Scaling up the Energy Transition Mechanism in Southeast Asia: Process and Achievements

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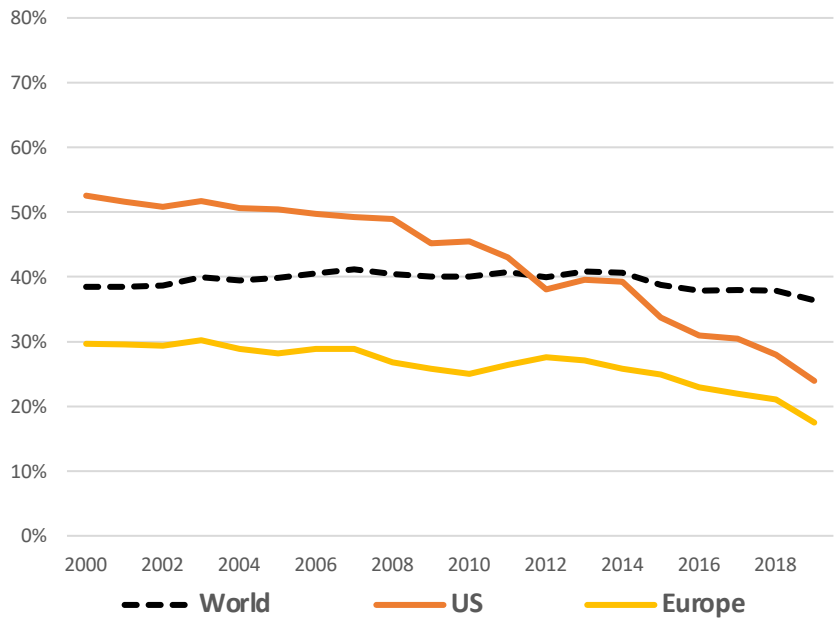
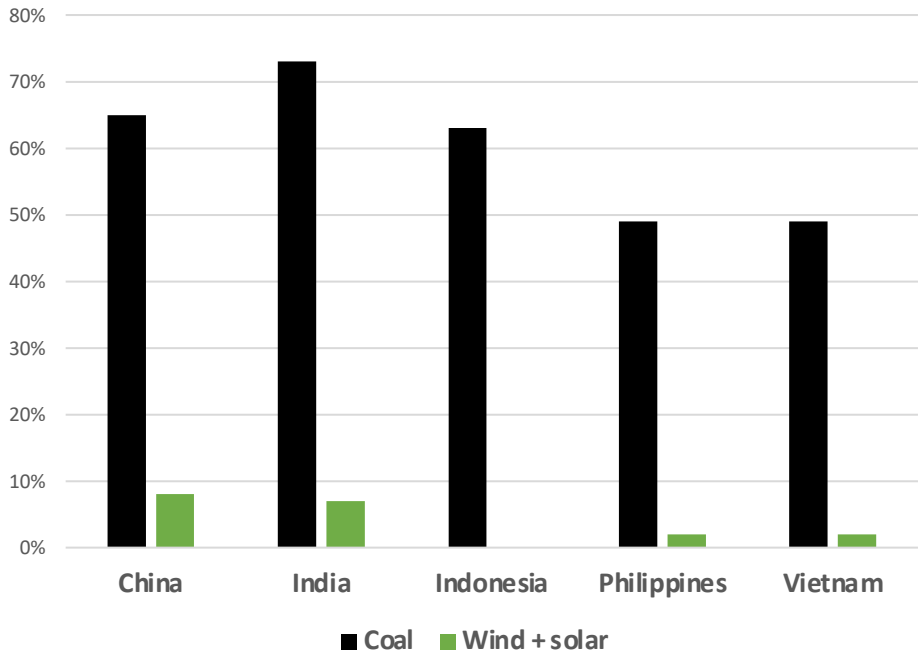
June 2023

Coal-fired electricity must drop, but remains significant in developing Asia

Share of coal-fired power generation dropped in Europe and the US…



…but remains very high in Asia (2019)

