

# IEC and IEEE GFM Standardization Efforts

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# Why Coordinate Between IEC and IEEE?

## Strengths

- A broad set of stakeholders, including many original equipment manufacturers (OEMs)
- Leveraging of subject matter experts (SMEs) from regions with substantial practical technical and regulatory experience
- More weight for potential adoption by entities

## Opportunities

- Precedence for successful joint standards like IEC/IEEE 60802 Stds, including 802.11 Wi-Fi Stds
- One step towards an International Standard (IS)
- One set of harmonized specifications
- Reduction of technical barriers for products in a global market

## Weaknesses

- Additional administrative burden
- More complicated consensus building
- Potential delays

## Threats

- IEC Technical Committee (TC)8 and other TCs have or are moving ahead
- Lack of coordination could create diverging sets of specifications
- If not coordinated properly, sub-par specifications could impact bulk power system reliability

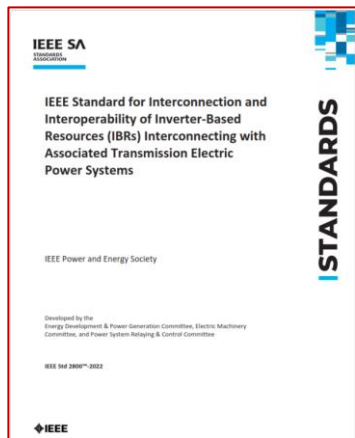


# The joint IEC PWI 8A-26/IEEE P2800.1 TS Will Create a Framework for GFM Requirements at the Equipment-Level

Informed by system (grid) needs; specify performance-based capability requirements.

Step 2

Step 3



Scope 1

Non-GFM  
IBRs at BPS  
Plant-Level  
IEC 6xxx-1-1\*

Scope 3  
GFM  
IBRs at BPS  
Plant-Level  
IEC 6xxx-1-2\*

GFM IBRs

Framework for Equipment-Level  
Joint IEC PWI 8A-26 / IEEE 2800.1

Step 1

Scope 2

Scope 3

Scope 4

- ② **Scope 1:** Define IEC plant-level requirements for Non-GFM IBRs at BPS
- ① **Scope 2:** Specify GFM capability and performance for IBR equipment
- ③ **Scope 3:** Expand IEC plant-level requirements to harmonize with IEEE
- ④ **Scope 4:** Specify plant-level capability to operate IBR equipment during steady state conditions to maintain GFM performance during disturbances

GFM PE  
Equipment-Level  
IEC 6xxx-3-2  
joint with TC22

GFM PV  
Equipment-Level  
IEC 6xxx-3-3  
joint with TC82

GFM WTG  
Equipment-Level  
IEC 6xxx-3-4  
joint with TC88

GFM ME  
Equipment-Level  
IEC 6xxx-3-5  
joint with TC114

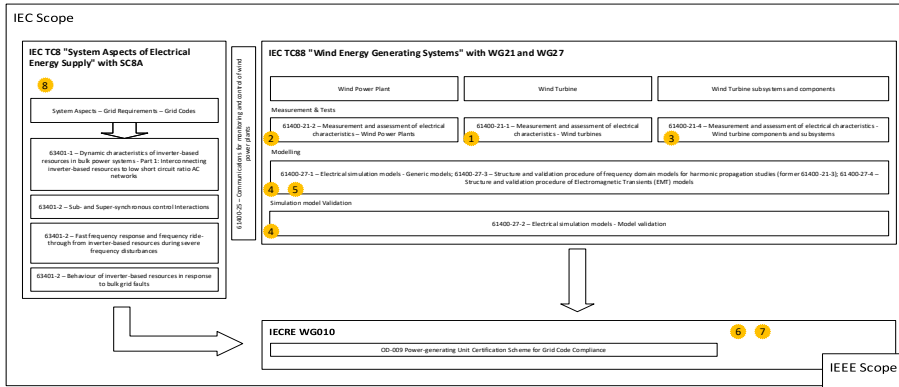
GFM HVDC  
Equipment-Level  
IEC 6xxx-3-6  
joint with TC115

GFM BESS  
Equipment-Level  
IEC 6xxx-3-7  
joint with TC130

➤ **Call for Participation to other TCs** and joint project(s) with IEEE “to extent possible.”



# IEC and IEEE Mapping

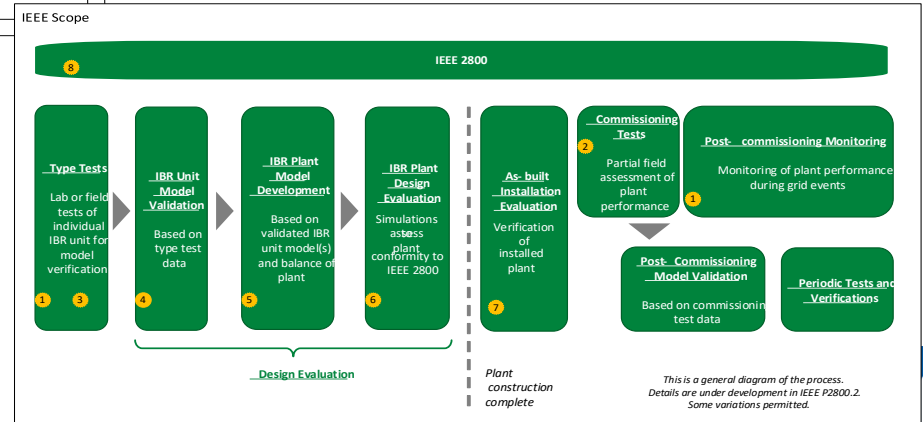


- IEC and IEEE frameworks are well aligned

- Notable differences / questions include:

