

TERMS OF REFERENCE FOR CONSULTANTS

A. Background

1. **Clean energy progress in Southeast Asia.** Energy demand in Southeast Asia (SEA) has been growing at a rapid pace, driven by robust economic growth, demographic expansion, and increased urbanization. While the ongoing coronavirus disease pandemic has lowered demand in recent months, it is expected that post-pandemic energy demand will regain its prior trajectory between 2023 and 2025.¹ The rapidly increasing energy demand is also a challenge to the long-term ambition of keeping greenhouse gas emissions in a trajectory consistent with the goals of the Paris Agreement.

2. Clean energy has begun to make inroads in SEA. In 2019, for the first time, more renewable energy projects than coal projects reached financial investment decision in the region². More recently, in 2020, deployment of new renewable capacity has accelerated in some jurisdictions at an unprecedented scale. In Viet Nam utility-scale grid-connected solar photovoltaic capacity increased from just 260 megawatts (MW) in April 2019 to 5,053 MW in July 2020.³ Similarly, Cambodia launched its first open tender for new solar photovoltaic capacity in 2019, achieving a record low procurement price for this technology.⁴ The region is also quickly embracing new technologies, including floating solar photovoltaic and offshore wind power. In addition, some countries in the region have indicated tentative measures to either dial back their coal power plant expansion plans, or outright cancel some projects.

3. **Challenges to the cleaner energy transition.** Notwithstanding these encouraging signs, more needs to be done to accelerate the transition towards cleaner energy in SEA. Despite the recent success of large-scale renewable energy programs, the potential of renewable energies, in particular variable renewable energy, remains largely untapped. This is mostly attributed to policy, regulatory and administrative constraints, while in some jurisdictions developments are hampered by low tariffs and the perceived threat of certain technologies to the traditional business models of power utilities. Energy efficiency also remains largely untapped, with progress hampered by a lack of policies and low enforcement of energy performance standards.

4. The power generation mix of most SEA countries is dominated by fossil fuels. Despite its adverse implications to the environment and health of local populations, coal-fired power generation still features prominently in the power development plans of some SEA countries. On the other hand, for more than two decades, SEA countries have been exploring opportunities for enhancing regional power interconnections and power trading through various platforms, including the Association of Southeast Asian Nations (ASEAN) and the Greater Mekong Subregion (GMS) Regional Power Trade Coordination Committee (RPTCC). Notwithstanding these efforts, regional power trade still accounts for a marginal proportion of the total power consumed in the region.⁵

5. Cross-cutting to the issues above, the development of cost-effective energy infrastructure in several SEA countries has been hindered by inadequate sector governance and transparency. This is reflected, for example, in the limited public disclosure of the terms and conditions of power purchase agreements (PPAs), owing to the region's preference for direct bilateral negotiations

¹ International Energy Agency (IEA). 2020. [World Energy Outlook 2020](#). Paris.

² IEA. 2019. [Southeast Asia Energy Outlook 2019](#). Paris.

³ Lantau Group. 2020. *ADB Assessment, Strategy and Roadmap for Viet Nam (18 October 2020)*. Unpublished.

⁴ ADB. 2019. [ADB-Supported Solar Project in Cambodia Achieves Lowest-Ever Tariff in ASEAN](#). Manila.

⁵ IEA. 2019. [Establishing Multilateral Power Trade in ASEAN](#). Paris.

between the private sector and the off-taker rather than reverse auctions. In many cases this has led to information asymmetry, high transaction costs, noncompetitive pricing, overcapacity, unsustainable debt, and poor quality of service.

6. Against this background, the proposed knowledge and support technical assistance (TA) will support SEA countries addressing the challenges above and enable them to accelerate the transition to a cleaner energy future. To this end, the proposed TA will assist SEA countries with a comprehensive package of solutions that will include: (i) the preparation of sectoral and country-specific assessments; (ii) the development of new business models and feasibility reports and other technical studies; (iii) the conduct of workshops and policy dialogues; and (iv) the development of project investment pipelines to be financed by the Asian Development Bank (ADB).