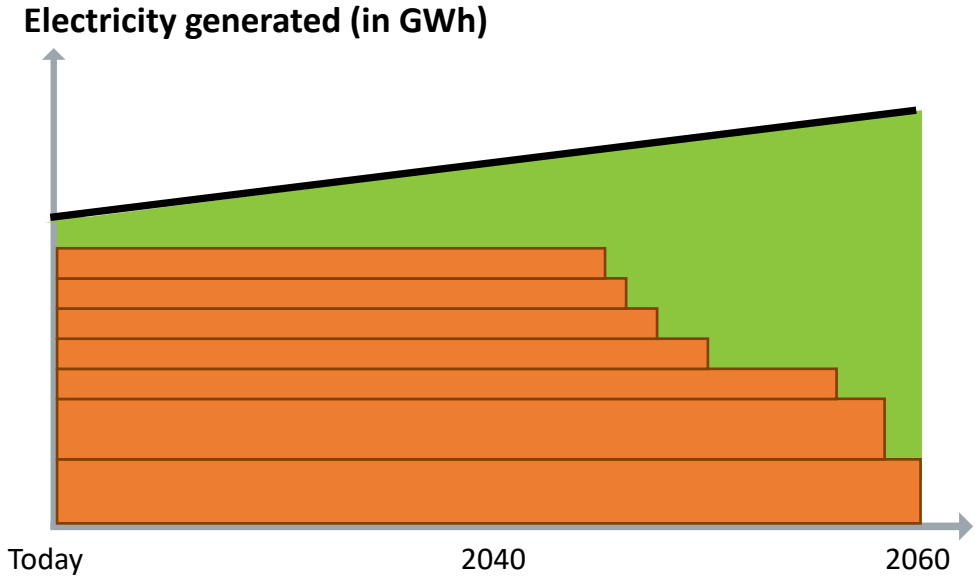


Large-scale solution needed to simultaneously and rapidly decarbonize and build up clean energy in Asian developing countries.

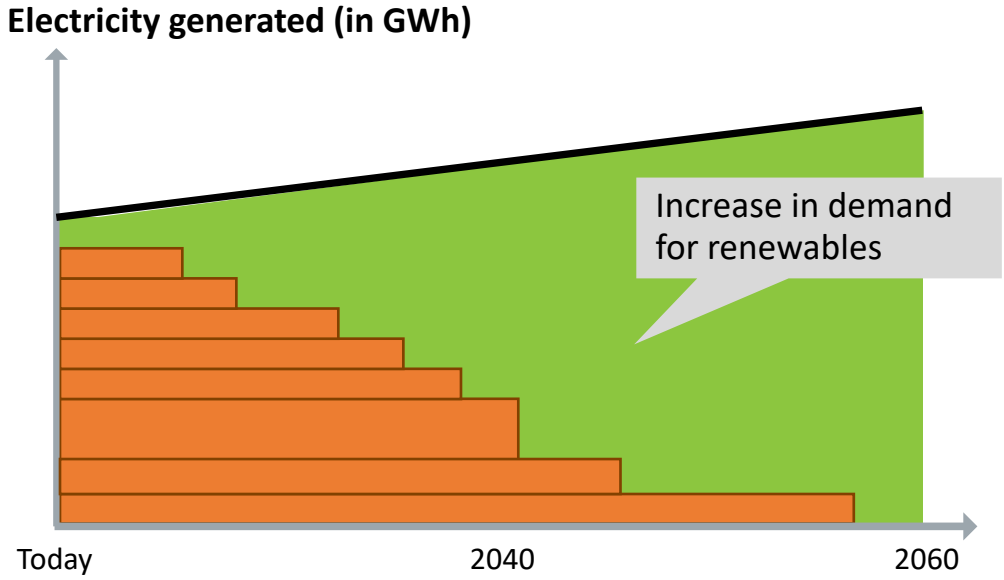
Source (left): Carbon Action Tracker 2020 and calculations based on IEA Data
Source (right) : BP “Statistical Review 2020”; IPCC “Special Report on Global Warming of 1.5°C”
Author: Donald Kanak (WEF blog "How to accelerate the energy transition in developing economies" https://www.weforum.org/agenda/2021/01/how-to-accelerate-the-energy-transition-in-developing-economies)

Why speed up the retirement of coal-fired power plants?

Business-as-Usual



With Energy Transition Mechanism



Total energy demand

Coal-fired generation

Renewable energy generation

Early retirement of existing coal-fired power plants can

- reduce emissions and improve population health,
- create additional demand for clean energy investments, and
- lower overall generation costs in the long-run.

ADB's Holistic 4P Approach Anchoring the ETM

People

Supporting just transition, protecting livelihoods and affordable electricity

- Just transition assessments, financing facility, and technical assistance
- Environmental and social safeguards

Policy

Supporting policies and regulations to accelerate energy transition

- Climate change policy programs
- Energy sector reform programs
- Sector analyses and advisory

Power

Promoting scalable, market-based model for reducing emissions from power plants

- Coal retirement and repurposing
- Investments in clean energy, storage, or grid

Partnership

Based on solid partnership with national and international stakeholders

- Governments
- International financial institutions and global climate finance
- Commercial lenders and investors
- Private sector
- Nongovernment organizations and civil society organizations
- Philanthropies

Energy Transition Mechanism (ETM)