- Different terminology between IEC and IEEE
- IEEE requirements are very specific whereas IEC requirements tend to be less specific
- IEC 61400-27 scope includes both IBR unit and IBR plant model validation/verification

- A joint IEC/IEEE standard would have to adequately balance “specificity” (IEEE) with “flexibility” (IEC).
- Use of term “converter-based resources” instead of “inverter-based resources”





# Drafting Team Contributors in IEC and IEEE

SC8A JWG5 members of SC8A-26 Project Grid Forming Converters Drafting Team

18 Jan 2026

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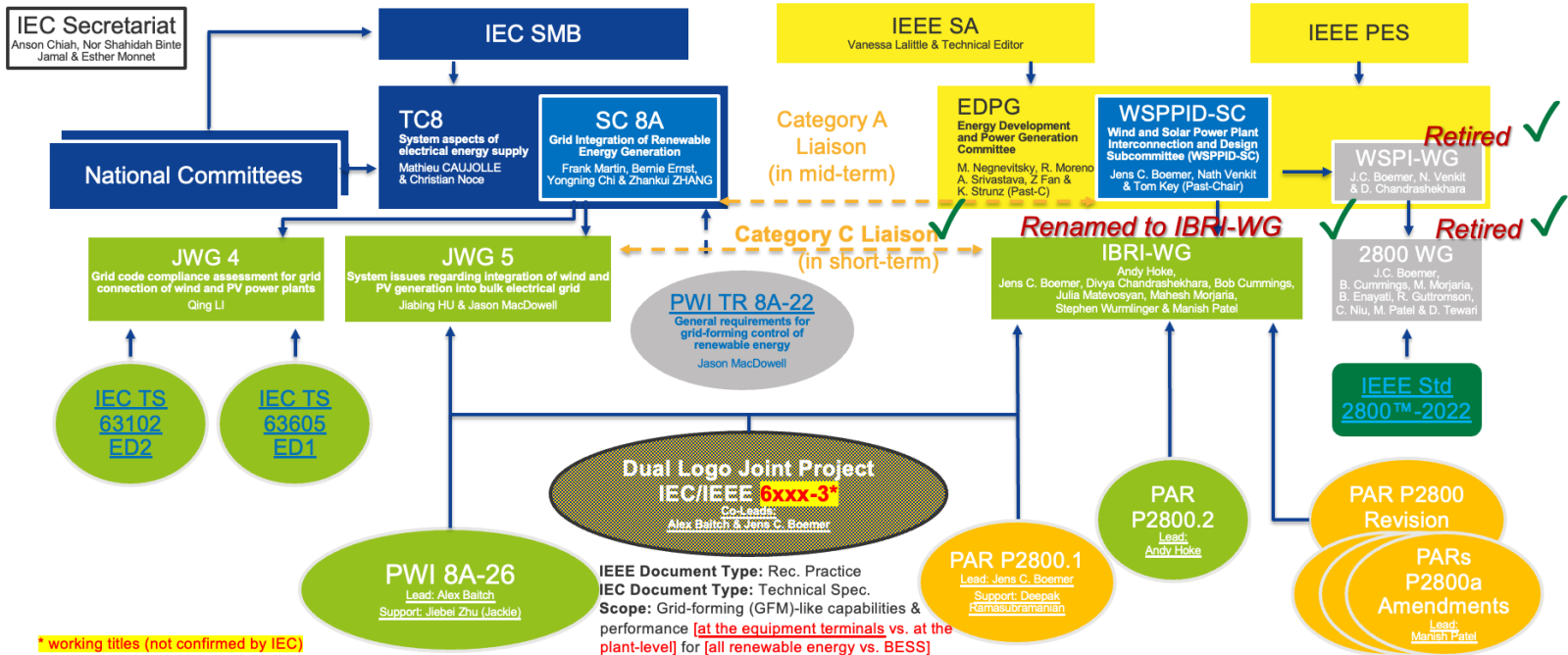
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# IEEE/IEC Joint Standardization



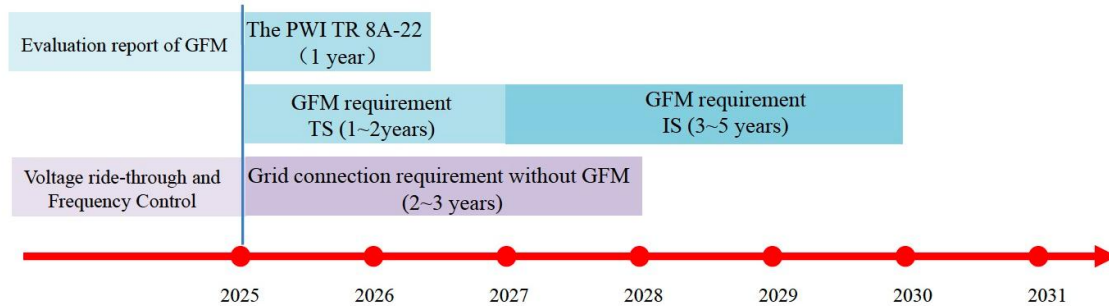
Last updated: 11/06/2025

**Legend:**

- Dormant WG or Project
- Retired WG or Project
- Published Document
- Active WG or Project
- Proposed New Project or Liaison



# IEC IEC and IEEE Mapping



- ❑ The title of the PWI TR 8A-22 and contents was reconsidered with focus on GFM behaviors.
- ❑ The GFM pre-project led by Alex Baitech is actively advancing, pending further feedback from the IEEE.
- ❑ Based on the working group meeting, the standard related to non-GFM IBRs will be developed as a single document.