7. The TA has five outputs: (i) coal and other fossil fuel-based generation assets phased-out; (ii) renewable energy solutions scaled-up; (iii) energy efficiency solutions expanded; (iv) energy sector governance and transparency enhanced; and (v) regional power grid integration enhanced. It is strongly aligned with ADB's Strategy 2030, including operational priorities 1 (addressing remaining poverty and reducing inequalities), 2 (accelerating progress in gender equality), 3 (tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability), 6 (strengthening governance and institutional capacity), and 7 (fostering regional cooperation and integration).

8. The TA requires the combination of two types of consulting services: firms and individual consultants. ADB will carry out procurement following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions. The TA will engage consulting firm(s) using quality-and-cost-based selection (90:10), while consultant recruitment will be via individual consulting services given the wide range of skills, expertise and experience needed to achieve the different outputs. The profiles specified in the table below are indicative of the consulting services required for the TA, and may be subject to change depending on the circumstances of each Output.

Table: Summary of Consulting Services Requirement

Expertise/Position	International (person-months)	National (person-months)
A. Individual Consultants		
Overall Coordination and Assistance		
Regional Coordinator and Specialist on Clean Energy	23	-
Assistant, Accounting and Operations	5	-
Output 2		
Senior Power Systems Engineer	6	-
Senior Renewable Energy Specialist	6	-
National Renewable Energy Specialist	-	40
Energy Specialist (for Knowledge Products)	2	-
Gender and Social Specialist	2	
Output 3		
National Energy Efficiency Specialist	-	40
Output 4		
Senior Energy Specialist on Power Sector Policy and Markets	6	-
Energy Specialist on Power Sector Policy and Market	-	30
Output 5		
Regional Power Trade Coordination Committee Coordinator	4	-
Regional Power Integration Specialist	4	-

Expertise/Position	International (person-months)	National (person-months)
Power Grid Specialist	-	24
Senior Specialist on Energy Performance Standards	3	-
Capacity Building Specialist	-	18
Subtotal (A)	61	152
B. Consulting Firm		
Output 1		
Team Leader	10	-
Energy Specialist	7	-
Clean Energy Technologies Specialist	7	-
Just Transition and Social Impact Specialist	3	-
Environmental Specialist	3	-
Political Strategy Advisor	3	-
Legal Counsel	10	-
Financial Specialist	8	-
Carbon Pricing Specialist	3	-
Marketing and Communications Specialist	6	18
Energy Specialists	-	24
Legal Specialists	-	24
Total Output 1	60	66
Output 3		
Senior Energy Efficiency Specialist	3	-
Energy Efficiency Technology Specialist	2	-
Energy Efficiency Finance Specialist	2	-
Energy Efficiency Policy Specialist	1	-
Procurement Specialist	1	-
Total Output 3	9	-
Subtotal (B)	69	66
GRAND TOTAL (A+B)	130	218

Source: Asian Development Bank estimates.

B. Consulting Services – Individual Consultants (64 person-months of international inputs, 152 person-months of national inputs)

9. **Regional Coordinator and Specialist on Clean Energy (international, full-time, 24 person-months).** The consultant should ideally have at least a master's degree in a relevant field (energy, economics, engineering), and a minimum of 10 years of relevant work experience with clean energy private developers, bilateral or multilateral donors, or with the broader international development assistance community. Experience of working in SEA and ADB is highly desirable. The consultant will work closely with the regional ADB project officer and teams of consultants hired by ADB on project preparation and implementation, as well as policy and program development in SEA countries. The consultant will support ADB identifying new investment opportunities on clean energy, provide technical advice and analytical support in the preparation of technical reports, and provide organizational support for field missions to countries of the region.

10. **Assistant, Accounting and Operations (international, intermittent, 7 person-months).** The consultant should have at least a bachelor's degree or its equivalent in public administration, management, accounting or related field, and at least five years of relevant experience of work in international organizations. The consultant will work closely with the regional ADB project officer and provide overall administrative and operational assistance in

implementing the TA. The consultant will monitor project implementation, collect data to develop project progress reports, and coordinate with other ADB divisions on budget execution.