Accelerating the transition from coal to clean energy

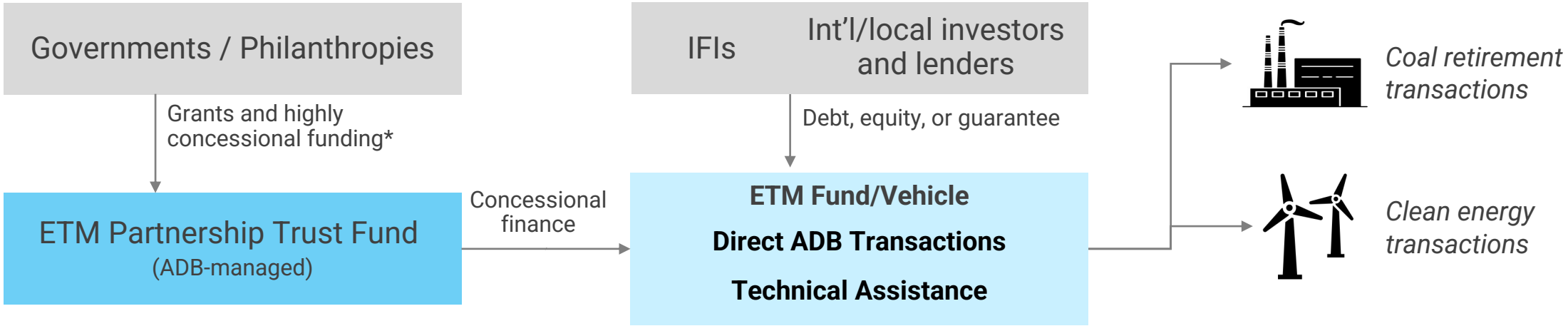
Background

An innovative mechanism is needed to intervene and accelerate the switch from coal to clean energy.

- Asia is responsible for over half of global GHG emissions and 80% of coal consumption.
- Once coal plants are built and commissioned, they operate for decades, locking in carbon emissions in the long-term.

ETM

- **Accelerates the retirement or repurposing** of coal-fired power plants and **scales up investment** in clean energy and energy storage using public and private finance through refinancing, acquisition or sustainability linked corporate loans.
- Aims to achieve **just and affordable transition** by addressing impacts to people and communities from coal retirement.



* Grants and highly concessional funding (low-cost equity and debt) are critical to catalyze private capital and make ETM a success.

Ongoing ETM Feasibility Study and Piloting

01 Project Selection

- Critical factors to focus on when selecting power plants:
  - Grid stability
  - Utilization
  - Plant age
  - Renewable replacement potential
  - Transactional appetite

02 Transaction Structuring and Financial Analysis

- Commercial and legal structure to efficiently retire the assets
- Valuation approach
- Role of existing stakeholders
- Cost of capital needed to achieve a significant lifetime reduction
- Potential additional revenue sources or costs (e.g., carbon and decommissioning)

03 Funding Vehicle Structuring

- Legal structure of ETM entity
- Capital structure and sources of funding
- Management structure
- Incentive structure
- Return expectations
- Major risks
- Safeguard policy
- Governance requirements

04 Environmental, Social, and Governance

- Replacement plan for retired capacity to ensure ETM has positive climate impacts
- Socioeconomic impact assessment of direct, indirect, and induced impacts in the coal value chain due to CFPP early retirement
- Planning of Just Transition activities and funding needs over short- and long-term
- Regional or country strategic environmental and social assessment of ETM options
- Asset-level audits

02 Transaction Structuring and Financial Analysis

Transaction models to accelerate retirement/repurposing of coal-fired power plants (CFPPs)

01 Acquisition Model[1] (SPV Level)	02 Synthetic Model (SPV Level)	03 Portfolio Model (Corporate Level)
ETM acquires share capital in CFPP	ETM invests senior/junior debt and/or other mezzanine capital to the CFPP	ETM provides funding to the corporate sponsor with CFPPs and greenfield clean energy projects
ETM to take role as owner and operator of the coal plant	Equity ownership and operational responsibility kept with the current asset owner	Sponsor guarantees greenfield clean energy projects will be built and coal plants retired ahead of schedule
ETM agrees an early termination date with the utility and operates the plant until that date and then closes it or repurposes	Investment conditional on early termination being contractually agreed with owner and utility and appropriate security being provided	Incentives (such as penalty interest) can be used to ensure that the transition occurs
Most suitable for **IPP plants with international bankable PPA**	Most suitable for **IPP plants with international bankable PPA**	Most suitable for **Utilities with a portfolio of plants**

While multiple transaction options exist, ETM will seek commitments from:

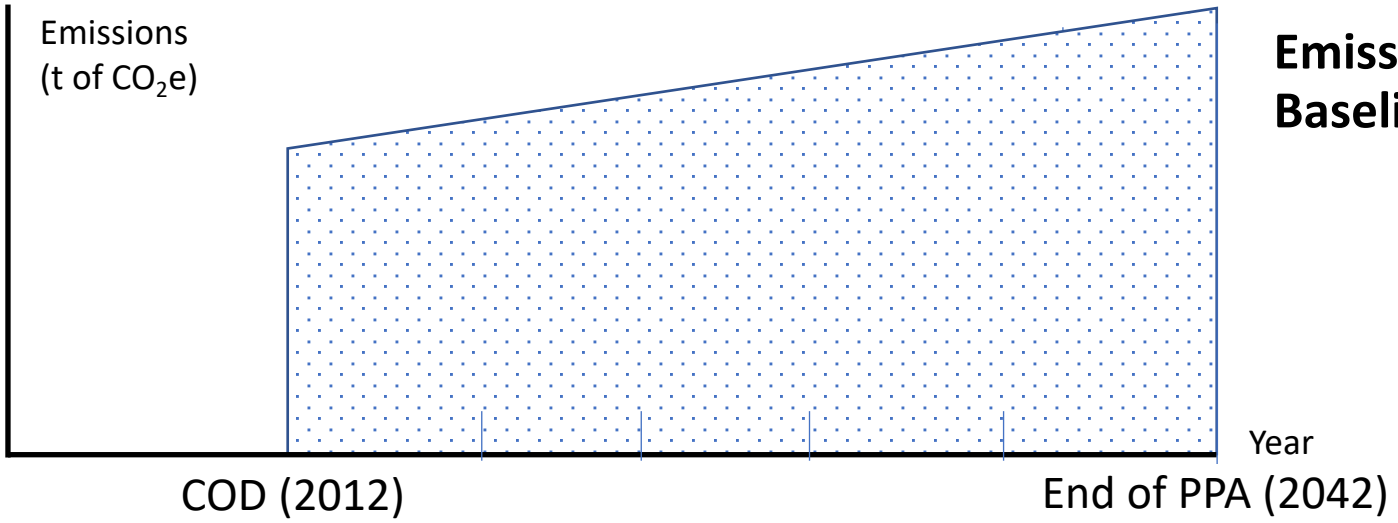
- **current project investors not to develop any new coal; and**
- **host country commitment to energy transition as a pre-condition for any deal.**

