



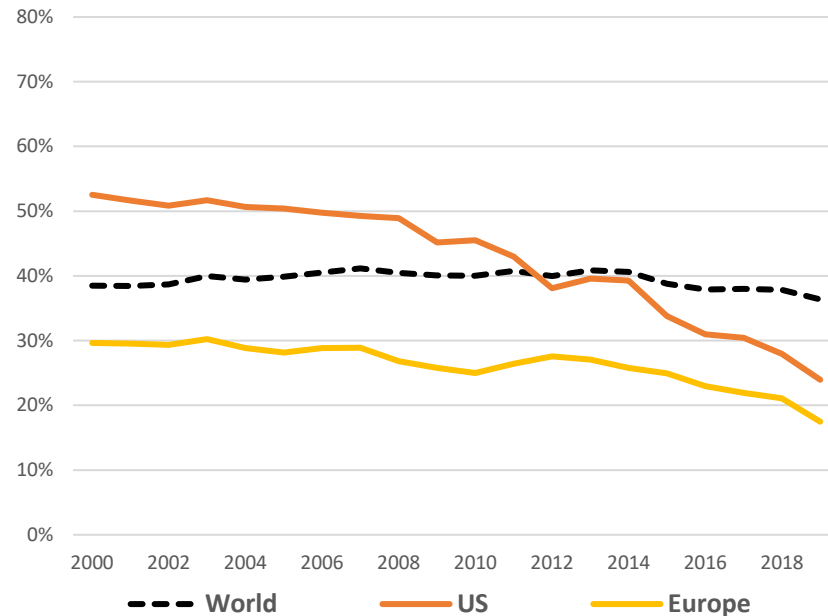
# The Energy Transition Mechanism Program for Southeast Asia

6 July 2022

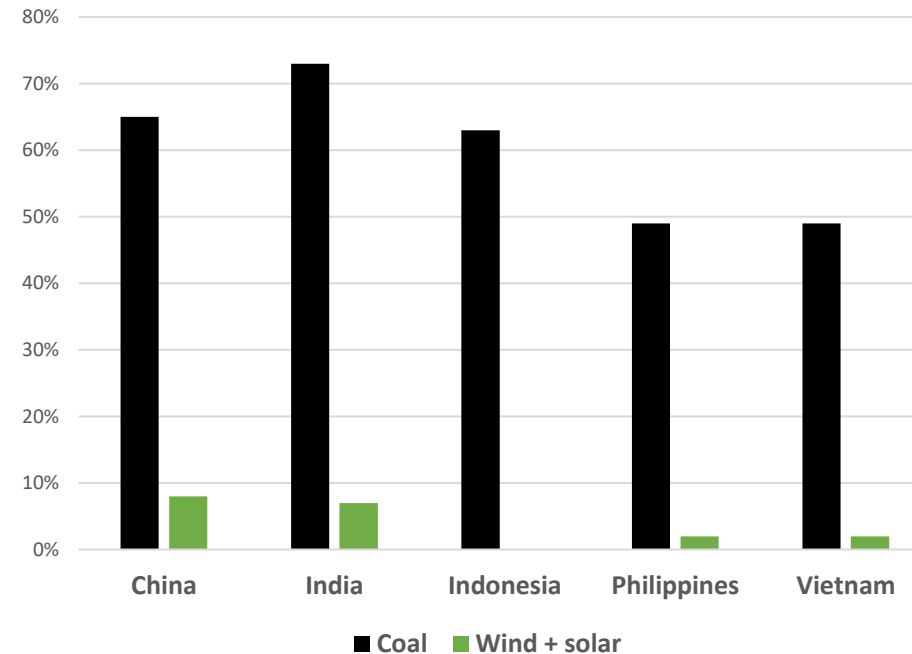


# Coal-fired electricity must drop, but remains significant in developing Asia

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 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>)

# ADB launched Southeast Asia ETM Partnership at COP26, Glasgow

- Indonesia and Philippines joined as key partners to launch the pilot study for ETM
- Japan's Ministry of Finance announced a \$25 million grant, the first seed financing for the ETM program
- 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 signed with Rockefeller Foundation, including to accelerate the transition to clean energy



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



*"I am pleased by the Asian Development Bank's work to accelerate the decommissioning of coal facilities. The world needs forward-thinking creative approaches to financing, especially from the multilateral development banks. And we need to find creative solutions so that our public funds crowd in additional private investment, as the bank is aiming to do here."*

