevant Working Groups and the Steering Groups to include the approved communication in the relevant TENE deliverables, integrating it with the detailed assumptions raise during their development. | > WG/SGs/Projects |

6.3. TEN-E update, including update on the current PCI list proceedings

The interim Programme Manager informs the Committee on the ongoing PCI process and TEN-E revisions.

6.4 Report from the Florence Forum

The interim Programme Manager reports to the Committee on discussions in the recent Florence Forum, especially on connection network codes and ERAA.

7. RGs activities (beyond TYNDP 2022)

7.1. Status of Convenorship RG CCS

(This topic is not presented in the meeting)



7.2. RG's activities

7.2.1. RG Baltic Sea

The Convenor of RG BS presents a short update of ongoing activities.

7.2.2. RG Continental Central South

(This topic is not presented during the meeting)

7.2.3. RG North Sea

The Vice-Convenor of RG NS presents a short update of ongoing activities.

7.2.4. RG Continental South West

The Convenor of RG CSW presents a short update of ongoing activities.

7.2.5. RG Continental South East

The Convenor of RG CSE presents a short update of ongoing activities.

7.2.6. RG Continental Central East

The Convenor of RG CCE presents a short update of ongoing activities.

7.3. Status of SECI project Report

The Convener of RG CSE informs the Committee on the Ukraine/Moldova Network Connection Sensitivity Study which was performed in the framework of the Southeast Europe Cooperation Initiative Transmission System Project (SECI TSP) project. The study has as main objective to investigate the influence of the UA/MD interconnection on the operation of ENTSO-E electricity market and transmission grid, with focus on the region of CSE.

Preparation of the Sensitivity Study was financed by the SECI TSP group which comprises the following TSOs: OST, NOS BiH, HOPS, ELES, ADMIE/IPTO, JSC EMS, KOSTT, Transelectrica, Terna, CGES, MEPSO and ESO EAD.

The SDC approves the delivered report that is, at the moment, foreseen to be partially included in the Regional Investment Plan of the CSE region and in the NDPs of the TSOs involved in its preparation. In the future, the possibility of including the main conclusions of the Study in the appropriate Insight report will also be investigated

Decision

| | Approval | Purpose/notes |
|---|--|--|
| > | The SDC approves the report named "The | This approval increases the relevance and |
| | Ukraine/Moldova Network Connection | visibility of the project done in the scope of the |
| | Sensitivity Study", made in the scope of the | Regional Group CSE and allows the report to |
| | first cycle of SECI TSP project. | obtain the ENTSO-E label. |



8. Topics for next mini-retreats in September 2021

SDC members and Conveners are invited to propose topics for the mini-retreats next September.

9. Any other business

No other business is discussed.