



APEC Expert Group on
New and Renewable Energy Technologies

EGNRET 64

Self-funded Project (Concept Note)

AI-Driven Wind Power Development in the APEC Region

Chinese Taipei

1 April, 2026 @ Bangkok

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Background and Issues

Joint Statement

2025 APEC Energy Ministerial Meeting (EMM15)

Busan, Republic of Korea @ 27-28 August, 2025

- **AI enhances energy systems** by improving forecasting, demand management, energy optimization, and overall system efficiency, security, and reliability.
- **Responsible AI deployment** is essential to address rising energy demand, especially from data centers, while ensuring safety, security, accessibility, trustworthiness, and reliability.

Background and Issues

- **Core Challenges:** Greater intermittency and forecasting uncertainty are complicating grid integration and intensifying O&M requirements.
- **AI as a Solution:** AI enhances system resilience through more accurate forecasting and predictive maintenance.
- **Key Barriers:** Advancement is hindered by uneven AI adoption, insufficient practical knowledge-sharing, and outdated regulatory frameworks.



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Objectives

- Identify and categorize practical AI deployments within the wind power infrastructure
- Benchmark international practices and technological approaches across the energy sector.
- Strengthen regional synergy through structured knowledge exchange among APEC member economies.

● Implementation Period: 1 May 2026 – 12 December 2026

Outputs

- **Forum:** A forum for **sharing international experiences and exchanging views** on AI applications in wind power development. (@ EGNRET 65)
- **Final Report:** A comprehensive report integrating the **forum's outcomes, expert insights, and perspectives from member economies.** It examines AI applications, stakeholder roles, and regulatory frameworks to support optimized wind power integration and improved system efficiency.

Thank you for your attention

**Welcome member economies to join the project
as co-sponsoring economies.**

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