- Janet Yellen, Secretary, US Department of the Treasury

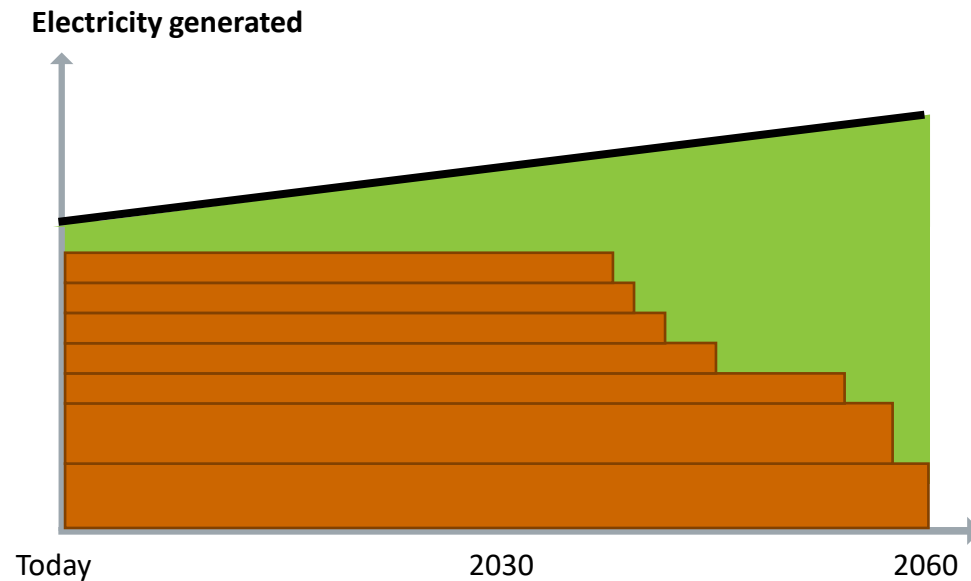
*"I want to thank the Asian Development Bank for its work, which will help bring many benefits. Cutting coal use doesn't just reduce the risks we face from climate change, it also reduces air pollution that kills so many people, including in Asia. Today's announcement will help to jumpstart more climate finance that helps to retire coal plants faster and improve many lives."*

- Michael Bloomberg, UN Secretary General's Special Envoy on Climate Ambitions and Solutions

