

**Climate Investment Funds (CIF) Accelerating Coal Transition (ACT)  
Investment Plan (IP) Preparation for the Philippines  
First Joint Mission, 13–14 March 2023**

**A. Background**

1. In October 2021, the Philippines was selected to develop an Investment Plan (IP) for the Accelerating Coal Transition (ACT) program of the Climate Investment Funds (CIF). The selection was based on the Expression of Interest (EOI) submitted by the Government of the Philippines (GOP) which was built on: (i) the Philippines' outsized vulnerability to climate change, (ii) its national commitment to mitigation as well as the need for sustainability, reliability, and flexibility in the power system, and (iii) its focus on decarbonizing the power sector and promoting renewable energy (RE) and energy efficiency and conservation to achieve energy transition goals.

2. The Department of Energy (DOE) of the Philippines subsequently hosted a scoping mission in August 2022 as the first step towards developing the ACT IP. The scoping mission was led by Asian Development Bank (ADB) and joined by World Bank (WB) and the International Finance Corporation (IFC). The mission also included participation from key government agencies and other stakeholders including the Department of Finance (DOF), Climate Change Commission (CCC), Department of Environment and Natural Resources (DENR), Department of Social Welfare and Development (DSWD), and the CIF Administrative Unit (CIF AU). The discussions at the scoping mission helped to (i) identify a broad strategy for ACT-supported investment consistent with the GOP energy and climate change policies, programs, and expenditure plans; (ii) review criteria and gathering government suggestions on candidate projects to be considered for ACT investment pipeline; and (iii) finalize roles and responsibilities of various stakeholders regarding the preparation of the IP.

3. Following the initial scoping mission, challenges in macroeconomic environment (i.e., rising interest rates) delayed discussions with key private sector stakeholders and GOP, as well as the changeover of GOP officials (see paragraph 15). The first joint mission was held on March 13 and 14, 2023. The mission was led by ADB and joined by WB and IFC. The mission included participation from DOE, DOF, and DENR. The key objectives of the mission were to discuss the coal transition strategy, initial IP project concepts proposed by ADB, WB, and IFC, and updates regarding the environment and social safeguards and Just Transition (JT) activities.

**B. Key Discussion and Findings**

4. **Supply-Demand Balance.** The Philippines has an energy deficit. In 2022, the country saw 10 instances when there was not enough generation to meet reserve requirements and 3 instances when supply fell so much as to lead to rotating power interruptions. This deficit is expected to persist. According to DOE estimates, an additional 12.6 GW is required by 2030, but committed capacity by 2027 is only 8 GW thus far. The Wholesale Electricity Spot Market

(WESM) prices peaked at \$0.164/kWh in June 2022, nearly double the 5-year average of \$0.083/kWh as supply growth is unable to keep up with the growth in demand. Despite the Philippines having diverse sources of power, coal has grown to form the backbone of the generation mix having nearly 60% share of the 102 TWh of total national generation in 2020, and natural gas follows with 19%. Off takers now generally demand baseload/mid-merit structured power purchase agreements (PPAs), which necessitate delivery of the required capacity throughout most of day, posing a challenge for RE assets that produce intermittent energy if power storage is not included. As such, while RE assets have grown significantly, the share of RE has gone down – geothermal and hydro account for 11% and 7% respectively, with solar, wind, and biomass each having around a 1% share.

5. **Philippine Electricity Market Structure.** The energy sector in the Philippines stands out from other Southeast Asian countries as all segments including electricity and fuels are largely privatized and commercialized, except for the Small Power Utilities Group (SPUG). Independent power producers (IPPs) account for approximately 90% of generation and their commercial arrangements have evolved over the years. Many of the earlier coal fired power plants (CFPPs) built in the 1990s had long-term take-or-pay contracts while more recent plants primarily offer their electricity output via several short to mid-term PPAs or retail electric supply contracts. The average age of these coal plants is 11 years. In addition, a small share or around 10% of purchased power is contracted through the Wholesale Electricity Spot Market (WESM), rather than relying on PPAs.