1. *Acquisition Model to be utilized only in exceptional scenarios.*

02 Transaction Structuring and Financial Analysis

Proposing a carbon methodology for CFPP early retirement

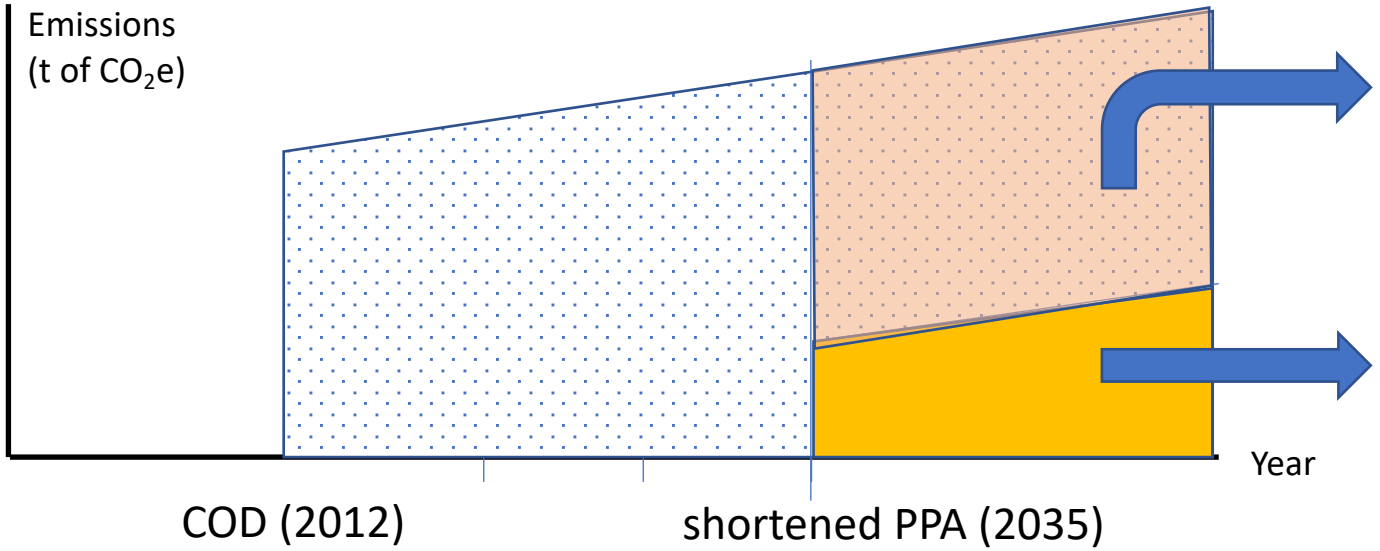
Baseline



Emission Reduction =
Baseline emissions – Project Emissions

Baseline emissions are the CO_2 generated by the combustion of coal in the power plant.

Project



Emission reduction from early coal retirement

Project emissions are CO_2 emissions due to replacement power generation once CFPP is retired.

CO_2 = carbon dioxide; COD = commercial operation date; PPA = power purchase agreement