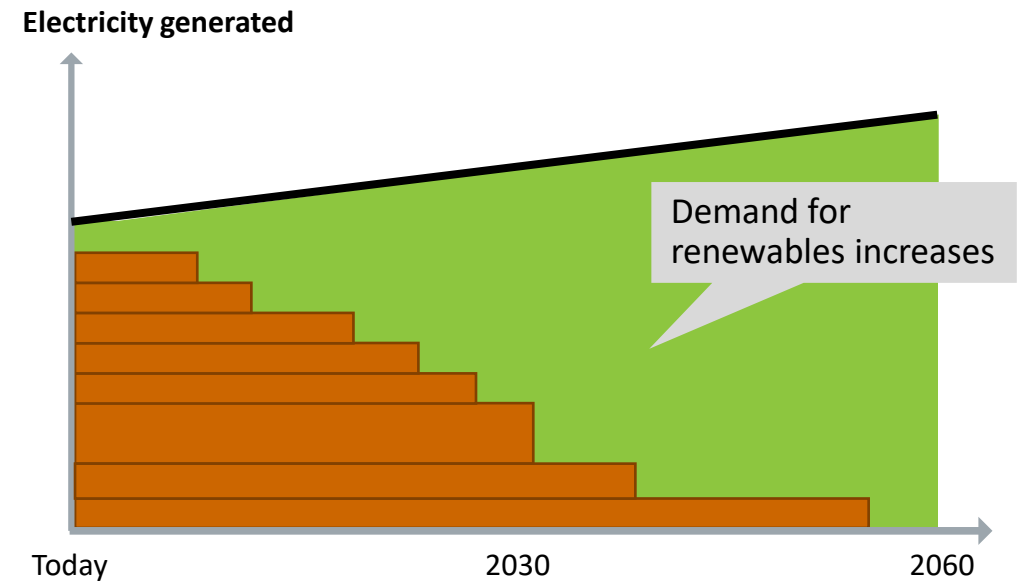


# Why speed up the retirement of coal-fired power plants?

## Business as Usual



## With the Energy Transition Mechanism



— Total energy demand

■ Coal-fired assets generation and retirement over time

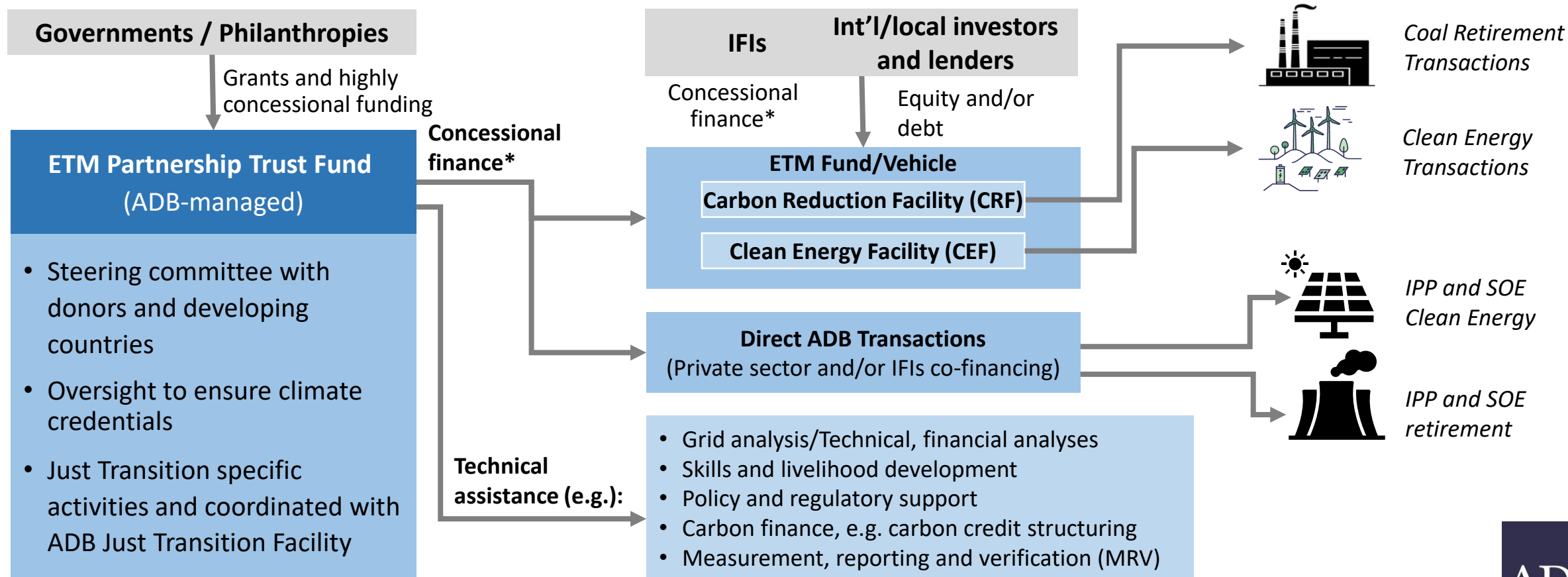
■ Renewable energy generation over time

### Retiring existing coal-fired power assets early can:

- reduce emissions
- create additional demand for clean energy investments
- lower overall generation costs in the long run

# The ETM program in a nutshell

- ETM: (1) accelerates the retirement of coal-fired plants using public and private finance through refinancing, acquisition or sustainability linked corporate loans; and  
(2) scales up investment in clean energy and energy storage.
- Grants and concessional funding (low-cost equity and debt) are critical to catalyze private capital and make ETM a success.



\* Concessional Finance could include concessional loans, evergreen debt, junior equity, and guarantees.

# Ongoing feasibility study is analyzing the challenges posed by the ETM

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/costs (e.g. carbon, decommissioning)

03



## Fund/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 the ETM has positive climate impacts
- Assessment of Employee, Community and Supply Chain (including informal sector) related concerns
- Assessment of Just Transition activities over short- and long-term
- Funding source for Just Transition activities to be enacted by the ETM