6. **The Philippines Energy Transition Strategy.** Surging commodity prices in 2021 and 2022, as well as the continued decline of natural gas supply from domestic field, compounded by the lack of generation and transmission capacity caused blackouts and brownouts in recent years, leading to a heightened focus on energy security and stability. The challenge grows more complex as the DOE's Philippine Energy Plan 2020–2040 (PEP 2020–2040) expects peak electricity demand to grow at 6%+ annually over the next 20 years, necessitating significant investments in RE, storage, and grid infrastructure for successful decarbonization of the power sector while meeting the rapidly growing electricity demand, keeping an affordable price, and maintaining grid stability. Given the deficit situation and the market structure where the government has limited ability to dictate how private IPPs transition out their coal plants, the DOE's overall strategy to reduce reliance on coal is to encourage build out of RE assets. This will reduce coal's share in the energy mix. Ultimately, this would also lead to lower dispatch for coal plants thus accelerating their retirement as they become more and more unprofitable to keep operating versus RE energy assets. The GOP is taking active steps to push for faster RE build-out by implementing various policy mechanisms and programs since the passage of the RE Act of 2008, such as the Renewable Portfolio Standard (RPS), Green Energy Auction Policy (GEAP), Green Energy Option Program (GEOP), and Net-Metering to expand the use of cleaner technologies in power generation. These initiatives are expected to bring about a 15-fold boost in solar and wind capacity by 2030. Accordingly, the amendment of Section 19 of the RE Law's IRR now allows foreign entities to engage in the exploration, development, and utilization of indigenous RE resources such as solar, wind,

biomass, and ocean or tidal energy.<sup>1</sup> This issuance is seen to further catalyze development of renewables in the country. Furthermore, GOP introduced in October 2020 a moratorium on greenfield CFPPs, with no new coal capacity to be added after 2030. These measures are in place to support PEP 2020–2040’s Clean Energy Scenario (CES) – an accelerated RE penetration scenario from the Reference Scenario – which aims to achieve 35% and 50% RE share in the power generation mix by 2030 and 2040 respectively.

**7. ACT Investment Program Support for the Philippines Energy Transition:** The ACT resources are expected to be used for CFPP transactions and just transition activities in the country. Given the privatized energy market and heightened focus on developing an affordable and stable supply, the IP will include both private sector IPPs accessing ACT funds as well as a financing package to address the remaining coal fired power plant owned by the GOP. IPP projects will decrease use of CFPPs, coupled with a repurposing to low-carbon fuels or technologies for replacement of baseload or flexible power.

**8. ACT for RE and Transition from Oil-Based Generation.** In addition to the core focus of the ACT, the GOP expressed its desire to explore using ACT resources to (i) support the investments in RE and grid strengthening, and (ii) transitioning from oil-based power generation particularly in island grids and SPUG areas.

(i) The Philippines CES aims to generate half of electricity supply through renewable sources by 2040. This will require exponential growth of installed capacity of RE from 7.6 GW in 2020 to 29.5 GW in 2030 and 81.5 GW in 2040, requiring a massive scale of investments in RE generation. With the implied reduction in CFPP contribution and selected early retirement and limited power reserves, this highlights a growing and urgent need to bolster transmission and storage infrastructure. Grid investments of this magnitude would require attracting private investment through concessional financing.

(ii) Oil-based electricity generation accounts for 16% of total installed capacity (4.2GW) in 2020, however supplies only 2.4% of total electricity (2.5 TWh). Majority of these fuel oil and diesel power plants are grid-connected typically used for peak power which are underutilized and expected to be used less in the future. Such inefficient operation of these assets calls for their retirement or resizing and introduction of alternative methods of meeting peak demand. A smaller share of oil generation is by SPUG power plants serving off-grid islands and remote communities, which are aging and inefficient. Programs are underway to decommission inefficient facilities, increasingly use RE, and hybridize diesel power plants with solar PV and battery systems. These efforts will need to benefit from increased support from the international community to stimulate a low carbon transition for oil-based generations.

---

<sup>1</sup> DOE Department Circular 2022-11-0034 titled “Prescribing Amendments to Section 19 of Department Circular No. DC2009-05-0008 Titled Rules and Regulations Implementing Republic Act No. 9513, Otherwise Known as the Renewable Energy Act of 2008” issued on 15 November 2022.

### C. Proposed Initial Project Concepts by MDBs

9. **Initial Project Concepts Proposed by ADB:** ADB is proposing two project concepts with ACT financing: (i) energy transition mechanism (ETM)<sup>2</sup> financing for the 200 MW Mindanao CFPP, and (ii) sustainability linked corporate financing facility for coal asset owners.

10. ADB is proposing to support an ETM financing which will fund the early retirement or repurposing of the **200 MW Mindanao CFPP**, the only remaining national coal asset in the Philippines. The CFPP is contracted under a build-operate-transfer (BOT) scheme by the Power Sector Assets and Liabilities Management Corporation (PSALM) to the private sector.<sup>3</sup> The BOT contract, which includes the power purchase agreement, expires in 2031, with an early termination provision as early as 2026. The ADB ETM financing envisions the use of a mix of concessional funding from ACT and commercial capital, to support a new private sector participant to come in for the early decommissioning and/or repurposing of the PSALM CFPP site into a solar park, and/or bundle with the rehabilitation of PSALM's other hydro assets that are connected to the same grid as the coal power plant. Through the support of ADB, ACT resources and commercial capital, the project(s) will be designed and structured to ensure that a qualified private sector partner can be selected through a competitive tender process to repurpose assets and repower the grid.