11. Senior Power Systems Engineer (international, intermittent, 6 person-months). The consultant(s) should have at least a master's degree in mechanical or electrical engineering, and at least 15 years of experience in power systems analysis. The consultant(s) will be engaged for the preparation of renewable energy resource assessments and pre-feasibility studies in SEA countries. For the technology under consideration (e.g., wind, solar), the consultant(s) will conduct analyses of power system operations (e.g., on dispatching generation priorities, voltage stability, frequency control) to determine the feasibility of national power systems to accommodate higher shares of renewable energy and the gradual phase-out of fossil fuel-based power generation.

12. Senior Renewable Energy Specialist (international, intermittent, 6 person-months). The consultant(s) should have at least a master's degree in mechanical or electrical engineering, and at minimum of 10 years of experience in renewable energy resource assessments and grid integration issues. The consultant(s) will be engaged for the preparation of renewable energy resource assessments and pre-feasibility studies in SEA countries. For the technology under consideration (e.g., wind, solar), the consultant(s) will: (i) review resource data available from public sources; (ii) analyze national policy and regulatory frameworks for renewable energy technologies; (iii) analyze social and environmental constraints for future developments; (iv) conduct preliminary economic and financial assessment of projects; and (v) identify the most promising areas for project development.

13. National Renewable Energy Specialist (national, intermittent, 40 person-months). The consultant(s) should have a bachelor's or master's degree in a relevant field (energy, economics, engineering), and a minimum of 5 years of relevant work experience in the development of clean energy projects. The consultant(s) will work in close coordination with the senior power system engineer(s) and the senior renewable energy specialist(s) in the preparation of renewable energy assessments and pre-feasibility studies in the host country. The consultant(s) will support the specialists in the collection of relevant data for the renewable energy studies, liaise with government officials and national institutions, and provide technical inputs, as necessary, to the studies and deliverables prepared.

14. Energy Specialist (international, intermittent, 2 person-months). The consultant should have a master's degree in a relevant field (energy, economics, engineering), and a minimum of 5 years of work experience in clean energy technologies, policies and regulations. The consultant will carry out the studies under the TA on regional best practices, guidelines, lessons learned and templates.

15. Gender and Social Specialist (international, intermittent, 2 person-months). The consultant(s) should have at least a master's degree in social sciences or related field, and a minimum of 10 years of experience in gender and social analysis and impact assessment studies. The consultant(s) will support the preparation of gender-responsive and inclusive studies on regional best practices, guidelines and lessons learned under Output 2. The consultant(s) will also provide gender guidance and support in the preparation of the pre-feasibility studies on wind or solar, as well as on "as-needed" basis.

16. National Energy Efficiency Specialist (national, intermittent, 40 person-months). The consultant(s) should have a bachelor's or master's degree in a relevant field (energy, economics, engineering), and a minimum of 5 years of work experience in energy efficiency technologies, policies and regulations. The consultant(s) will be engaged to support the

international energy efficiency specialist(s) engaged by ADB to implement Output 3 of the TA. The consultant(s) will provide support in the collection of relevant data for the energy efficiency studies and assignments conducted in the selected SEA country, liaise with government officials and national institutions, and provide technical inputs, as necessary, to the studies and deliverables prepared.

17. Senior Energy Specialist on Power Sector Policy and Markets (international, intermittent, 6 person-months). The consultant(s) should have a bachelor's or master's degree in a relevant field (engineering, economics, finance) and a minimum of 5 years of experience in energy policy, governance or research. The consultant(s) should also have previous experience in advising or drafting power purchase agreements (PPAs). Building on the outcomes of an ADB-funded study whose aims is to assess the transactional and governance benefits of PPA disclosure, the consultant(s) will prepare detailed guidelines for the disclosure of PPA terms. The consultant(s) will identify at least one country where these guidelines could be implemented, and present the outcomes of the work at a high-level regional forum.

18. Energy Specialist on Power Sector Policy and Markets (national, intermittent, 30 person-months). The consultant(s) should have a bachelor's or master's degree in a relevant field (engineering, economics, finance) and a minimum of 5 years of experience in energy policy, governance and market analysis. The consultant(s) will work with the energy and finance ministries of the respective SEA country to implement the PPA disclosure guidelines prepared by the international consultant. The consultant(s) will ensure the guidelines are adapted to the local context, organize national workshops and consultations, and ensure their application to at least one renewable energy project.