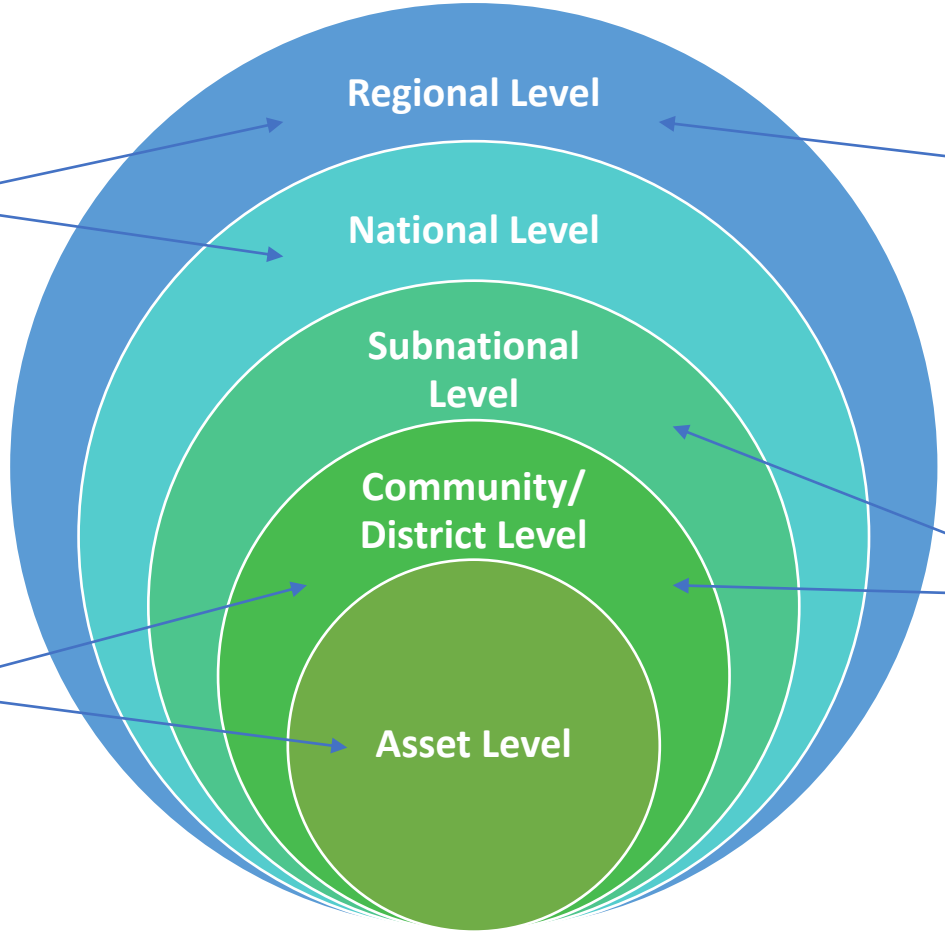
ADB's commitment to Safeguards and Just Transition are critical parts of ETM work

Comprehensive Approach to Just Transition under the ETM

Just Transition (JT) activities extend beyond the scope and implementation timeframe of ETM.

JT considers the geopolitical context and enabling environment, including policy frameworks, education systems, and economic structure.

ETM considers the direct, indirect, and induced impacts along the coal value chain and national system-level effects.



JT entails coordination with other development partners, stakeholders, and national or regional platforms, including the JETP.

JT considers the availability of alternative employment, potential for economic diversification, and impacts on local and subnational budget.

It mobilizes investments in social sector projects to strengthen the enabling environment.

JT activities include asset-level impact assessments, social dialogue, and development of JT plans, considering direct and indirect workers, employers, labor unions, and environmental remediation issues as well as communities in general.

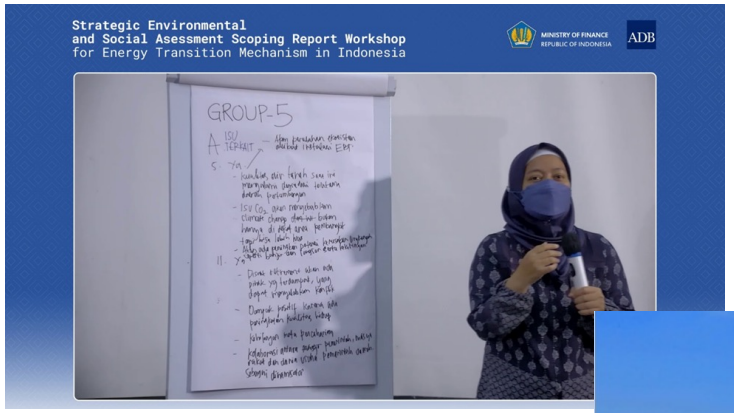
Together with ADB's social and environmental safeguards, Just Transition provides support for workers, communities, and regions impacted by the intervention of the ETM and associated projects, while preserving the environment.

04 Environmental, Social, and Governance

ADB's commitment to Safeguards and Just Transition are critical parts of ETM work

Strategic environmental and social assessment and stakeholder engagement

- A regional strategic environmental and social assessment (SESA) scoping study completed in 2022.
- Country-level SESA for Indonesia and SESA scoping study for Philippines are underway.
- Stakeholder analysis conducted and stakeholder engagement plan prepared for SESA
- Consultations with CSOs at regional and country level (Indonesia) conducted and will continue.
- A dedicated email address set up to allow for a real-time feedback (ETMfeedback@adb.org).



(left) A member of the SESA Consultative Forum presenting issues associated with different scenarios for energy transition at the national SESA workshop.

(right) SESA scoping study for Indonesia, published in March 2023.

(right) Government and NGOs participating during the hybrid SESA workshop held back-to-back with CSO consultation held in Jan. 2023 in Bogor, Indonesia.

Fiscal Policy Agency, Ministry of Finance, Indonesia. Strategic Environmental and Social Assessment – Indonesia.

