

ASIA CLEAN ENERGY FORUM 2025

2–6 June | ADB Headquarters, Manila



Pre-Forum Event

Energy For All: European Models of Inclusive Access

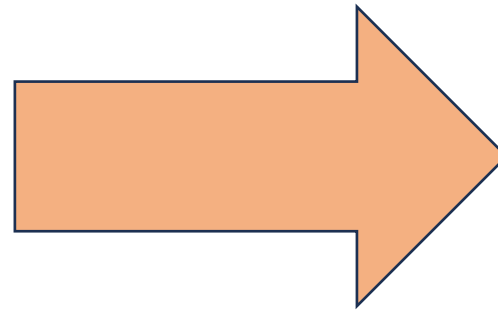
2 June 2025 (Monday) • 14:00 p.m.–15:45 p.m.

*Jaimes Kolantharaj,
Principal Energy Specialist,
Energy Sector Office, ADB*



Lessons: European Model for Inclusive Access

R⁴



D⁴

- ✓ **Reforms**
- ✓ **Renewable Energy**
- ✓ **Resilience / Reliability**
- ✓ **Regional Cooperation**

- ✓ **Democratization**
- ✓ **Decarbonization**
- ✓ **Decentralization**
- ✓ **Digitalization**



Navigating Clean Energy Pathways: ADB Initiatives

Global Investment Trends

Energy Access and RE Investment

- ☐ Investments in renewables exceed fossil fuel.
- ☐ Grids and renewables expansion
- ☐ Strengthening grid infrastructure.

RE Integration, Energy Equity & Inclusiveness

- ☐ Digitalizing and modernizing grids
- ☐ Emerging markets and developing economies.
- ☐ No community is left behind.

Investment and Financing Needs

Global Requirements

- ✓ Annual investments in grids: \$600 billion
- ✓ At least \$350 billion needed in emerging markets
- ✓ Over 80 million kms of transmission lines by 2040

Regional Focus: Asia

- ✓ Rapid increase energy demand and affordability
- ✓ Smart grids and digitalization for RE integration
- ✓ Interconnections for regional power trade

ADB Initiatives and Focus



Power Evacuation and Strengthening Rural Grids

- ☐ RE integration and efficiency improvement
- ☐ Digitalization



Cross Sectoral Interventions Using RE

- ☐ Supporting water-energy-food nexus
- ☐ Greening transport and hard to abate sectors



Battery Energy and Emerging Storage Solutions

- ☐ BESS (grid scale and distributed)
- ☐ Pumped hydro (long term storage options)



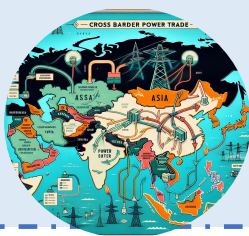
Enhancing Community Involvement

- ☐ Support local employment and RE skilling
- ☐ Develop skilled workers in RE sector



Distributed RE and Productive Energy Use

- ☐ Rooftop solar and virtual net-metering
- ☐ Empowering prosumers



Regional Power Trade and Interconnections

- ☐ Potential SASEC, CAREC, BIMSTEC, ASEAN and GMS interconnections and power trade



RE & Digital Solution's Potential to Inclusive Development



Creating a Resilient Power Supply



Predicting and Balancing Power Fluctuations



Smart Maintenance to Extend Equipment Life



Helping Communities to Become Smart Prosumers



Real Time Monitoring

Few Examples of ADB Interventions

Sri Lanka:

- ❖ **AI and Digital Transformation Project** for integration of decentralized renewables
- ❖ **Virtual Net Metering Project** benefits low-income SME's and consumers with no possibilities to access own rooftop PV

India:

- ❖ **Maharashtra: Cross Sectoral Intervention to Solarize Agricultural Feeders Project** developing resilient rural distributed RE 18 GW and digital twins. Supports green skilling and employment creation in rural areas.

Pacific Islands and Maldives:

- ❖ **Mini grids and hybrid systems.** Displace diesel-based generation to RE based systems
- ❖ **Energy –water – Food Nexus (Maldives).** Renewable Energy based desalination plant to provide water for agriculture (including rainwater harvesting and modern irrigation solutions)
- ❖ **Supporting Fisheries using RE (Maldives).** Renewable Energy based ice making plants run by women development councils to support Fisheries.
- ❖ **Renewable Energy Based Ferry (Maldives).** Solar battery based renewable energy ferry to decarbonize Marine Transport.



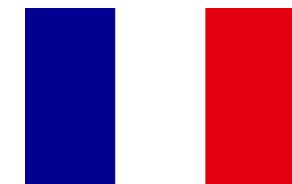
Speakers: with Innovative and Emerging Solutions

- 🎯 Interesting set of presentations covering
- 🎯 Innovation and Emerging Technologies potential to address DMC issues

❖ AI Driven EMS Energy Management Systems



❖ Smart metering and its efficient AMI integration



❖ Energy Efficiency (Industrial decarbonization)
- Hard to abate sector



❖ Innovative Vortex Turbines (low head Hydro)



ASIA CLEAN ENERGY FORUM 2025

2–6 June | ADB Headquarters, Manila



THANK YOU!!