

Report from the Expert Group : Advanced capabilities for Grids with a High Share of Power Park Modules

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Vice-Chairs: Florentien Benedict, Dr. Wang Mian

[GC ESC] 28th meeting - (MS Teams)

30 Nov 2022

Topics „after“ 27th ACER meeting



- ❑ Concluded 2 Main Meetings after the last ACER report
 - ❑ Many sub-meetings for working chapters
 - ❑ Hybrid (F2F at ENTSO-E Premises & Online meeting) in November



- ❑ Good Progress and first version of documentation in Chapter 3 (System Needs that require advanced capabilities for grid stability)
- ❑ Kick-off discussion for chapters (Chapter 5, Chapter 7 - Roadmap for delivering capabilities)



- ❑ Analysis, discussion and initial conclusion for chapter 3 (System Needs that require advanced capabilities for grid stability)
- ❑ Discussion of works from Fraunhofer ISE – Germany

Management Summary

❑ Eventful November

- November : Georgios Antonopoulos as an observer member from ACER.
- November 17 : Hybrid Meeting (F2F in ENTSO-E Premises, from 9:30-12:30 and 13:30-16:00)
- November 24 : Finalize open comments on Chapter 3 Proposal (lead by Thomas Schaupp)
 - Chapter 2 Finalized , Chapter 3 proposal to be sent to other members of EG
 - Chapter 5 Started and in Progress

❑ DSO Related topics on Grid Forming needs more attention and assessment

- Detailed studies, demonstrator at DSO related areas seems to be missing
- Applicable technical solutions for DSO related areas seems to be required
- Technical studies and working group including research institute, academics, manufacturer perhaps required.

