

**ACER-CEER Public Workshop**  
**on the potential amendments to the European Grid Connection Network**  
Ljubljana, 25 OCT 2022

# **Recommendations on Compliance Issues by EFAC / VAZ**

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## Agenda

- Preliminary note
- Scene Setting & Motivation
- Recommendations – Overview
- Recommendations – Details
- Summary

## Preliminary note

- **EFAC welcomes the amendment process and supports the key areas as indicated in the ACER policy paper with some general comments**
  
- **EFAC has proposed two additional key areas**  
(which has been incorporated in the revision of the policy paper)
  1. Providing a more precise and consistent **framework on compliance mechanisms**
  2. Striving for more **harmonisation also on Type B & C level**
  
- **This presentation will address EFAC's recommendation on compliance mechanisms, only**
- For the harmonisation issue, EFAC refers to the recommendations of the FGH study on RfG Implementation on behalf of the European Commission:  
<https://op.europa.eu/en/publication-detail/-/publication/7ff90e84-dae0-11eb-895a-01aa75ed71a1>

## Scene Setting & Motivation

- **European Network Codes** have drawn a vague picture of compliance measures
  - Introduction of **Equipment Certificates** (optional) –  
but neither referring to a accreditation standard, nor to certification or evaluation programmes
  - Equipment has not been clearly defined or distinguished
  - Introduction of **Power Generation Module Documentation** (PGMD) to proof PGMs' conformity –  
but no concrete assessment scheme defined
  - Nevertheless, compliance on PGM level is required for commissioning
  
- **Implementation of compliance measures** are, hence, quite heterogeneous in Europe
  - Accredited certification programmes in Spain and Germany only  
(on PGU, component and PGM level)
  - Quite a few misunderstandings on formal requirements, definitions, appliances and actors
  - See also FGH study on RfG Implementation on behalf of the European Commission
  
- **Hence, there is a need for**
  - clear **requirements and definitions** on Equipment Certificates
  - Measures to **support the acceptance** of certificates in the course of PGM compliance as well as to **accelerate their availability** (by reducing formal barriers and harmonizing evaluation schemes)

## Recommendations Overview (on Compliance)

1. An Equipment Certificate is a **Product Certificate**: Provide a reference to the accreditation standard **ISO/IEC 17065**.
2. Provide a clear definition on **Equipment** – introduce the designations **Power Generating Units** and **Components**, and their distinguishment (to PGM, PGF).
3. An Equipment Certificate must be based on a **Certification Programme** – any requirement in member states for a certificate must provide a clear reference to a certification programme to promote the acceptance of certificates.
4. Next to the standard grid code certification (with respect to a concrete, national code) **additional conformity assessment schemes** are feasible. Future GC NCs may link to these in order to support their acceptance and, hence, accelerate their availability.
5. To reduce multiple conformity assessments (i.e. type testing) of similar equipment, a comprehensive scheme for **family grouping** is highly recommended.
6. Manufacturers need a scheme to introduce new variants of equipment - a comprehensive **compliance scheme on prototypes** will support these emerging technologies.
7. User of certificates need an accepted scheme on the **validity of the certificate**, especially when modifications are applied to the PGU

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**Blue recommendations**  
will be subject to the final results  
of Expert Group HCF !

standard

## Recommendation Details (I/VII)

### Subject: Accreditation standard ISO/IEC 17065

#### Motivation:

An Equipment Certificate is a Product Certificate and must be based on the accreditation standard ISO/IEC 17065. Hence, an authorised certifier must hold an accreditation with respect to this standard. However, the definition in Article 2 (46) is missing this reference. Instead, a reference to Regulation (EC) No 765/2008 is given, which provides regulation on Accreditation Authorities, only.

EFAC strongly recommends to incorporate that reference. ISO/IEC 17065 provides clear provisions on the constitution of certification bodies and more over on the requirements of certification programmes (see recommendation 3).

