Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 13-Aug-2024 | Report No: PIDISDSA37610

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
East Asia and Pacific	P181555	Accelerating Sustainable Energy Transition Program	
Region	**Appraisal Date**	**Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	02-May-2024	24-Sept-2024	Energy & Extractives
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	ASEAN Centre for Energy	ASEAN Centre for Energy	

Proposed Development Objective(s)

To help accelerate renewable energy scale up in the ASEAN countries, including through regional power trade.

Components

Regional Renewable Energy Policy Support and Climate Financing
Regional Power Trade
Knowledge Sharing, Consultations, and Capacity Building

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	5.00
Total Financing	5.00
of which IBRD/IDA	5.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	5.00
IDA Grant	5.00

Environmental and Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Regional Context

1. Economic growth in the East Asia and Pacific (EAP) region has led to increased energy consumption and reliance on fossil fuels, with the region accounting for a significant portion of global energy demand and coal consumption. The rapid expansion of energy production, driven by industrialization and urbanization, has been fueled by coal, contributing to local and national economic growth. With electricity demand projected to rise by 50 percent by 2030, the region's ability to meet this demand through renewable energy (RE) is crucial for decoupling emissions from economic growth and pursuing low-carbon development.

2. The transition to low-carbon energy in EAP is critical for achieving climate mitigation and adaptation goals. The region contributes substantially to global greenhouse gas (GHG) emissions, with emissions tripling between 2000 and 2020. The vulnerability of EAP to climate change, underscored by significant economic losses from natural disasters and the unique climate change challenges faced by Pacific Island Countries (PICs), necessitates investments in energy systems that are not only lower in carbon but also resilient. Amidst global energy shifts, several EAP countries have set ambitious carbon neutrality targets, with their success now hinging on near-term actions to scale up RE deployment and reduce dependence on coal and diesel for power generation.

3. The Accelerating Sustainable Energy Transition Multiphase Programmatic Approach (MPA), or Program, supports EAP's decarbonization goals. The proposed program integrates key elements of the new vision expressed in the World Bank's Evolution Roadmap to deliver solutions and impact at scale. It also responds to the urgency of implementing climate mitigation and adaptation efforts by increasing the World Bank's ambition while scaling up its knowledge and financing support. With a proposed US$2.5 billion financing envelope from IDA and IBRD, the program will promote proven strategies to address policy barriers, support infrastructure development, and encourage private sector investment, emphasizing regional cooperation and capital mobilization.

Sectoral Context and Constraints

4. Decarbonizing the power sector is essential for EAP countries to achieve carbon neutrality, as reliance on fossil fuels remains high and electrification of other sectors through RE is necessary. Despite rapid demand growth and a significant stock of coal-fired plants in the region, transitioning to RE and energy storage is key for affordable and reliable electricity. Progress varies across EAP, with some countries advancing rapidly in RE deployment, while others still falling short. Countries in the region have put in place ambitious targets and strategies, with China likely to exceed its solar and wind capacity goals ahead of schedule, and Indonesia, Viet Nam, and the Philippines aiming to increase the RE share in their power mix by 2030.

5. Increased regional power trade would also allow to enhance the affordability, flexibility, and carbon efficiency of electricity in EAP. Despite progress with bilateral power exchanges, these trades represent only 2 percent of the region's overall energy consumption. Expanding multilateral power trade could bring economic gains, lessen the demand for domestic power generation investments, and provide cleaner energy options to countries that might otherwise depend on fossil fuel power plants.

6. In EAP, the challenges to large-scale RE deployment are multifaceted, with each country facing unique conditions that are functions of energy resource endowments and the state of national electricity infrastructure. Some challenges, however, are common across the region: inadequate policy frameworks hinder the scaling up of RE while underdeveloped network infrastructure poses challenges to integrating variable renewable energy (VRE) resources. Limited access to commercial financing for low-carbon technologies further complicates the transition. Workforce skill development also remains a priority to support the shift towards a low-carbon power sector. In East Asia, countries must prioritize evolving policy and institutional frameworks and implementing competitive RE procurement and pricing policies. Among Pacific Island Countries (PICs), transitioning to RE also offers the opportunity to reduce reliance on expensive fossil fuels, improve electricity access, and enhance resilience to climate change. High electricity tariffs – often below cost recovery – make it difficult to justify investments in RE. Addressing these financing barriers, including risk mitigation instruments and concessional financing, is critical for PICs to attract investments, manage debt risks, and strengthen their economies while advancing towards sustainable energy systems.

