



Global Partnerships for accelerating development and deployment of innovative solutions for the clean energy transition

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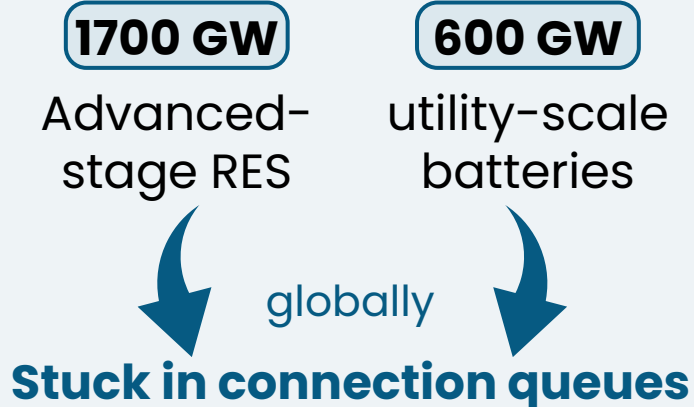
8 October 2026, Tokyo, Japan

ICEF2026 Plenary 2: Global Partnerships and Practical Solutions for Secure, Flexible, and Resilient Power Systems



25 million km of power lines are needed by 2035 to meet expected demand growth

Grid **expansion** is not keeping the pace



Source: [IEA](#) (2026)

Power grids: The real enablers of the energy transition

Grid Flexibility Needs

Growth in global system flexibility **2019 → 2050** (Source: [IRENA](#) 2026)



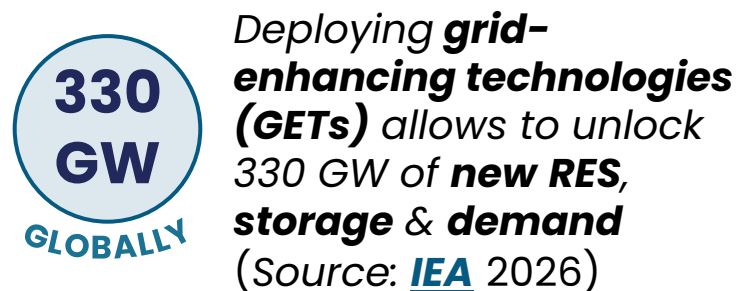
RES mix shapes flexibility needs

- higher **solar** share drives **daily flexibility needs**
- higher **wind** share drives **weekly and seasonal needs**

Suitable solutions

- **Batteries** and **demand response** for daily balancing
- **Interconnections** and **LDES** for weekly-to-seasonal flex. needs

Grid-enhancing Technologies



Key solutions to enhance resources grid integration (dynamic rating, advanced network control, etc.)

Goal: to demonstrate that, by **2030**, power systems in different geographies and climates can effectively integrate **up to 100% variable renewable energies** in their generation mix while maintaining a cost-efficient, secure, and resilient system.

GPFM Flagship projects

Flagship Project 1
**"5 Demos in Five
Continents"**

Flagship Project 2
**"Multilateral Research
Programme"**

GPFM Knowledge-sharing
Platform
"GPFM Toolbox"

2021

2030

GPFM Coalition: Public - Private Partnership



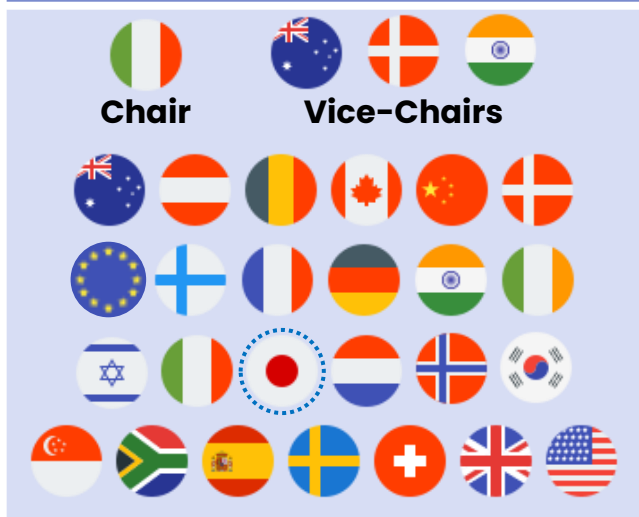
National Pilots Report 2026

107 Pilot Projects
25 GPFM members
10 Countries
8 National funding programmes





Executive Committee

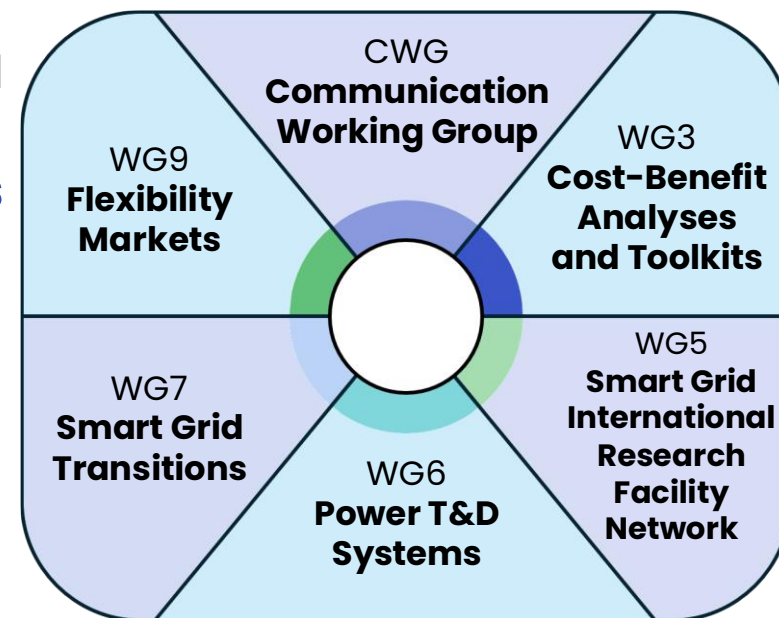


Technology
Collaboration
Programme
by IEA



The **International Smart Grid Action Network (ISGAN)** is a strategic platform to support policymakers and high-level government attention and action for the accelerated development and deployment of **smarter, cleaner and more flexible electricity grids** around the world.

The work of ISGAN
is organized in
6 WGs



25 Active Members

5 Continents



ISGAN Awards Themes (2023–2026)

2023	2024	2025	2026
"Artificial Intelligence for Smart Grids"	"Flexibility for Grid Resilience"	"Solutions for Enhanced Grid Operation"	"Long-Term Planning of Smart Distribution Grids under Uncertainty"



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