19. Regional Power Trade Coordination Committee (RPTCC) Coordinator (international, intermittent, 4 person-months). The consultant(s) should have at least a master's degree in a relevant field (energy, economics, engineering), and a minimum of 7 years of experience in the formulation of energy policies, research, or project origination and implementation, preferably in countries of the Greater Mekong Subregion (GMS). The consultant(s) will support ADB fulfilling its role as the secretariat of the GMS-RPTCC, and responsibilities will include: (i) the organization of meetings of the RPTCC and its working groups; (ii) coordination and provision of technical inputs to technical studies and pilots; and (iii) identification of projects that could involve multilateral power trade in the GMS.

20. Regional Power Integration Specialist (international, intermittent, 4 person-months). The consultant(s) should have at least a master's degree in mechanical or electrical engineering, and a minimum of 10 years of experience in power systems planning and integration. The consultant(s) will carry out a technical study on matters related to power trade in the GMS aimed at fostering regional power trade, which will cover the following topics: (i) development of regional generation planning scenarios; (ii) implementation of the regional generation and transmission master plan; and (iii) identification of priority projects for improving interconnection among GMS countries.

21. Power Grid Specialist (national, intermittent, 24 person-months). The consultant(s) should have at least a bachelor's degree in electrical engineering, and a minimum of 5 years of work experience in power grid planning and power systems integration. The consultant(s) will support the Regional Power Integration Specialist in the preparation of the technical study on power trade by focusing on aspects related to national power grids.

22. Senior Specialist on Energy Performance Standards (international, intermittent, 3 person-months). The consultant(s) should have at least a master's degree in an engineering subject (mechanical, electrical), and a minimum of 10 years of work experience on energy efficiency standards and regulations. The consultant(s) will lead the preparation of a study on the development of harmonized minimum energy performance standards (MEPS) for different appliance/equipment types in SEA countries. To this end, the consultant(s) will: (i) conduct research on regional and global good practices on MEPS for the selected appliances/equipment; (ii) conduct gap analyses on MEPS development among the SEA countries involved; (iii) provide recommendations for the harmonization of MEPS; and (iv) develop a framework for MEPS harmonization in these countries.

23. Capacity Building Specialist (national, intermittent, 18 person-months). The consultant(s) should have at least a bachelor's degree in a relevant field (engineering, economics, etc.), and a minimum of 3 years of experience in providing trainings and/or other capacity building activities. The consultant(s) will be responsible for organizing and developing the contents of capacity building trainings involving GMS countries.

C. Consulting Services – Firm (60 person-months of international inputs and 66 of national inputs for Output 1)

24. Under Output 1 of the TA, a mechanism for accelerating the phase-out of coal and other fossil-fuel-based generation assets will be established. The set-up of this vehicle – an Energy Transition Mechanism (ETM) – will build on the outcomes and recommendations of a pre-feasibility study funded by ADB to be completed in May 2021. To this end, ADB seeks the services of a consortium of international consulting firms to carry out a full feasibility study with the aim of laying out the implementation rules and procedures of the ETM. The study will also assess a pool of eligible assets that could be acquired by the ETM and the overall impacts of the early coal retirement of coal assets in target countries. These activities will require a total of 60 person-months of international expertise and 66 person-month of national expertise. The study will be delivered over a period of two-year period, from July 2021 to June 2023.

25. ADB will recruit the consulting firm in accordance with the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions using a quality- and cost-based selection method. A quality-cost ratio of 90:10 will be applied for the final selection of the firm based on the simplified technical proposals from short-listed firms. The consulting firm will be engaged using a partial lump sum contract.

1. Scope of Work

26. Under the guidance of and in close coordination with ADB, the consulting firm will carry out a feasibility study structured into five components: (1) technical feasibility, (2) political economy, legal and policy analysis, (3) asset identification and owner engagement, (4) fund structuring and capital raising, and (5) communications. All of the project activities outlined in components 1–5 will need to be delivered for each of the three developing member countries (DMCs) considered in the pre-feasibility study, namely Indonesia, the Philippines and Viet Nam. In addition, activities under components 1–3 are required for another DMC that will be selected upon completion of the pre-feasibility study.

