

Baseline for type A power- generating modules

(EG BftA)

Florentien Benedict

22-09-2021

Baseline for type A power-generating modules

(Vice) chairs

- Søren Stig Abildgaard, Mechanical Engineer at EC , COGEN Europe
- Florentien Benedict, Expert Regulation Stedin DSO, CEDEC

21 members

- Cedec #3
- ENTSO-E #5
- SolarPower Europe #3
- VGB #2
- EDSO #1
- COGEN Europe #3
- GEODE #1
- ACER #1
- CENELEC #1
- EFAC #1

Time schedule (1)

- Meetings:
 - 1. 7 September 2020
 - 2. 29 October 2020
 - 3. 17 November 2020
 - 4. 15 December 2020
 - 5. 21 January 2021
 - 6. 1 March 2021
 - 7. 9 April 2021
 - 8. 18 May 2021
 - 9. 03 June 2021 Final meeting
 - 10. 15 June 2021 Extra meeting
 - 11. 23 June 2021
 - 12. 29 June 2021
 - 13. 2 July 2021
 - 14. 31 August 2021

Time schedule (2)

- Final report for the members ESC Grid Codes at 06-07-2021
- Two emails with comments received during the summer
 - One from Orgalim, with the confirmation that they don't have any further additional comments
 - One from VGB, with the comments of the VGB members
- The comments have been incorporated in the main document
- Meeting 14. with the expert group at the end of August to discuss the incorporated comments and the remarks.
- Completed report (06-09-2021) for acknowledgement at the meeting ESC Grid Codes at 22-09-2021

5 Topics TOR

1

- Considering different banding values implemented across the EU, the requirements that have already been imposed on type B, do we also want to declare them on type A? Which ones? (include a justification).

2

- Are there any new or additional items or requirements that we want to add to type A based on the evolving system needs and taking into the account the requirements provided in the EN 50549-01 and -2? Make a list of additional requirements in the standard EN 50549-01 and -02.

3

- Based on the expected growth in population size, should type A requirements differs for Power Park Modules (PPMs) and Synchronous Power Generating Modules (SPGMs) just like it is with type B? If yes, please justify.

4

- Any new insight and method of determining the certification obligations for type A and possible harmonization.

5

- Assessment of possible benefits from harmonizing the thresholds between type A and B PGMs

Summary and Recommendations (1)

requirements that have already been imposed on type B, do we also want to declare them on type A?

A detailed assessment of possible future modified type A requirements resulted in the following recommendations:

- The following requirements, already imposed on type B PGMs, are also declared on type A PGMs:
 - Fault Ride Through (**FRT**)
 - Post Fault Active Power Recovery (**PFAPR**)
 - Active Power Control (**APC**)

Summary and Recommendations (2)

requirements that have already been imposed on type B, do we also want to declare them on type A?

FRT and **PFAPR** requirements for type A PGMs can however not be met by some technologies

- Therefore, two possible distinct solutions, being supported by different stakeholders, have been suggested to incorporate the **FRT** and **PFAPR** requirements properly into an amendment NC RfG
 - Introduce both requirements for PPMs as mandatory and for SPGMs as non-mandatory, and for technologies that cannot meet these requirements (class) derogations would still be available.
 - Introduce both requirements for PPMs as mandatory and for SPGMs as non-mandatory but immediately excluding certain technologies (i.e. μ CHP and possibly μ Hydro) ≤ 50 kW.

Whichever solution is taken forward, the EG notes that consideration needs to be given to extending the content of Title IV of the NC RfG to ensure the compliance requirements for FRT are specified appropriately.

Summary and Recommendations (3)

requirements that have already been imposed on type B, do we also want to declare them on type A?

- For **APC** two broad approaches are possible to implementing this requirement and dealing with any exceptions that might be needed in practice.
- The first approach is to bring the requirements of Article 14.2 into Article 13.6, but recognise exceptions (e.g. possibly $\text{CHP} \leq 50\text{kW}$) at the drafting stage and include the exclusions in the formulation of the new article.
- The second approach recognises that Article 14.2 describes in point (a) the inclusion of an interface and in point (b) the use of that interface to receive instructions to modulate the active power.
 - All new type A PGMs shall be equipped with the communication interface and capability to modulate active power. The use of the interface can be a local tool or a solution of the RSO if agreed nationally when the relevant system operator demonstrates the need and benefit for enabling the use of this interface. To that point the RSO will have to recognise any technology constraints, which of course need to be justified, and taken into account by the national implementation.

Summary and Recommendations (4)

requirements that have already been imposed on type B, do we also want to declare them on type A?

- Regarding reactive power control (**RPC**) the EG reached the conclusion that the status quo, i.e. not introducing any changes for type A PGMs in this regard is the most appropriate response at this time.

Summary and Recommendations (5)

new or additional requirements to type A based on the evolving system needs and taking into account EN 50549-01 and EN 50549-02?

- **No new or additional requirements** apart from the ones mentioned in the slides before have been nominated to be added to type A PGMs based on the evolving system needs and the requirements provided in the **EN 50549-01 and -02**.

Summary and Recommendations (6)

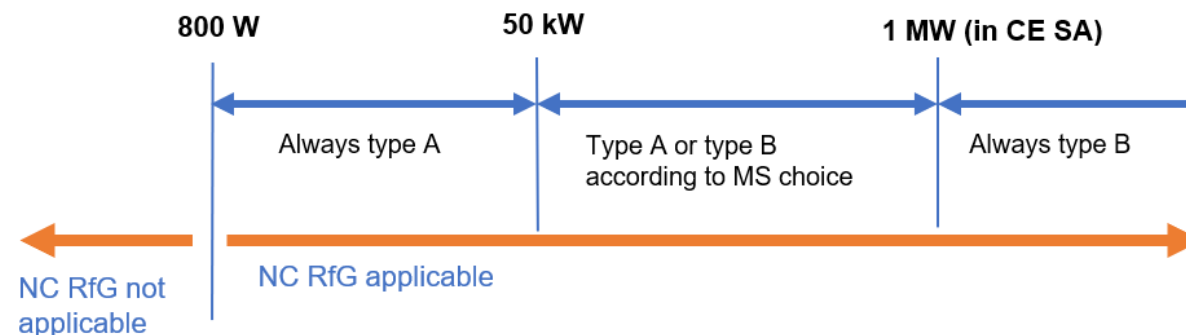
certification regime

- Although the NC RfG does not give much guidance to the creation of a **certification regime**, it is still open to the use of certificates.
- Before making changes to NC RfG, the existing possibilities should also be assessed. The IGDs and standards should also be viewed for this purpose.
- The EG does not have enough depth of expertise in legal assurance schemes to propose a compelling solution at this time, hence there is a recommendation for more work on this topic.

Summary and Recommendations (7)

harmonising the thresholds between type A and B PGMs

- The EG recommends to define a **minimum level for the A/B-threshold at 50kW** in addition to the existing thresholds defined by Member States.
- Without a defined level on the low end of the A/B-threshold, manufacturers which are active in several or even most of the European countries, are forced to include various type B capabilities due to different selected A/B-thresholds which make their products too expensive and reduces the market significantly.
- Considering that Italy and Slovenia currently have lower thresholds than 50kW between type A and B PGMs, this proposal should be properly addressed so as not to create a conflict with the NC RfG implementation in these two countries.



Questions?

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- ??