Piloting ETM in Southeast Asia: Progress and Updates

Indonesia

- Technical support for the establishment of the Indonesia ETM Country Platform, aiming to mobilize domestic and international financial resources and support. MOF Regulation for ETMCP and MEMR decree for early retirement roadmap being finalized.
- Conducted 4 focus group discussions in 2022 in Jakarta, and 5th on Mar. 2023
- MOU signed for first ETM transaction exploring early retirement of the first coal power plant (Cirebon 1, 660MW)
- Submission of $500 million in highly concessional funding investment plan under the CIF-ACT program

Ongoing work:

- Finalization of feasibility report
- RBL and PBL processing
- JT studies being finalized
- Country SESA for INO
- Engagement with CSO/NGO community at national and subnational levels
- Power system analysis and grid impact studies

Philippines

- Conducted 2 joint MDB missions for the preparation of an investment plan under CIF-ACT.
- ADB's first climate action policy-based loan (May 2022) includes DOE and DOF commitment to establish an ETM financing framework, considering energy security and just transition.

Ongoing work:

- Full feasibility study ongoing
- Preparation of draft CIF-ACT Investment Plan, with Word Bank Group
- Continue discussions with private sector independent power producers on transaction structuring models and financial analysis
- Country SESA scoping study being initiated

Viet Nam

- Pre-feasibility study completed in 2021.
- ETM workshop held in May 2022, hosted by MONRE.
- VIE Country Partnership Strategy 2023–2026 highlights ETM support.

Ongoing work:

- Dialogue ongoing with key ministries to commence feasibility study in 2023
- Coordinating with development partners to support policies and regulations on energy transition

ETM: from a concept toward an operational program

Initial focus on Indonesia, Philippines, and Viet Nam with additional interest expressed by Pakistan and Kazakhstan.

Exploration of the first private sector ETM transaction in Indonesia (660MW plant).

Launch of the Indonesia ETM Country Platform at the G20 Summit in November 2022.

Catalyzing active participation from G7 countries including through discussions around the Just Energy Transition Partnership (JETP).

Collaborating with other DMCs in Asia, which are embarking on their own energy transition strategies.

Just Energy Transition Partnership (JETP)

An umbrella initiative for international support for just energy transition

- JETP was announced for South Africa at COP26 to help reduce emissions in the energy sector and accelerate coal phase-out with support from the International Partners Group (IPG), which consists of G7+ countries.
- JETP is being developed for India, Indonesia, Senegal, and Viet Nam.
- ADB is closely coordinating with the JETP IPG and will contribute where possible, including through the ETM.

Indonesia JETP (I-JETP)

- Indonesia and the International Partners Group (IPG) announced to mobilize an initial $20 billion in public and private financing over a 3–5-year period. Launched on 15 November 2022 at the G20 Leaders' Summit in Bali, Indonesia;
- JETP Secretariat launched on 16 February 2023, led by the Governments of Japan and the United States; hosted by Indonesia's Ministry of Energy and Mineral Resources;
- Four working groups established: Technical, Policy, Financing, and Just Transition workstreams to support the Secretariat's delivery of commitments under the I-JETP;
- Aims to support Indonesia's just energy transition through an accelerated deployment of renewable energy and a phase down of on-grid and off-grid coal-fired electricity generation;
- ADB to provide institutional support and implementation capacity to the Secretariat through a technical assistance.

Thank you!

ADB's Energy Transition Mechanism:

Increasing momentum from Glasgow COP26 to Bali G20 and Egypt COP27

Philippine Finance Secretary Carlos G. Dominguez, Indonesian Finance Minister Sri Mulyani Indrawati, and ADB President Masatsugu Asakawa during the ETM Launch at UN Climate Change COP26, Glasgow on 3 Nov. 2021.

- Indonesia and the Philippines joined as key partners to launch the pilot study for ETM in Southeast Asia.
- Japan's Ministry of Finance announced a $25 million grant, the first seed financing for ETM.
- The partnership was endorsed by senior cabinet-level officials from Denmark, the UK, and the US, as well as leading global financial institutions and philanthropies.
- MOU was signed with Rockefeller Foundation, including to accelerate the transition to clean energy.

Pres. Asakawa, Indonesia's Finance Minister Indrawati, World Bank Managing Director of Operations van Trotsenburg, and Islamic Development Bank Pres. Dr. Al Jasser launching the Indonesia ETM Country Platform on 14 Nov. 2022 in Bali.