C. Program Development Objective

Program Development Objective (PrDO)

7. The proposed program development objective (PrDO) is to accelerate the scale-up and grid integration of renewable energy in participating countries across the East Asia and Pacific region.

Key Results

8. To monitor the achievement of results, the proposed PrDO indicators include: (i) RE generation capacity enabled with direct support, indirect support, and/or enabling policy support, with a target of 2,500 MW; and (ii) projected lifetime net GHG emissions from results achieved, with a target of 60 million metric tons of CO_2eq.

D. Project Description

9. The MPA will serve as a comprehensive financing and knowledge platform mechanism to expedite the large-scale adoption of RE, demonstrating the World Bank's long-term commitment to assisting countries in their low-carbon transition. The MPA approach aims to enhance the scalability of World Bank support impacts, reduce GHG emissions, and ensure coordinated, long-term engagement across EAP countries. The MPA will focus on deploying proven RE technologies, blending finance for RE scale-up, and designing grid infrastructure to support intermittent clean generation, while also addressing the transition from fossil fuels in 'hard-to-abate' sectors (especially in colder climates like Mongolia). By standardizing processes and documentation, the MPA intends to reduce transaction costs and facilitate harmonization, with allowances for country-specific customization. Furthermore, it will leverage the ASEAN Centre for Energy (ACE), a regional institution, to foster a coordinated regional effort, deepen the knowledge agenda, and support capacity development, thereby creating a platform for implementing key MPA activities.

10. **Pillar One: Enabling policies and strengthened institutions.** The first pillar of the MPA aims to scale up investment and dispatch of low-cost, clean energy, overcoming barriers like thermal generation dominance and policy distortions. Key initiatives include helping countries develop RE policies, market frameworks, competitive procurement standards, and decarbonization strategies that leverage regional integration. The pillar also supports the financial and regulatory reform of utilities to ensure their viability as RE offtakers, promotes regional power trade through harmonization of technical operations, and fosters knowledge sharing. Gender mainstreaming and social protection mechanisms will also be integral to support the energy transition and advance gender equality in the energy sector.

11. **Pillar Two: Expanded and more flexible energy systems.** This pillar addresses the critical need for growth and modernization of energy systems to support the energy transition, with a focus on securing funding for economically viable clean energy projects. This includes investments through Investment Project Financing (IPF) and Project for Results (PforR) operations to develop capable and flexible transmission systems. Key activities include expanding and upgrading transmission grids to overcome RE integration constraints and supporting regional interconnection projects to facilitate cross-border power flows. Activities will also support the rehabilitation and enhancement of distribution networks in metropolitan areas and mini-grids, particularly in PICs, to improve access to reliable and clean electricity. Investments in grid flexibility, such as battery energy storage systems and supervisory control and data acquisition (SCADA) systems, will also be supported to enhance the integration of VREs (solar and wind energy resources).

12. **Pillar Three: De-risking clean energy investments.** The MPA will strategically utilize concessional financing to leverage commercial funds and lower transition costs, focusing on enabling RE policies and interventions to reduce capital costs, including through blended finance. It will explore carbon market opportunities, assessing gaps for carbon market readiness and tapping into facilities such as Transformative Carbon Asset Facility (TCAF) and Scaling Climate Action by Lowering Emissions (SCALE), to generate additional revenue streams and mobilize private sector finance. De-risking through IPFs, guarantees, and PforRs will support public and private projects, offering various guarantees and credit lines to stimulate RE investments aligned with decarbonization targets.

13. **Participating countries.** Eligibility will be flexible to cover all the EAP region, but potential client countries would need to have fundamental sector conditions and demonstrated commitment to embark on the energy transition and RE scale-up. Criteria could include: (i) commitments expressed through policies, plans, and/or strategies to meet the country's Nationally Determined Contribution (NDC) commitments, particularly in the power sector; (ii) basic regulatory and policy frameworks and implementation capacity for the needed measures/activities; and (iii) stated commitment to mobilize private sector financing for the energy transition over time.

14. **Phase One of the proposed MPA is expected to support the following projects**:

- **Clean Energy and Power Trade Development in Southeast Asia Project (P181555).** The proposed US$5 million grant aims to help accelerate renewable energy scale-up in the ASEAN countries, including through regional power trade. It includes three main activities: (i) regional renewable energy policy support and climate financing; (ii) regional power trade; and (iii) knowledge sharing, consultations and capacity building.