# Indonesia: assessment of potential plants conducted

	PLN	MEMR	ETM Feasibility Team
Approach Summary	<ul style="list-style-type: none"> <li>Identify assets for Spin-off</li> <li>Identify wider pool of assets for closure</li> </ul>	Two step approach to select candidates and then assess cost of early retirement	Multi Criteria Analysis (“MCA”) to develop a ranking across all plants in JB and Sumatra
Geography	Java Bali and Sumatra		
Key Issues Considered	<p><b>Spin-off</b></p> <ul style="list-style-type: none"> <li>Plant Technical and Operational Characteristics</li> </ul> <p><b>Wider List</b></p> <ul style="list-style-type: none"> <li>Grid Security</li> <li>Plant Technical and Operational Characteristics</li> <li>Commercial and Financial</li> <li>Environmental</li> </ul>	<ul style="list-style-type: none"> <li>Grid Security</li> <li>Plant Technical and Operational Characteristics</li> <li>Commercial and Financial position</li> </ul>	<ul style="list-style-type: none"> <li>Grid Security</li> <li>Plant Technical and Operational Characteristics</li> <li>Commercial and Financial</li> <li>Environmental</li> <li>Just Transition</li> </ul>

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

01

## Acquisition Model<sup>1</sup> (SPV Level)

ETM acquires share capital in CFPP

ETM to take role as owner and operator of the coal plant

ETM agrees an early termination date with the utility and operates the plant until that date and then closes it or repurposes

Most suitable for **IPP plants with international bankable PPA**

02

## Synthetic Model (SPV Level)

ETM invests senior/junior debt and/or other mezzanine capital to the CFPP

Equity ownership and operational responsibility kept with the current asset owner

Investment conditional on early termination being contractually agreed with owner and utility and appropriate security being provided

Most suitable for **IPP plants with international bankable PPA**

03

## Portfolio Model (Corporate Level)

ETM provides funding to the corporate sponsor with CFPPs and greenfield clean energy projects

Sponsor guarantees greenfield clean energy projects will be built and coal plants retired ahead of schedule

Incentives (such as penalty interest) can be used to ensure that the transition occurs

Most suitable for **Utilities with a portfolio of plants**

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

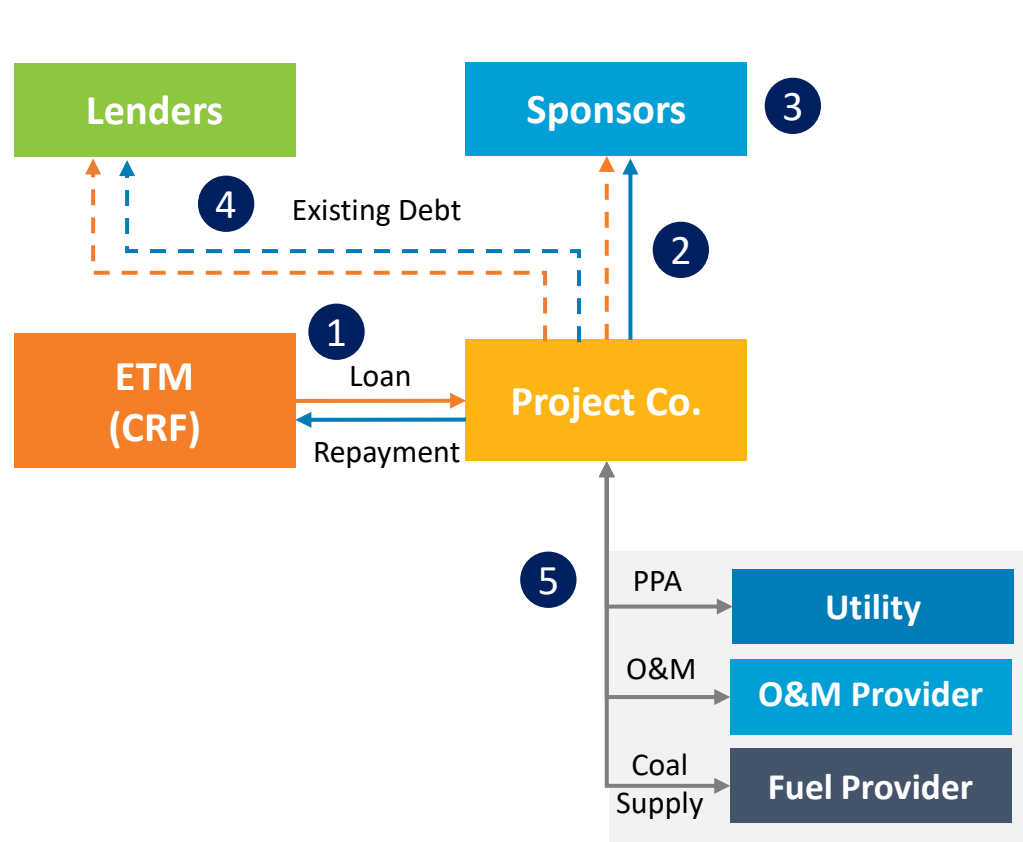
- **current project investors not to develop any new coal; and**
- **host country commitment to energy transition as a pre-condition for any deal.**