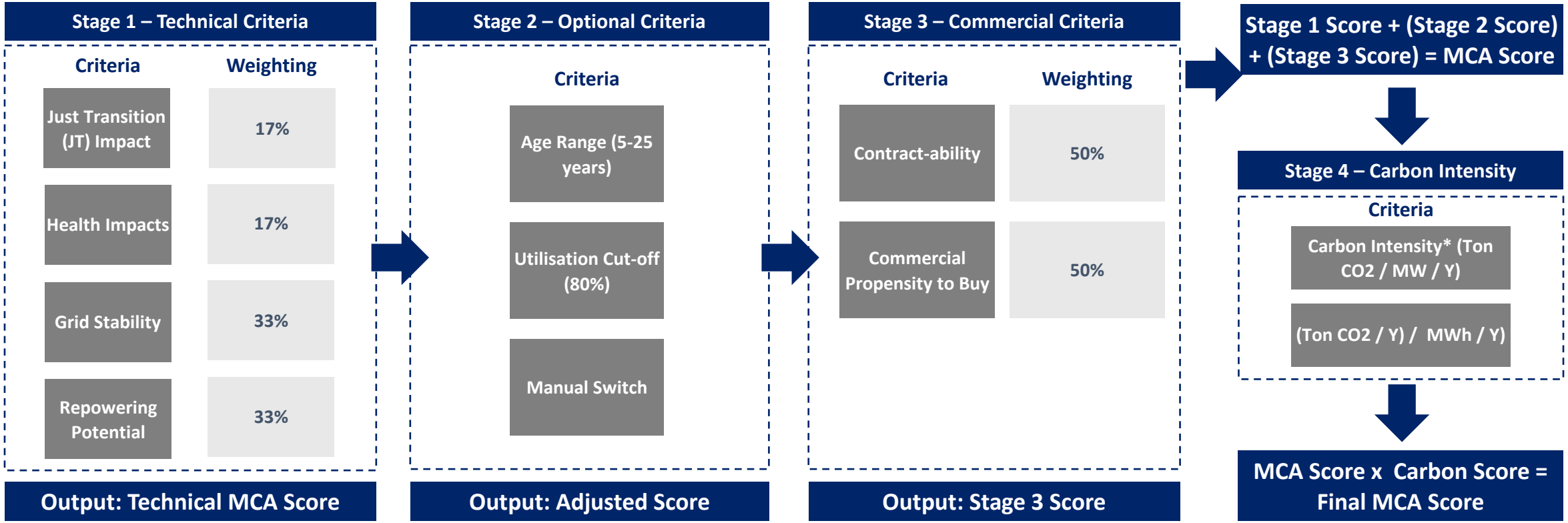
- The Government of Indonesia launches the Indonesia ETM Country Platform alongside key partners—ADB, Islamic Development Bank and World Bank.
- Signing of a MOU on the landmark precedent ETM transaction in Indonesia between ADB, PT Perusahaan Listrik Negara, Cirebon Electric Power, and Indonesia Investment Authority.
- Signing of MOU between ADB and PT Sarana Multi Infrastruktur, Indonesia ETM Country Platform Manager.

OneADB ETM Team led by SDCC DG Bruno Carrasco is joined by Germany's Anna Lührmann, Deputy Foreign Minister and State Minister, representatives from Kazakhstan and Viet Nam, and speakers from Bezos Earth Fund, Climate Policy Initiative, Glasgow Financial Alliance for Net Zero, Institute for Climate and Sustainable Cities, and Sustainable Energy for All during COP27 in Sharm El-Sheikh on 17 Nov. 2022.

- Germany's Ministry of Foreign Affairs announced its €30 million contribution to the ETM Partnership Trust Fund.
- Government representatives from Indonesia, Kazakhstan and Viet Nam provided updates on country-level ETM implementation.

