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# India SMART UTILITY Week 2025

**Session : POWER MARKETS AND CARBON MARKETS**

## Scaling Climate Finance

***Presented By***

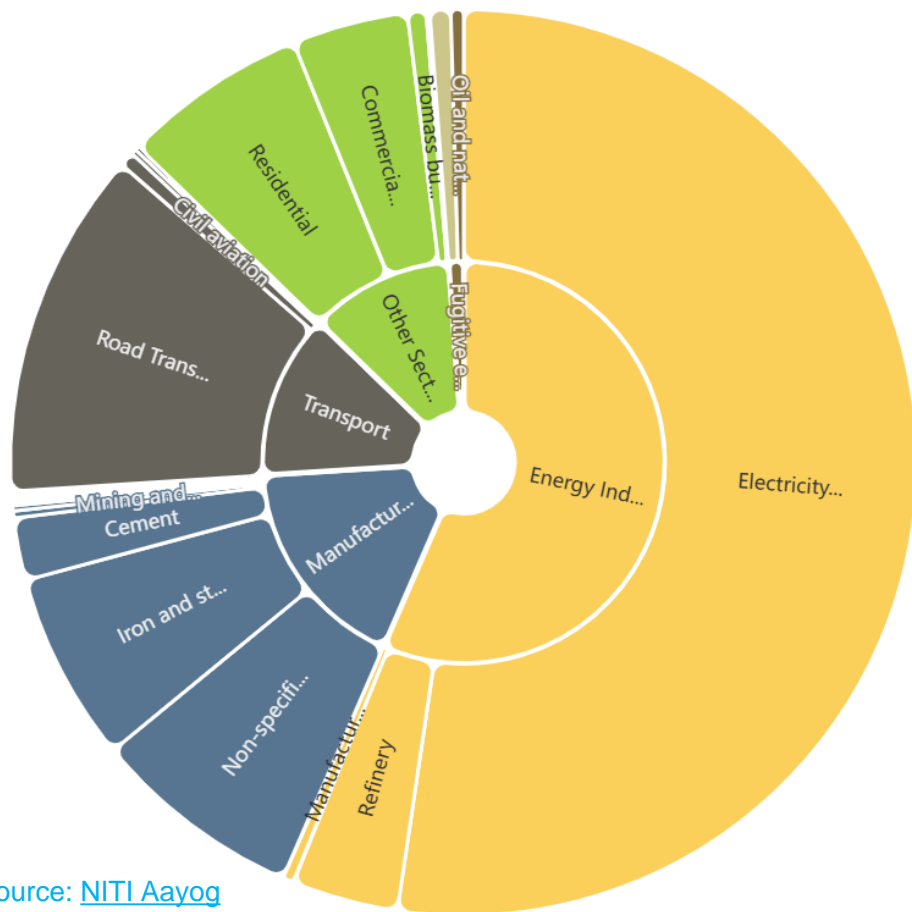
***Apurba Mitra, IETA India Taskforce Cochair and Partner, KPMG***

# Insufficient Climate Finance in Power Sector



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55%

Emissions driven by Electricity in India



Massive investments required in clean energy, grid modernization, emerging clean technologies, process electrification and energy efficiency

Finance gap is huge

**\$2.5t** By 2030 to meet NDC targets | Government of India  
**\$1.4t** By 2050 for renewable energy expansion | IEA estimates, 2021  
**\$10t** By 2070 for net-zero goals | CEEW analysis, 2022

**Current flow of finance is insufficient with a financing gap of USD 50-55 billion every year in the power sector alone**

# Why Integrate Carbon & Power Markets



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## Clear Pricing Signals

Cost of carbon emissions should ideally get reflected in electricity prices

EU-ETS | cost of allowances is passed on to consumers in the form of higher electricity prices.



## Private sector investments

Improves investor confidence with **predictable carbon prices** and clear incentives

Clean energy will **give strong financial returns** with internalization of carbon emissions in prices



## Brings more flexibility

Power producers can choose between most efficient way to cut emissions. **Companies can either invest or purchase credits to adopt energy efficient measures**



## Supports India's climate goals

500 GW of non-fossil capacity by 2030 requires approx. USD 1.4 trillion investment | This will expedite the financing in a cost-effective manner

# Case Study – Indonesia Energy Transition Mechanism



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## Energy Transition Mechanism

To accelerate energy transition in Asia and Pacific away from coal-based energy.