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



# Synthetic Model: ETM will re-leverage CFPPs with low-cost capital while existing owners remain involved as equity owners and operator

## ETM Synthetic Transaction Structure



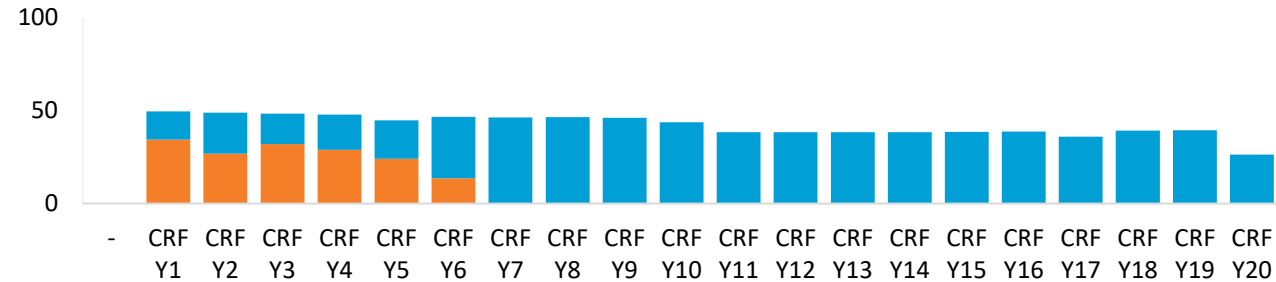
CFPP: Coal-Fired Power Plant

- 1** ETM invests in debt-like instrument into the project company and receives repayment based on sculpted cash flow (% of CFADS) over the investment horizon
- 2** Proceeds from ETM investment are paid to existing shareholders as a **special dividend** as a form of equity return. Existing shareholders continue to receive equity dividends (but at a lower level than without CRF)
- 3** Existing shareholders remain as **100% common shareholders** until the end of the shortened PPA tenure
- 4** Transaction to be structured for **existing financing arrangement to remain** (e.g. pari-pasu with CRF) or **fully exit**
- 5** Shortening of PPA tenure to be **contractually agreed with the Utility**; major project agreements (O&M, Fuel) to remain as is but with shorter tenor

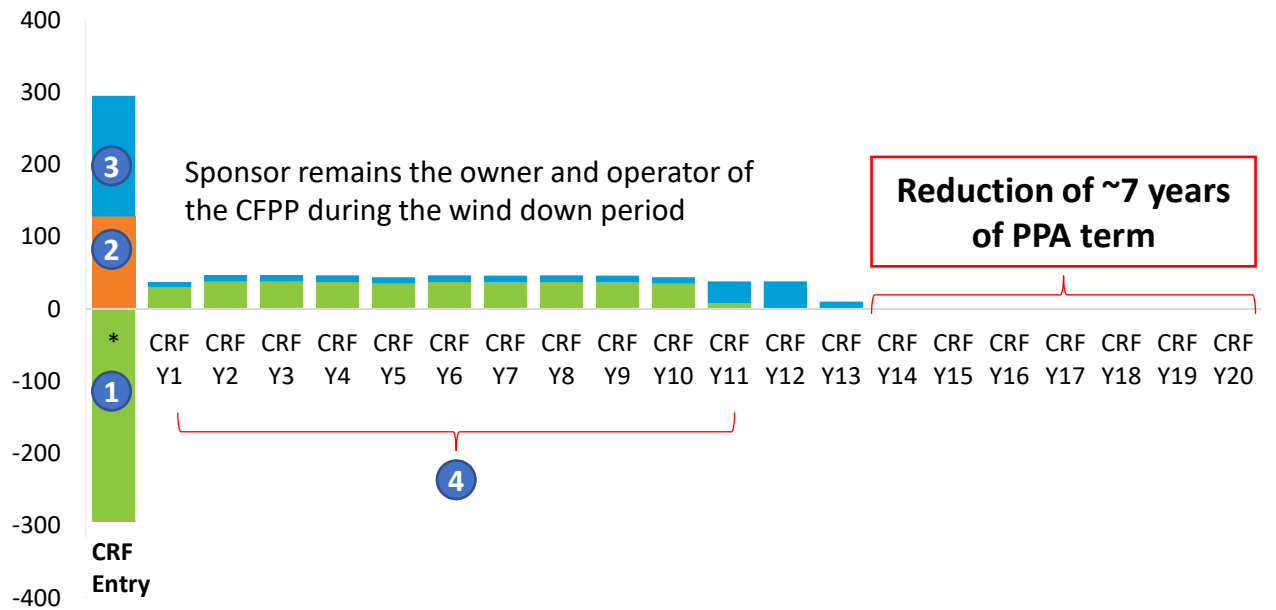
# Synthetic Model: Illustrative cash flow model