#### Proposition:

Amendment in Article 2 (46):

*‘authorised certifier’ means an entity that issues equipment certificates and power-generating module documents and whose accreditation **according to ISO/IEC 17065** is given by the national affiliate of the European cooperation for Accreditation (‘EA’), established in accordance with Regulation (EC) No 765/2008 of the European Parliament and of the Council (1);*

## Recommendation Details (IIa/VII)

### Subject: Definition on Equipment and its sub-elements, i.e. Power Generating Units

#### Motivation:

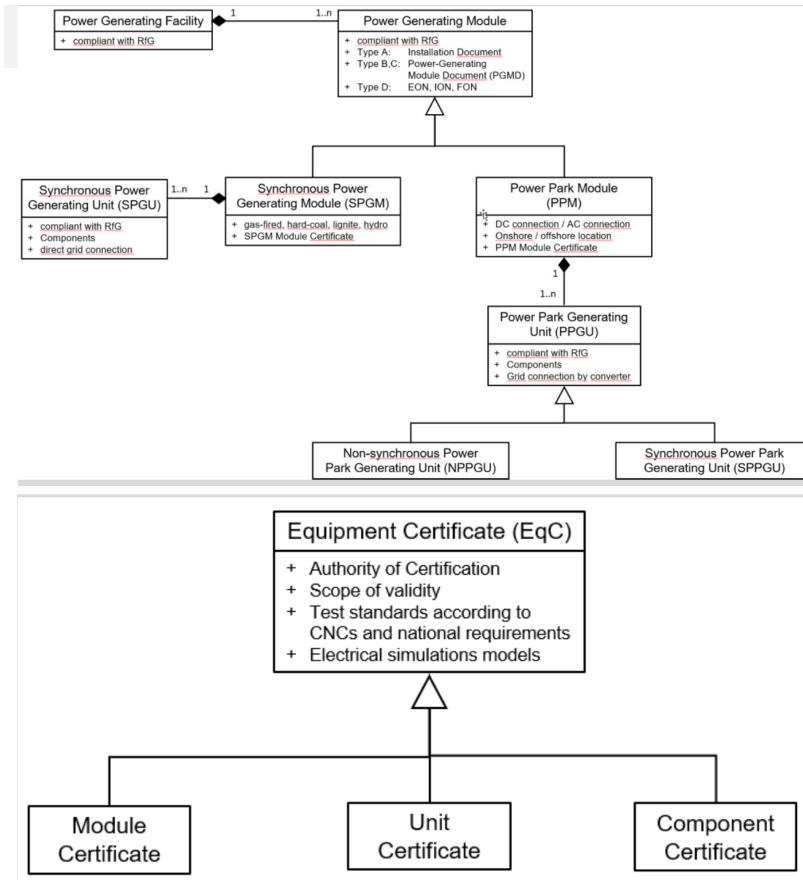
The GC NCs lack a precise definition of equipment, hence the reference to Equipment Certificates remains vague.

The IDGs on compliance (2017/2021) have addressed that vacancy by introducing the entities **Power Generating Unit (PGU)**, with sub-entities on synchronous and PPM units) and **Components**. As well, definitions on PGU and component certificates are provided.

**Remark 1:** EN 50549-1/2 provide an independent, slightly different definition on PGUs.

**Remark 2:** The division of PGMs into PGU and components is generally in line with the status quo of grid code certification as applied in Spain and Germany for many years.

**Remark 3:** OD 009 of IECRE WG10 has taken over the IDG definition.



**Source:**  
*GENERAL GUIDANCE ON COMPLIANCE VERIFICATION - Compliance testing and application of equipment certificates in the verification process;*  
ENTSO-E, 2021



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#### Proposition:

Include an additional definitions in Article 2 on

- **Power Generating Units (PGU);**
- **PGU Certificates;**
- **Components (as of PGUs or PGMs);**
- **Component Certificates**

based on the IDG (2021).

**Remark:** the definition and distinguishment of PGU, component and PGM is subject to EG HCF. A more detailed and elaborated recommendation might be expected.

## Recommendation Details (III/VII)

### Subject: Certification Programme

#### Motivation:

ISO/IEC 17065 requires a certification programme each issued certificate must be based on. The programme may contain further references to evaluation schemes (testing, model validation).

Each programme must be assessed with respect to its accreditability once. Subsequently, each certification body, issuing certificates with respect to this programme must obtain its individual accreditation on this programme. The programme owner holds the obligation to maintain the programme.