## How it works?

ADB working with regional and international partners to support, study, and pilot scalable ETM



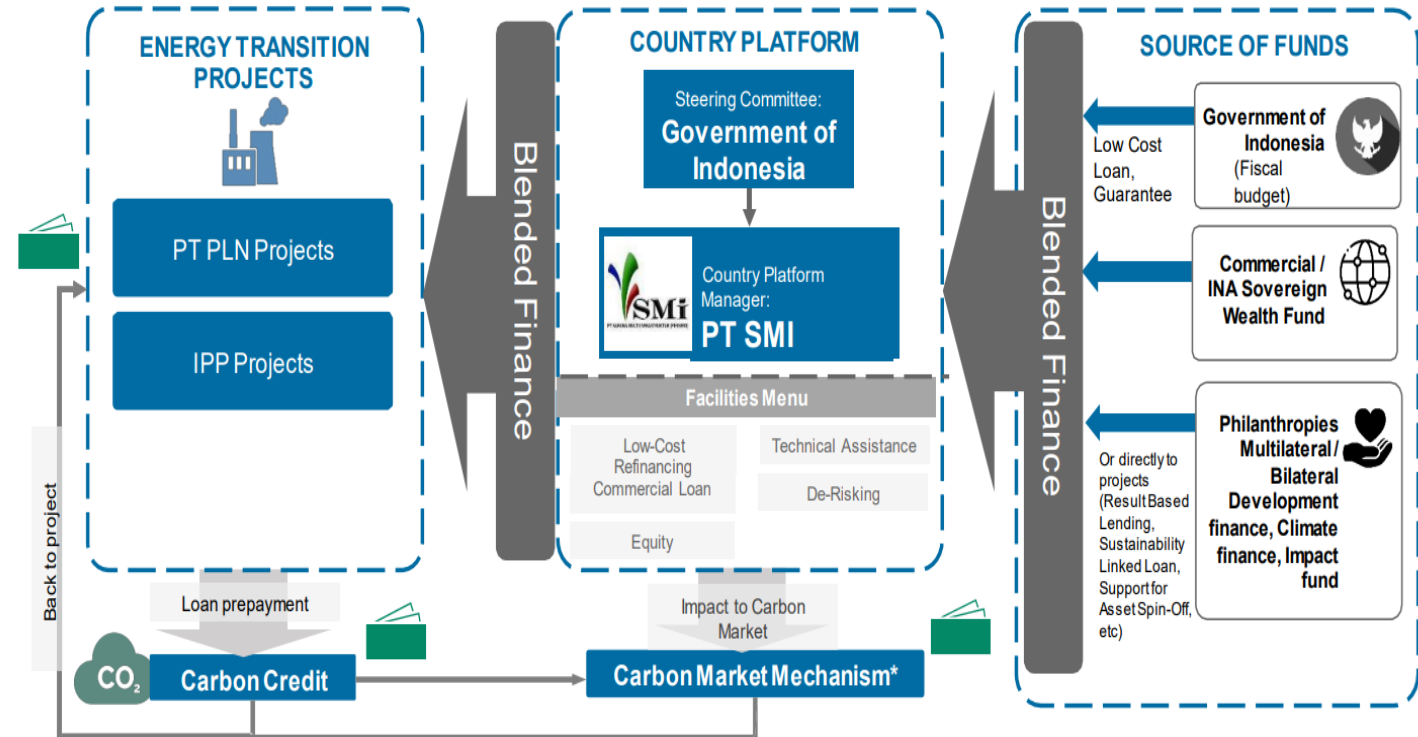
## Target

Accelerate climate action, reduce energy costs, drive investment, provide scalable model



## Objective of Indonesia ETM

- Optimize energy mix progression based on National Energy Policy
- Enhancing emission reduction in electricity subsector to achieve NDC and NZE targets
- Accelerate early retirement of coal-fired power plants
- Boost RE power generation investment



## Blended finance structure on Indonesian Energy Transition Mechanism

- Combines carbon market mechanism for energy transition projects with blended finance facility for the energy sector in Indonesia.
- Structured to direct carbon credit proceeds to further incentivize mitigation action.
- Different climate finance sources blended for energy transition further reduce cost of energy transition in Indonesia.

# Key Recommendations: A call for bold actions



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## Unified Carbon Market linked to

- Linking ETS with RECs to bring flexibility in compliance
- Stronger Carbon price realization will ensure meaningful emission reductions.
- Bringing Thermal power plants into compliance market ambit

## Innovative Climate Finance

- Power companies can explore issuing carbon linked green bonds with carbon reduction linked interest rates.
- India should actively think of setting up National Climate Finance Facility to blend public, private and concessional capital for clean energy projects.
- Carbon index electricity tariffs will help in faster energy transition while cross-incentivizing clean energy projects.

## Renewable Purchase

- RPO compliance must be standardize across the States
- Access RPOs can be traded between the States on the lines of US Renewable Purchase Standards (RPS)

## Mobilizing International

- Linking Indian Carbon Market with Article 6 of the Paris Agreement can be explored in the longer run
- Enhance Multilateral Financing for Clean Energy Infrastructure expansion
- Developing green Infrastructure Investment Trusts (InVITs) to channel pension and sovereign fund investments into clean energy projects



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Links/References (If any)