**Business as Usual  
(without CRF  
entry refinancing)**

Future cash flow (US\$ million)



**After CRF  
Investment**



- 1 \$300m ETM 10Y loan (funded by ~25% concessional capital) is provided to the project.
- 2 ETM loan proceeds are used to repay existing lenders.
- 3 Remaining ETM loan proceeds are used to pay a special dividend to sponsors, to compensate them for the economic loss due to the shortened operation period (same IRR as BAU scenario).
- 4 Project cash flows are used to repay ETM loan.

**Legend**

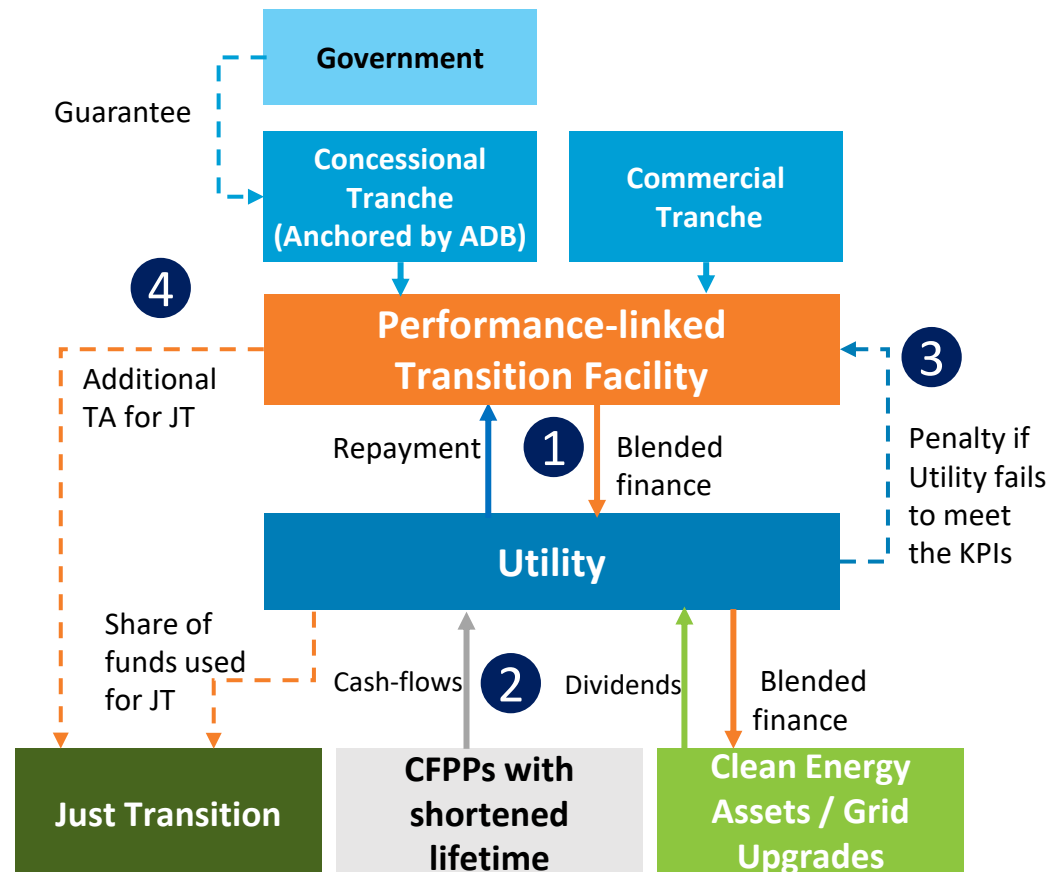
- Net equity cashflow
- Net debt cashflow
- Net CRF cashflow

**ETM’s market-based approach will significantly reduce coal plant life by re-leveraging with lower-cost capital from governments, multilateral banks, philanthropies, and private sector investors**



# Portfolio Model: ETM will provide a performance-linked transition facility with financing provided at the corporate level.