For grid code compliance certification no international programme exists so far. Only Germany and Spain have elaborated certification programmes with respect to their national codes (FGW-TR8, NTS).

Multiple member states allow the deployment of equipment certificates in the course of PGM compliance, however, they don't give a reference to any certification programme these certificates shall be based on.

**Remark:** see also EFAC presentation on GC ESC, 11<sup>th</sup> meeting, 2018.

#### Proposition:

Either

- extend definition on 'Equipment Certificate' in Article 2 (47) or (preferably, with respect to including recommendations IV-VI)
- extend a new Chapter 1 & Article 40 in Title IV on 'Equipment Certification' (to be further elaborated)

Subjects to be addressed:

- RSOs, that demand equipment certificates within their schemes on operational notification (Title III) and/or compliance (Title IV) must identify certification programmes, respective equipment certificates shall be based on;
- Any equipment certificate must identify the certification programme it is based on;
- Member states shall be encouraged to accept equipment certificates based on the existing certification programmes in Germany and/or Spain (regardless of the assessed code).
- The reference to existing evaluation schemes (testing, validation) shall be utilised, preferably on international standards (=> EN 50549-10; ISO/IEC 61400-21/27; FGW-TR3/4, ...)

## Recommendation Details (IVa/VII)

### Subject: Additional Assessment Schemes

#### Motivation:

In general, a grid code compliance certificate is based on a conformity assessment with respect to an individual, national grid code.

Manufacturers need to provide multiple, grid code specific certificates (eventually even based on different testing and modelling provisions).

In order to facilitate the appliance of PGU certificates in the course of PGM compliance superior, more generic conformity assessment schemes might be enabled.

Future GC NCs should address these schemes in order to promote their acceptance throughout Europe.

**Remark:** Member state, i.e. grid code specific conformity statements might be provided in separated annexes to such certificates, taking into account deviations (=> gap analysis).

#### Proposition:

Include references to superior assessment schemes in a new Chapter 1 & Article 40 in Title IV on 'Equipment Certification' (to be further elaborated). These schemes may comprise assessments against

- RfG provisions (exhaustive & outmost non-exhaustive requirements);
- EN 50549-1/-2 requirements (i.e., most stringent);
- the PGU's outmost capability according to the manufacturer's declaration.

The acceptance of respective certificates shall be addressed.

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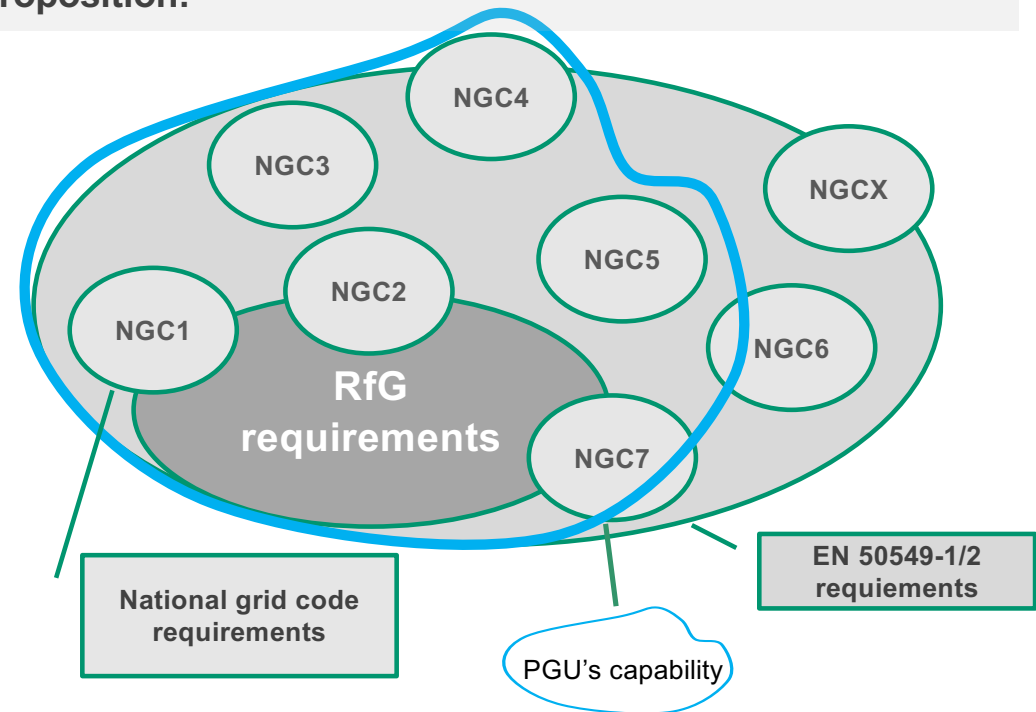
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- the PGU's outmost capability according to the manufacturer's declaration.