01 Project Selection

Multi-criteria Analysis (MCA) for asset selection

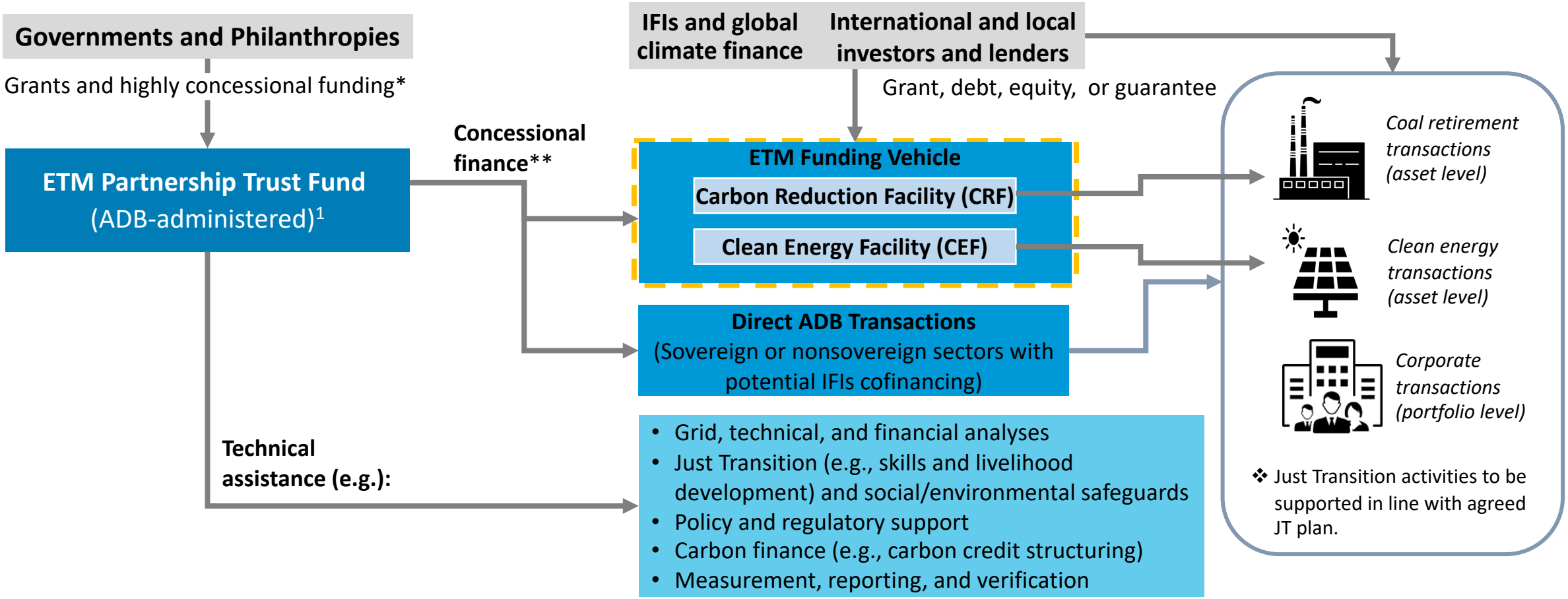


The MCA results can be aggregated separately by stage or by applying the multiplication of the carbon intensity measures.

03 Funding Vehicle (FV) Structuring

ETM Funding Vehicle structuring is ongoing

- **CRF** will leverage the power of a blended finance approach, to accelerate retirement / repurposing of coal-fired power plants (CFPPs)
- **CEF** will catalyze and channel investment in new renewable energy generation, energy storage infrastructure, and requisite grid upgrades

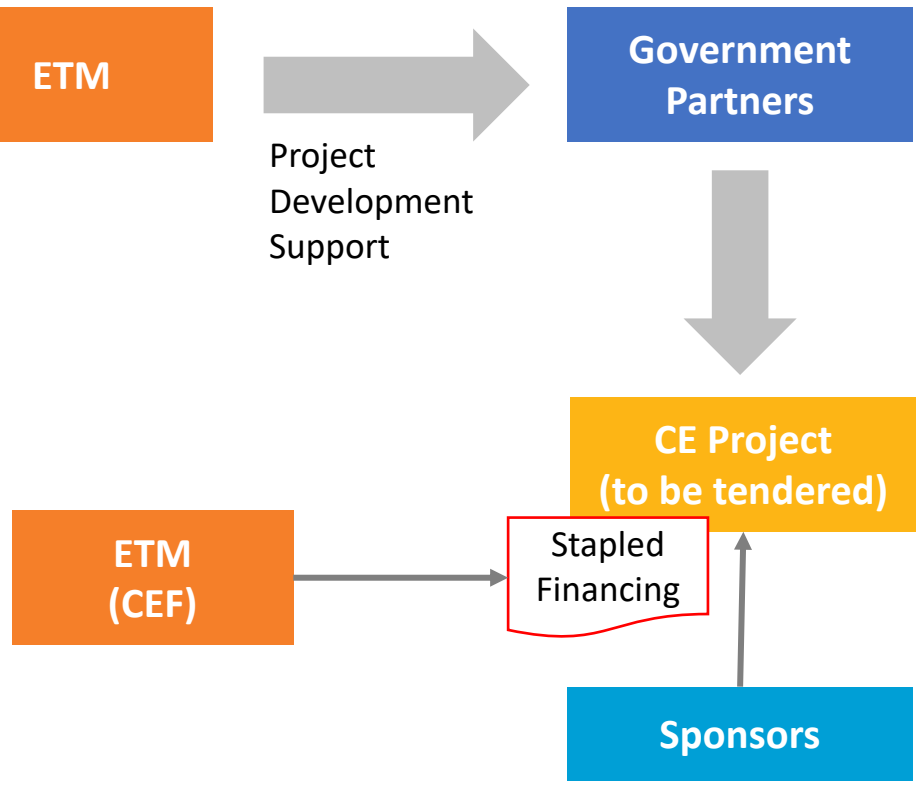


Funding Vehicle (FV) Structuring

NEW - CEF

CEF Value Proposition: ETM will support project preparation to generate pipeline and will provide stapled financing for clean energy projects

ETM CEF Conceptual Model



Project Development

- ETM will work with the government to develop renewable energy master plans and identify renewable project pipelines
- ETM will support project preparation of specific clean energy projects or grid enhancements, incl. preparation of FS, due diligence, project structuring and development of bankable project documents
- ETM can also provide tender assistance, if applicable

Financing Close

- ETM would provide attractive stapled financing attached to the project when it goes to the market for private sector sponsor participation through tenders or other means.
  - could include both commercial capital (subject to being competitive with market rates) alongside concessional funding
  - concessional funding can be used to de-risk project and/or address viability gaps
- The private sponsor would use ETM debt attached to the project for part of its funding needs.

ETM CEF is being considered as a mostly debt vehicle but we are possibly open to ideas of taking non senior debt positions on a limited basis.