ETM Portfolio Transaction Structure



CFPP: Coal-Fired Power Plant

- 1 ETM to provide a corporate loan facility to Utility. KPIs could include items such as:
  - Individual coal plant shutdown (identified CFPP(s) to close)
  - Overall GW of coal plants closure by a certain date (Utility choose CFPP(s) to close)
  - CO2 reduction achievement - Utility and ADB/Financiers to agree a mechanism for calculating current emissions baseline and achieved CO2 reductions vis-à-vis this baseline
- 2 Utility uses cash receipt to shut CFPPs over time and use funding for renewable energy and grid upgrade projects
- 3 Utility to pay penalty for not meeting KPIs which may include
  - Penalty interest – level of concessionality of the loan would be reduced if KPIs are not met by applying a penalty interest (potentially cumulative since the inception of the loan)
  - Default – inappropriate use of funds or failure to meet KPIs could provide financiers the right to withhold future drawdowns and/or immediate repayment
- 4 Additional concessional capital/TA could be provided to help fund Just Transition (“JT”) activities

# Safeguards and Just Transition are critical parts of ETM work

## Regional Feasibility Study (SE Asia)

- Legal and regulatory assessments
- Technical and financial assessments
- ETM Fund/Transaction Structures

## Country Feasibility Study

- Identification of pilot assets
- Techno-financial analysis
- Country-level transaction vehicles

## Safeguards

- Scoping of environmental, socio-economic issues (regional)
- Environmental, social assessment of ETM (country level)
- Coal retirement plans, impact assessment for renewables

## Just Transition

- Quantitative socio-economic impacts assessments (regional, country and local/province levels)
- Plan mitigation measures and financing of direct impacts
- Technical assistance and coordination of concessional finance through ADB's Just Transition Facility

# Indonesia: key events leading to G20 Leaders' Summit/COP 27

Event	Date	Location
Sustainable Finance for Energy Round Table	14 July	Bali
Focused Group Discussion III	4 August	Jakarta
Focused Group Discussion IV	27/28 September	Jakarta
<b>G20 Leaders' Summit / COP 27</b>	<b>November 7-18</b>	<b>Bali / Sharm El-Sheikh</b>

## Target by G20 Leaders' Summit / COP27

- **National Energy Transition Planning**
  - Just Energy Transition Roadmap for Indonesia, including coal to clean energy in power sector
  - Announcement of enabling policies and mechanisms to reduce coal usage and increased use of renewables
  - Announcement of the launch of the Indonesia Country Platform
- **Assets / Transactions**
  - Announcement for both IPP and PLN power plant transactions for accelerated retirement/repurposing
  - Announcement of cancellation of pipeline coal-fired power plant projects.
- **Financial support**
  - Contributions committed by G7 (JETP), multilateral-bilateral, private sector to support above activities

# Philippines: background and updates

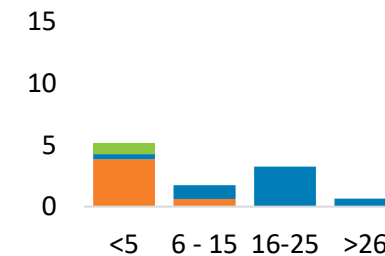
## Update:

- Early stage of preparing feasibility study; key issues include the setting of baseline for CFPP's operational life
- Preparation of an Investment Plan (IP) under the Climate Investment Funds (CIF) Accelerating Coal Transition (ACT) window ongoing
- Discussions initiated with private sector IPPs around the synthetic model and analysis on going
- ETM concepts used by one private sector to announce accelerated coal power plant retirement

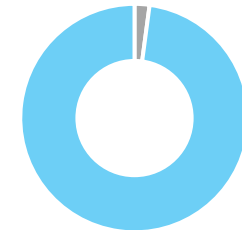
## Market Summary

- More liberalised market with three main power grids; Luzon and Visayas which are interconnected, while Mindanao grid is independent.
- Total CFPP capacity accounts for ~ 43% of total installed capacity.
- Most CFPPs are concentrated in Luzon and owned by a few conglomerates.
- CFPPs can operate under merchant conditions but many have bilateral agreement with distribution utilities
- Engagement with DOF and DOE for ETM concept

CFPP (GW) by Age



Utility vs IPP



■ Circulating Fluidized Bed ■ Subcritical ■ Supercritical ■ Ultra Supercritical ■ Utility ■ IPP

Source: Pre-FS Report "Opportunities to Accelerate Coal to Clean Power Transition in Selected Southeast Asian Developing Member Countries", September 2021