11. **Sustainability-Linked Financing Facility** consisting of a mix of concessional and commercial capital will be provided to private sector coal asset owners for development of clean energy projects. In turn, these coal asset owners will be obligated to early retire one or more coal assets and / or reduce overall carbon emissions across its portfolio. Failure to meet stipulated closure / emission reduction targets would represent a default event and would require repayment of loan principal, accrued interest and penalty interest.

12. **Initial Project Concepts Proposed by IFC.** IFC intends to support coal transition by assisting in accelerating the development of RE together with storage solutions in the Philippines while ensuring cost competitiveness of power generation and grid stability. This will present an alternative to coal assets in responding to firm generation requirements and reduce dispatch of coal plants. Eventually, this would make coal plants unprofitable to keep running. IFC is in discussion with private sector players to assess different RE and storage technologies that can potentially displace coal-based power sources. IFC also intends to assess the technical and economic viability of switching from coal to refuse derived fuel (RDF), green hydrogen, or biomass as feedstock to support infrastructure gaps in transportation and storage.

13. **Initial Project Concept Proposed by WB.** WB proposes to utilize a grant of \$10 million from ACT, along with financing from WB and contributions from GOP, towards its

---

<sup>2</sup> The Energy Transition Mechanism (ETM), initiated by ADB, is a program that utilizes concessional capital from various public and private sources to incentivize the early retirement or repurposing of coal-fired power plants and other carbon-intensive power generation while also unleashing new investments in clean energy, grids, and energy storage.

<sup>3</sup> Power Sector Assets and Liabilities Management Corporation (PSALM) is a state-owned entity that is primarily responsible for the privatization of GOP's power sector assets.

Energy Transition Technical Assistance Project (ETTAP) which will strengthen institutional and regulatory capacity for undertaking the energy transition in Philippines. The ETTAP will be implemented alongside a series of WB's Development Policy Loans which will support the adoption of key policies and reforms to support energy transition in Philippines. The current target is to identify the full scope of ETTAP by September 2023, with expected WB Board approval by September 2024.

14. **Just Transition.** WB has already initiated scoping exercise for more detailed understanding of key JT issues in Philippine context. The scoping exercise is expected to be finalized by June 2023. ADB and WB proposes to use a grant of \$1 million from ACT towards upstream analytical work, design of JT framework and stakeholder engagement.

15. Additionally, ADB proposes to utilize a grant component of \$2-5 million to support reskilling or upskilling of the workforce at CFPPs and the coal value chain to create opportunities with alternative livelihood through economic diversification. This component will be integrated into an ongoing technical and vocational education and training (TVET) project or a potential pipeline project on supporting Philippines digital transformation.

16. **Environment and Social Safeguards.** ADB proposes that the ACT Investment Plan Preparation Grant (IPPG) (\$0.5 million) is utilized to support Philippines' national strategic environmental and social assessment (SESA) study. The SESA for the energy transition in the Philippines would offer a tool to undertake systematic evaluation of sustainability performance of options for CFPP retirement and RE development following the energy options that were outlined by DOE in the PEP. The Philippine SESA will focus on issues associated with RE uptake, with coal retirement being of secondary focus. The interim report of the Philippine SESA is expected by the first week of June 2023 and the draft SESA report by end of July 2023.

17. **Timeline.** Although progress has been made, the preparation of the IP has been delayed due to a number of challenges. Developing a project pipeline for an innovative program like the ACT has been particularly complex in the current challenging macroeconomic environment. As power generation is largely privatized in the Philippines, multiple discussions with private sector owners of coal-fired power plants have now been carried out and progress is being made. Additionally, discussions between the GOP and MDBs regarding IP preparation were delayed due to the 2022 Presidential and Congressional elections and subsequent appointment of key high-level GOP officials. It was decided that GOP to request the CTF Trust Fund Committee, a 6-month extension until November 2023 to finalize its IP submission. A letter will be sent from GOP to CIF AU for CTF Trust Fund Committee's consideration.

18. Subject to the approval of the IP submission extension by the CTF Trust Fund Committee, below table summarizes the key activities, including the application for the \$1 million Investment Plan Preparatory Grant (IPPG). As the lead MDB, ADB will administer the grant and coordinate with government, World Bank, and IFC on use of the grant funds.