27. Component 1. The component will analyze the technical feasibility of retiring a significant proportion (up to 50%) of each country's coal-fired power plants (CFPPs) on an accelerated timescale, while rapidly increasing the renewable energy generation to both replace the power

generated by the retired CFPPs and to meet growing electricity demand. The technical study should identify how the energy system of each country will need to adapt to manage the accelerated retirement of CFPPs, the increased role of renewable energy in the power system, any investments in energy storage and the role of technology to enable the grid to respond and adjust. This component should also assess the socio-economic and environmental costs and benefits that accelerating the retirement of CFPPs delivers in each country. This should cover employment and livelihood implications in terms of access to new opportunities (both in the coal value chain and related to the renewable energy sector); health benefits through improving air quality; broader ecosystem and biodiversity impacts related to reduced coal extraction; and the role of ETM in providing a “just transition” which considers and addresses gender and social inequalities, particularly for local communities that are directly affected by fossil fuel transitions. Activities under this component shall include:

- i) Building off the work in the pre-feasibility study, identify (a) an initial tranche of CFPPs for retirement in each country, and (b) which CFPPs would be selected in order to meet the goal of retiring 50% of the existing fleet within a 5–10-year timeframe.
- ii) Carry out a technical assessment of the effects that retiring both the initial tranche of assets and 50% of each country’s CFPPs would have on the energy system. Based on this, identify the key grid improvements and investments required to support the integration of significantly scaled up renewable energy generation assets.
- iii) Assess the country’s capacity to accelerate the deployment of renewable energy, considering existing renewable energy resources, the strength of the grid, local supply chain, etc.
- iv) Identify the key barriers that would need to be addressed in order to support a higher percentage of renewables in delivering accessible, reliable and affordable power, and identify a range of interventions that are needed to address these barriers.
- v) Identify suitable metrics to assess the impact of the ETM such as employment by sector, grid emission factors (tCO₂/MWh); carbon dioxide (CO₂), sulphur dioxide (SO₂) and nitrogen oxides (NO_x) emissions from coal-fired power plants; social and gender equality indicators.
- vi) Carry out an assessment using the identified metrics of the costs and benefits of multiple scenarios of CFPP retirement, and identify key “just transition” activities that will be required to address any negative impacts experienced by specific stakeholder groups.

28. **Component 2.** This component will review the political and legal viability of coal assets being acquired and/or governed by an ETM, carrying out an in-depth analysis of the policy, regulatory and institutional landscape in each country. This will help determine whether the fund is compliant and can acquire assets within the existing legal framework of each country. A key part of this study will be a stakeholder and political economy feasibility assessment, which will include identifying potential “local champions” of the ETM from public and private stakeholders and building on government relationships in each country to maintain the momentum around the ETM concept. Once the necessary technical analysis has been carried out, the results can be presented to the key stakeholders and governments to secure their buy-in, with the goal of engaging them further in the detailed design and setup of the ETM vehicle. Activities under this component shall include:

- i) building off the work on the pre-feasibility study, carry out a further review of the regulatory and policy framework to determine the feasibility of carbon-intensive power assets being acquired and/or governed by an ETM;
- ii) legal assessment of the ETM in each country to ensure compliance around asset transfers, including: (a) evaluating the local conditions of the country related to electricity pricing regimes, utilization and offtake arrangements, legal and contractual customs; (b) assessing how the asset transfer can work within the existing legal framework, and whether the ETM can acquire or govern state-owned assets; and (c) propose a legal structure for the fund that is consistent with the relevant country's legal framework;
- iii) assess the political-economy dynamics affecting the energy sector to identify public and private-sector advocates/champions of the ETM (or resistance points) based on a value chain and ownership analysis of the coal sector, and broader stakeholder engagement;
- iv) build on government relationships established during the pre-feasibility study to maintain the momentum around the ETM concept; and
- v) share the provisional results of the ETM with potential public and private-sector advocates/champions and governments to secure their buy-in and start developing greater local ownership of the ETM concept.