The acceptance of respective certificates shall be addressed.

**Remark 1:** the description of superior schemes is subject to EG HCF. More detailed and elaborated recommendations will be given in terms of its final report.

**Remark 2:** EN 50549-10 as well as IECRE OD009 will support capability testing and capability certification, respectively.

**Remark 3:** As well, the temporary acceptance of existing certificates, e.g. according to VDE TARs, might accelerate the overall process.

## Recommendation Details (V/VII)

### Subject: Family Grouping

#### Motivation:

Conformity assessment within product certification and, hence, equipment certification is generally based on type testing. Manufacturers often provide several PGU based on a common technical platform with slightly differing characteristics (e.g. in power, blades, etc.).

In order to facilitate the process, a certification of non tested PGUs should be enabled, that is based on test results of one single tested PGU. For this purpose a permissible family grouping of such PGUs shall be defined under clear restrictions with respect to power ranges and/or deviating technical characteristics.

Future GC NCs should provide a comprehensive framework on this issue.

**Remark:** Family grouping is enabled under the certification programmes in Spain and Germany.

#### Proposition:

Include a framework on family grouping in a new Chapter 1 & Article 40 in Title IV on 'Equipment Certification' (to be further elaborated).

Subjects to be addressed:

- Eligible power ranges;
- Eligible deviations in technical characteristics;
- Provisions on simulations in order to support the transferability of testing results, if applicable.

**Remark:** the definition and distinguishment of family grouping is subject to EG HCF. More detailed and elaborated recommendations will be given in terms of its final report.

## Recommendation Details (VI/VII)

### Subject: Prototype Definitions

#### Motivation:

When introducing a new PGU / component type into the market, a transition period needs to be defined to enable the manufacturer to conduct the required type testing in the course of PGU / component certification.

A prototype definition may provide a well defined scheme

- on deadlines up to the provision of the PGU certificate;
- which compliance documentation has to be provided until the PGU certificate is available, in order to support PGM compliance processes (*'prototype declaration'*)

**Remark:** A prototype scheme is provided under the certification programmes in Spain and Germany.

#### Proposition:

Include a framework on family grouping in a new Chapter 1 & Article 40 in Title IV on 'Equipment Certification' (to be further elaborated).

Subjects to be addressed:

- Definition on prototypes;
- Definition on prototype declarations;
- Embedding prototype declarations in the overall compliance scheme (time frame, appliance).

**Remark:** the definition and distinguishment of prototype definitions and declaration is subject to EG HCF. More detailed and elaborated recommendations will be given in terms of its final report.

## Recommendation Details (VI/VII)

### Subject: Certificates' Validity

#### Motivation:

According to ISO/IEC 17065 a certification programme should define a monitoring scheme on the validity of respective certificates.

E.g., in Germany, according to FGW-TR8 the validity of PGU and component certificates is restricted to 5 years. Manufacturers (certificate owner) are obliged to report any modifications in hard- and/or software to the certified PGU type immediately to the certifier which then assesses the changes with respect to the certificate's conformity statement.

The outcome of this assessment determines whether a reassessment on PGM level becomes necessary.

#### Proposition:

Include a monitoring scheme on the validity of certificates in a new Chapter 1 & Article 40(ff) in Title IV on 'Equipment Certification' (to be further elaborated).

Subjects to be addressed:

- A comprehensive maximum validity time span;
- Definition on the reporting obligations of the certificate owner in case of modification to the PGU type.

**Remark:** a definition of the certificates' validity is subject to EG HCF. More detailed and elaborated recommendations will be given in terms of its final report.