❑ Proposed³ document as Initial recommendation and outcome and not as Legal Text

Presentation from a German Applied Research Organization



17 Nov 2022 : Special Invitee from Fraunhofer ISE

- Mr.Roland Singer
- Dr.Soenke Rogalla

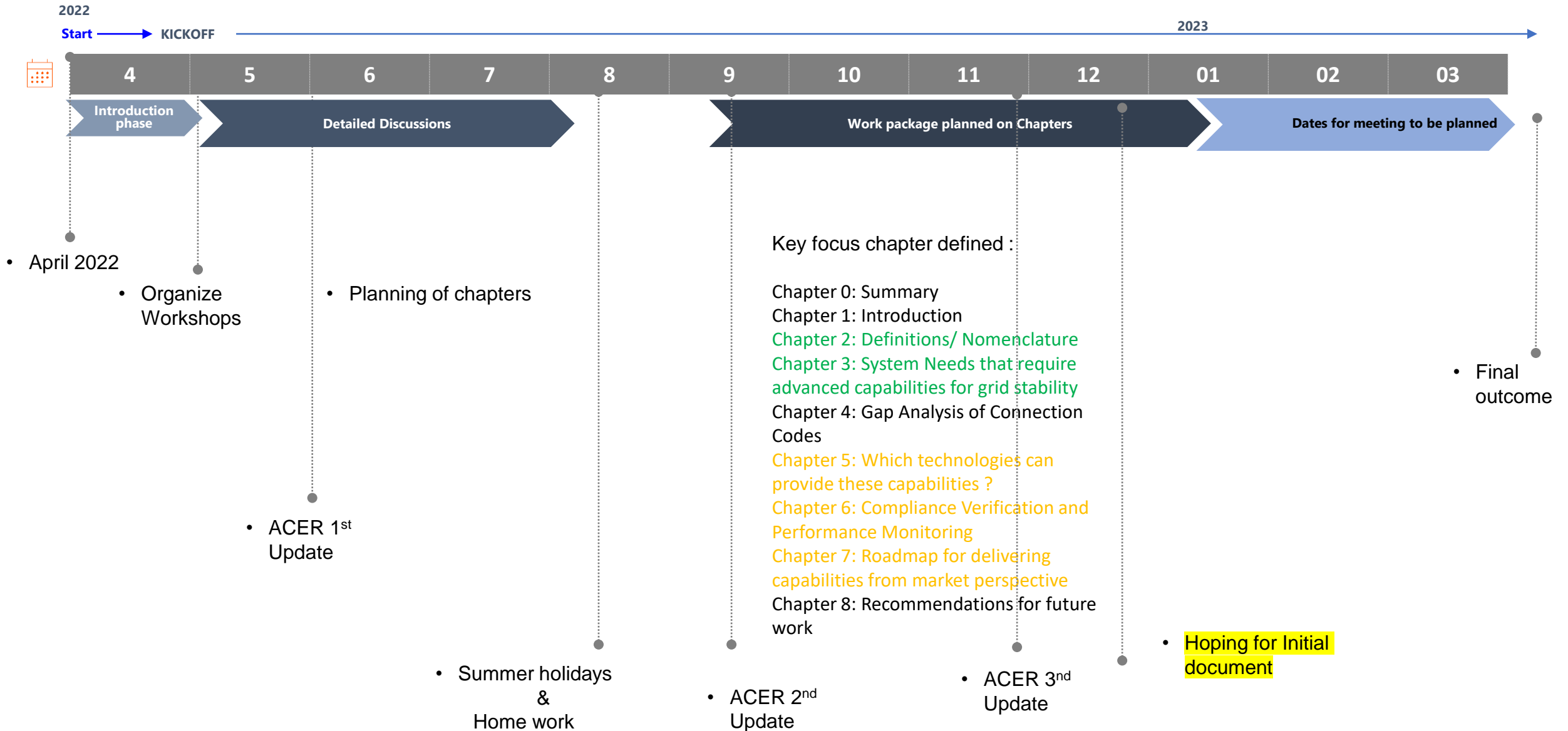
- ❑ Outcomes of the Research Project VerbundnetzStabil (Consortium between TSO, Research organization, University, Manufacturer)
 - ❑ Shared Mission in the Definition and evaluation of suitable converter control concepts to ensure a reliable and stable grid operation without relying on synchronous generators (source: Fraunhofer ISE)
- ❑ Approach for GFC Testing (Outcomes and Feedback from Battery-VSM project funded by National Grid ESO in the UK, and the VerbundnetzStabil project financed by the German Federal Ministry of Economic Affairs and Energy BMWi)
 - GFC properties and Independent assessment of GFC properties
 - Voltage Source Properties, Power Quality, Inertia and Damping, Overload and fault behavior, Grid Interactions

Summary and Status of Chapters

- ❑ Work ongoing in some sub chapters.
- ❑ Separate expert team named for leading sub chapters

- Chapter 0: Summary
- Chapter 1: Introduction
- Chapter 2: Definitions/ Nomenclature
- Chapter 3: System Needs that require advanced capabilities for grid stability (Sub-group have completed their version) (Lead by Mr. Thomas Schaupp)
- Chapter 4: Gap Analysis of Connection Codes (None of the aspects of Chapter 3 will be considered as Gap and will be done soon when other topics and chapters gets mature.)
- Chapter 5: Which technologies can provide these Capabilities s? (being formed and Lead by Dr. Thorsten Buelo)
- Chapter 6: Compliance Verification and Performance Monitoring (Lead by Dr. Martin Schmieg)
- Chapter 7: Roadmap for delivering capabilities from market perspective (preliminary documentation and work in progress for chapter 7). Lead by Mr. Antony Johnson
- Chapter 8: Recommendations for future work (all chapter leads will provide their recommendations)

Proposal timeline



Chapter 3 Outcomes

Key Chapter : Chapter 3 - System Needs that require advanced capabilities for grid stability

Over to Mr. Thomas Schaupp (Lead Chapter 3)

Next Steps

- Timeline and Dates for Meetings from Jan 2023 until March 2023 to be planned
- Approval , Comments and Feedback on Chapter 3 from other members of EG
- Work in Progress check for Other Chapters (Requested already for starting Chapter 6 , Chapter 5 to their chapter module leads)
- Questions and understandings related to DSO topics
- Before Christmas – Preliminary Deliverable including System needs and Grid forming capabilities

Question to ACER

- Possible joint research project with different stakeholders : Manufacturer, Research Institute, University, DSO ?
- When would be the special meeting session with ACER early Spring 2023 ?

Thank you