**Table: Summary of key follow up activities**

Tasks	Timeline
Joint MDB Mission	13-14 March 2023
Submit Aide Memoire, letter seeking IP extension, and IPPG	End-March 2023
Pipeline development (private sector sponsors + GOP counterparts)	July 2023
IP draft disclosed and stakeholder consultation	August-September 2023
IP revised and finalized, and submitted for CIF Trust Fund Committee	September-October 2023
CTF Trust Fund Committee consideration	November 2023



**Felix William B. Fuentebella**  
Undersecretary  
Department of Energy  
Republic of the Philippines



**Ayato Kurokawa**  
Energy Specialist  
Asian Development Bank



**Feng Liu**  
Senior Energy Specialist  
World Bank



**Andrey Shlyakhtenko**  
Senior Operations Officer  
International Finance Corporation

**Appendix 1: List of Attendees****Philippine Government Agencies**

	NAME	POSITION	OFFICE/UNIT
<b>Department of Energy</b>			
1	William Fuentebella	Undersecretary	Office of the Undersecretary
2	Marissa P. Cerezo	Director	Renewable Energy Management Bureau (REMB)
3	Nenito C. Jariel Jr.	Director	Energy Resource Development Bureau (ERDB)
4	Ruby B. De Guzman	Assistant Director	REMB
5	William Quinto	Assistant Director	Energy Policy and Planning Bureau (EPPB)
6	Madonna M. Naling	Division Chief	Electric Power Industry Management Bureau (EPIMB)
7	Hershey Dela Cruz	OIC Division Chief	EPPB
8	Mark Christian P. Marollano	Supervising Science Research Specialist	EPIMB
9	Letty Abella	OIC Supervising Science Research Specialist	EPPB
10	Ma. Caroline A. Quitaleg	Senior Science Research Specialist	EPPB
11	Katherine Velasquez	Senior Science Research Specialist	ERDB
12	Angelou B. Austria	Science Research Specialist II	EPPB
13	Sarah T. Gabriel	Science Research Specialist II	REMB
14	King Anthony Ting	Science Research Specialist II	REMB
15	Mary Grace Q. Razonable	Science Research Specialist I	Energy Utilization Management Bureau (EUMB)
<b>Department of Finance</b>			
1	Glenda Rumohr	Assistant Secretary	Privatization and Corporate Affairs Group (PCAG)
2	Nathan Bayasen	Project Manager	PCAG
3	Anica Sarmiento	Project Manager	PCAG
4	Paola Matanguihan	Attache II	International Finance Group (IFG)
5	Jenevive Lontok	Attache II	IFG
6	Marius Torres	Economist II	IFG
7	Hannah Sasil	Planning Officer II	IFG
8	Ryan Omar Ching	Technical Consultant	IFG
9	Helen Alcantara		
<b>Department of Environment and Natural Resources</b>			
1	Eda Soriano	Development Management Officer	Foreign-Assisted and Special Projects Service (FASPS)
2	Alyssa Micah Macasieb		FASPS
3	Marivic Yao		

**Multilateral Development Banks**

	NAME	POSITION	OFFICE/UNIT
<b>Asian Development Bank</b>			
1	David Elzinga	Principal Energy Specialist (Climate Change)	Southeast Asia Energy Division (SEEN)
2	Dionisio Camangon	Senior Public-Private Partnership Specialist	Office of Public-Private Partnership, Advisory Division 2 (OPA2)
3	Katherine Hughes	Senior Climate Change Specialist	Sustainable Development and Climate Change Department, Climate Change and Disaster Risk Management Division (SDCD)
4	Lazeena Rahman	Senior Climate Finance Specialist	SEEN
5	Ferran Vila Planas	Senior Public-Private Partnership Specialist	OPA2
6	Diana Connett	Energy Specialist	SEEN
7	Ayato Kurokawa	Energy Specialist	SEEN
8	Hannah Ebro	Associate Project Officer	SEEN
9	Carla Campos	Consultant	Private Sector Operations Department
10	Karan Chouksey	Consultant, Climate Finance Specialist – ADB-CIF Coordination	SDCD
11	Angelica Natividad	Consultant	SEEN
12	Cherry Rivera	Consultant	SEEN
13	Shivam Singh	Consultant	OPA2
<b>World Bank</b>			
1	Ditte Fallesen	Senior Social Development Specialist	
2	Feng Liu	Senior Energy Specialist	
<b>International Finance Corporation</b>			
1	Andrey Shlyakhtenko	Senior Operations Officer	
2	Thuy Thu Bui	Senior Country Officer	
3	Charu Suri	Senior Investment Officer	
4	Jonathan Chu	Investment Officer	