



CENELEC

EUROPEAN COMMITTEE
FOR ELECTROTECHNICAL STANDARDIZATION

CENELEC TC8X WG03 contribute

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ACER workshop on rate of change of frequency and grid forming capabilities

10/05/2023

ACPPM Draft Final Report Version 0.9

CENELEC POSITION REGARDING MASSIVE GRID FORMING INTRODUCTION

CENELEC CONCERNS

- correct integrations of grid forming PPMs in distribution grids

it important that an agreement is reached with the relevant system operator: as an alternative, the term “**coordination**” may lead to national implementations that are not technically feasible for a specific DSO

- need of standardization

the proposed legal text is not able to provide the needed degree of technical details to allow a correct harmonization in Europe. There is risk, that national implementations may deviate significantly with impacts for Manufacturers.

Grid-forming features and functionalities should be defined in detail at the European level, allowing Manufacturers to develop and test a limited number of products and for each RSO to be able to perform verified simulations.

The reference to standardization needs to be strengthened and standards must not only be “considered” but must be “applied”, limiting deviations as much as possible and providing all justifications to NRAs.

- ▶ WG03 already shared positions regarding possible impacts at present time of Grid forming inverters on DSO grids are:
 - Protection strategies and operation solutions not mature enough and detailed evaluations not yet completed to allow a simple, safe and cost effective massive generalized introduction of Grid Forming inverters on MV and LV distribution networks of each EU Country
 - Grid-forming inverters, on the other hand, could be immediately connected to the HV/MV busbars (HV or MV through dedicated feeders) avoiding unwanted impact on the DSO grid.

TC8X WG03 support to ESC-EGs New work item proposal CLC/TS 50549-20

STATUS AND NEXT STEPS

- ▶ WG03 actively supported HCF and ACPPM, to speed energy transition in the single market perspective
- ▶ Reports of the 2 EGs have been discussed on a WG03 meetings held on 2023-04-20.
 - ▶ HCF conclusions will be immediately considered in 50549-10 evolutions
 - ▶ From ACPPM conclusions it appears that further Standardization is needed as Grid-forming functionalities are not yet defined in detail such to allow an immediate massive implementation
- ▶ To speed up the additional needed Standardization and to further support Grid-forming definition, WG03 defined and proposed a NWIP to TC8X
- ▶ A questionnaire was prepared from TC8X Secretary and sent to NCs, voting expired on 2023-03-24. NWIP was approved with 12 Y, 1 A 3 N

- ▶ New work item proposal: CLC/TS 50549-20 - Requirements for generating plants to be connected in parallel with electrical networks - Part 20: Definitions and tests of the electrical characteristics of grid-forming generating and storage units

| Preliminary roadmap | Phase | Event(milestone) | Stage-code | realized | |
|------------------------|-----------------------------|-----------------------------|------------|------------|------------|
| | Proposal and decision on WI | Proposal of WI for approval | | 10.00.0000 | 28/03/2023 |
| | | Decision on WI Proposal | | 10.99.0000 | 01/06/2023 |
| | Dating of 1° working doc | Circulation of st WD | | 20.60.0979 | 31/10/2023 |
| | Consensus and consolidation | Acceptance of TS draft | | 30.99.979 | 31/03/2024 |
| | Finalization of standard | DOR/ratification | | 60.55.0000 | 31/07/2024 |

Expected finalization of the TS – 31/07/2024 in case of positive decision on WI proposal