# Viet Nam: background and updates

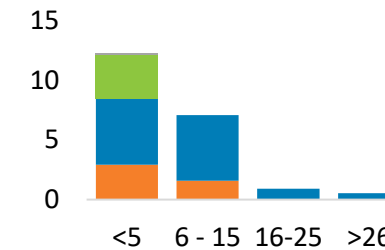
## Update:

- Engaging with development partners to perform desk top analysis for coal to clean energy transition
- Ministry of Natural Resources and Environment (MONRE) held workshop on ETM in May 2022
- Dialogue with key ministries ongoing to commence feasibility study

## Market Summary

- The integrated state-owned utility EVN acts as the single buyer for the market.
- Viet Nam's CFPPs are dominated by major SOEs, and thus mainly controlled by the government although BOT IPPs also exist.
- Total CFPP capacity accounts for around 29% of total installed capacity.
- Strong power demand growth and vibrant existing solar market means that grid security is a major concern for EVN and Viet Nam government
- Transition from coal to clean impacts are being carefully deliberated

## CFPP (GW) by Age



## Utility vs IPP

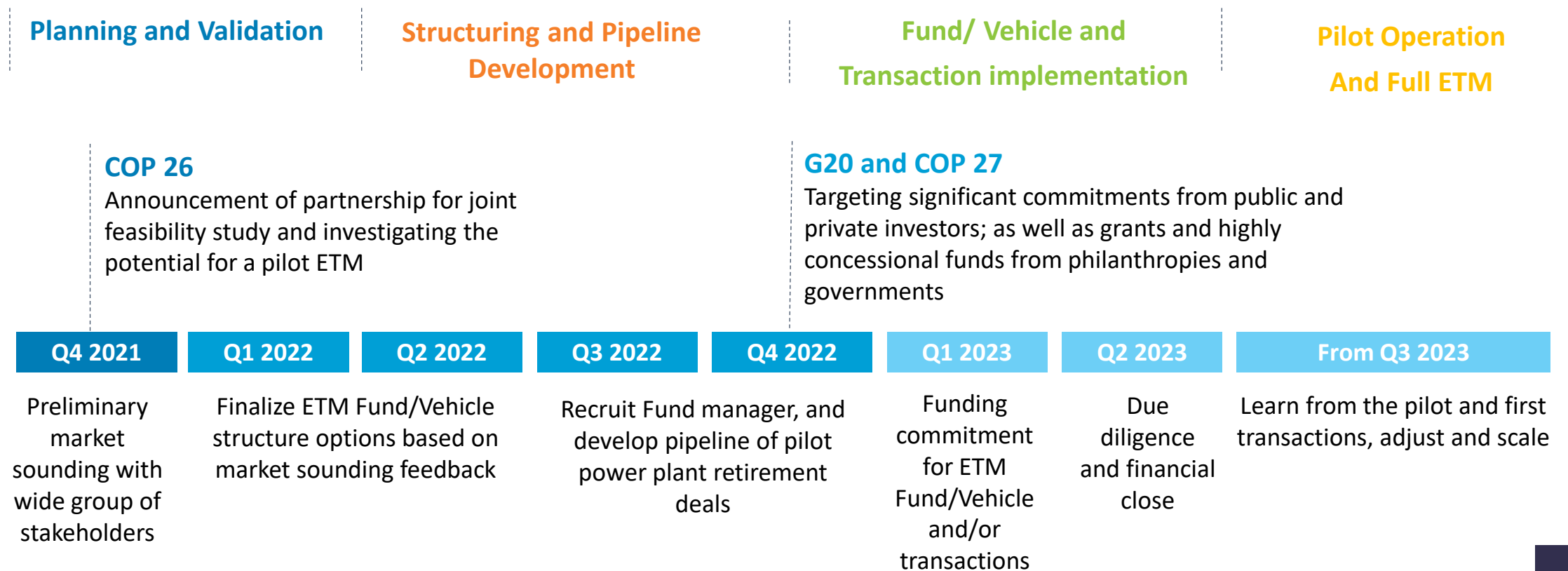


■ Circulating Fluidized Bed ■ Subcritical ■ Supercritical ■ Ultra Supercritical ■ Utility ■ IPP

Source: Pre-FS Report "Opportunities to Accelerate Coal to Clean Power Transition in Selected Southeast Asian Developing Member Countries", September 2021

# Indicative timeline to operationalize ETM

- Initial focus on ASEAN countries with high coal power share (Indonesia, Philippines, Viet Nam).





**Thank you!**