- **Papua New Guinea: National Energy Access Transformation Project (P173194).** The proposed US$200 million IDA IPF, complemented by a US$4.2 million grant from the Global Partnership for Results-Based Approaches Multi-Donor Trust Fund, aims to increase access to energy – including through RE micro-grids – and enhance the reliability of electricity supply. The proposed project comprises four main components: (i) rehabilitation, enhancing the reliability of the national utility's infrastructure, and on-grid electrification; (ii) RE micro-grids and rural energy market development for remote communities not served by the grid; (iii) energy-sector institutional development; and (iv) support to the management of the project.

- **Republic of the Marshall Islands: Renewable Energy Generation and Access Increase Project (P181250).** The proposed US$60 million IDA IPF aims to increase RE generation and improve the reliability and access to electricity services. The project will also strengthen the capacity, including gender inclusion, of key energy sector entities. The project comprises three components: (i) increase in RE generation and network upgrade in main grids; (ii) improve electricity access in outer atolls; and (iii) institutional strengthening and implementation support.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

15. The Environmental and Social Risk Classification (ESRC) for the proposed MPA is rated as Substantial, given the typical environmental and social (E&S) risks associated with the program typologies. These include: (i) regional technical assistance to strengthen regional cooperation and increase planning and execution capacity of priority projects; and (ii) country-specific physical investments and technical assistance to strengthen the electricity grid, increase the capacity of transmission lines, increase electricity access, and scale up renewable energy generation. The ESRC for the TA project implemented by ACE and the investment project in Papua New Guinea is Substantial. The ESRC for the project in the Republic of Marshall Islands is Moderate.

16. The implementation of the MPA is expected to have significant E&S benefits. These include the potential facilitation of RE, reduction of GHG emissions, improvements to air quality, improving access to affordable energy, and providing opportunities for a just and equitable transition from reliance on fossil fuels. Key environmental risks and impacts relate to the implementation of technical assistance such as what may be financed under Pillar one, hazardous waste disposal, land clearance resulting in may result in habitat loss, disturbance of terrestrial biodiversity, degradation, and fragmentation of natural habitat, as well as the introduction of invasive species, land and groundwater as well as those more generally associated with civil works. Potential social risks and issues include, gender issues, engagement and protection of vulnerable people including indigenous and ethnic minority communities, community local economic impacts created in coal-producing communities as energy generation transitions to renewable energy, land, and community impacts in RE areas of having new investments requiring large areas of land, community safety, equity, and benefit-sharing arrangements. Each country in EAP has very different land tenure arrangements that will likely have significant influence on technical designs, costing, project structuring and other aspects as well as creating potential social risks which will need to be proactively managed. Community engagement will underpin project risk and benefit analysis and will therefore form a fundamental part of technical project identification, design, and delivery. Future phases will be assessed based on the risks associated with each operation. E&S instruments will be prepared for each project in accordance with the Environmental and Social Framework (ESF) considering direct, indirect, cumulative, and downstream impacts as well as any risks and impacts from associated facilities. Where appropriate, borrower frameworks will be used to manage E&S risks associated with Low and Moderate risk projects. For PforR operations included in future phases of the MPA, Environmental and Social System Assessments (ESSAs) will be developed.

E. Implementation

Institutional and Implementation Arrangements

17. Country-level institutional and implementation arrangements will follow those established in each respective country project for RE scale-up. Typically, they will involve ministries, utilities, transmission and distribution system operators, regulators, and financial intermediaries. When financial intermediary (FI) operations are included, relevant assessments will be conducted as required (including for E&S aspects), and FI risks included in the risk assessment. Each operation will be implemented independently.

18. The proposed MPA provides an opportunity to strengthen regional networks to foster learning and capacity building, as well as generate knowledge on regional power trade to be implemented through investment operations in the future. The MPA will work with ACE to accelerate the implementation of regional integration investments that would unlock significant low-carbon resources to deepen the knowledge agenda and support the capacity development of national entities. The MPA will leverage ACE's institutional set-up, technical knowledge, and convening power to create a catalyzing platform for the implementation of key activities in the MPA. ACE and participating countries will also benefit from global knowledge delivered by the World Bank through a series of technical academies with the objective of strengthening client capacity, facilitating learning between countries and regions, and ensuring that learning is captured methodically throughout the various MPAs being deployed globally.

19. All operations under the MPA will have sustainability at the core. The projects will undertake investments that can be sustained or scaled-up over time, even after individual project implementation periods. This would include transitioning from early public financing to revolving schemes and other sustainable financing mechanisms, and eventually to fully commercial financing. The projects supported by the MPA are designed to build capacity and cover existing gaps in the implementing entities, with an emphasis on the environmental sustainability of the infrastructure.

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APPROVAL

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