29. **Component 3.** The component should develop a pool of eligible assets for the ETM from the initial tranche of assets identified in Component 1 (technical feasibility), with the aim of finalizing a deal by the end of 2022. This will involve a study of individual plant contractual agreements, as well as financial modelling to determine asset specific cashflows and profitability. Once the pool of eligible assets has been identified, the project team should also begin to engage with asset owners, with the aim of signing them up to the ETM. Activities under this component shall include:

- i) identification of pool of eligible assets and engagement with asset owners through a contractual and financial assessment, including: (a) analyzing the individual plant contractual agreements pertinent to the country and developing recommendations on how to structure the ETM so that it is in alignment with the contractual customs; and (b) developing detailed financial models for each of the CFPPs in the initial tranche of assets selected for early retirement and determine the price that the ETM would need to pay to acquire and retire each of the target CFPPs; and
- ii) engagement with asset owners and facilitation of negotiations to determine an appropriate value of the initial tranche of CFPPs to be acquired by the ETM.

30. **Component 4.** The component should propose a fund structure based on the legal assessment made in each country, and the scale and type of financing required by the CFPPs prioritized for retirement. Part of this should include establishing the ownership structure of the ETM vehicle, defining the role of existing stakeholders involved with the ETM concept, and engaging with other development partners, including international financial institutions and global private sector financial institutions on potential partnerships for the fund. This component should also develop and implement a stakeholder outreach plan to engage public and private institutions that may be interested in investing in the ETM. This will include developing and testing the ETM's proposed fund structure with potential investors to ensure that this is aligned with their requirements and expectations. This exercise will be led by the ADB with the consultant team supporting the development of the outreach materials. Activities under this component shall include:

- i) Design a fund structure for the ETM and calculating the scale and degree of concessional finance needed to acquire and retire the initial tranche of CFPPs on the proposed timeframe. This would also include developing the ETM's ownership and governance structures, risk management standards, etc.
- ii) Assess the potential for voluntary or mandatory carbon markets or carbon pricing mechanisms in each of the countries to provide additional finance for the ETM or incentives for early CFPP retirement.
- iii) Develop appropriate materials to introduce the ETM to potential investors, covering all of the topics covered in the other Feasibility Study components.
- iv) Engage with potential investors to assess whether the proposed ETM's fund structure is consistent with their requirements. Investor groups to be consulted include donors (e.g., developed country governments, philanthropic groups), international financial institutions (e.g., multilateral development banks), long-term institutional investors (e.g., insurers, pension funds) and investment banks.
- v) Refine the design of the fund structure based on stakeholder inputs, and market the fund to interested investors to secure investment commitments.

31. **Component 5.** The component relates to implementing a global engagement strategy and developing high-level thought leadership to raise awareness of the ETM and push coal retirement to the forefront of the international agenda. This will involve engaging with the standard-setting bodies for green/transition finance to establish best practices, government stakeholders and the media to further promote the ETM. Activities under this component shall include:

- i) development of stakeholder engagement strategies and high-level thought leadership; and
- ii) media engagements, events and other marketing activities.

32. To carry out this feasibility study ADB seeks to engage a consulting firm specialized in transaction advisory services, which must be supported by a law and engineering firms with expertise in the power sector, in particular in power generation assets (fossil-fuel based and renewable) and the analysis of power system. The consortium of firms should have demonstrated experience in providing advisory and consultancy services to multilateral development banks for at least 10 years. In addition, the consulting firm should have considerable experience working in developing countries of Southeast Asia. English language skills are essential for all positions.

33. The following team of international experts will be engaged under the consulting firm:

34. **Team Leader/ Senior Energy and Financial Specialist (international, intermittent, 10 person-months).** The specialist should have at least a master's degree in a relevant field (energy, economics, engineering), and a minimum of 15 years of work experience in power-generation technologies, financing and policy development. The team leader should have experience in the financing of large-scale energy infrastructure projects, including thermal power projects. In addition, the team leader should have experience in advisory or senior management roles with a power utility, preferably in a country of SEA. The specialist will provide strategic guidance and technical expertise to the design and set up of the ETM. The specialist will also lead the team of specialists that will carry out the feasibility study, ensuring the quality and timely submission of deliverables.

35. **Energy Specialist (international, intermittent, 7 person-months).** The specialist should have at least a master's degree in engineering (mechanical, electrical), and a minimum of 10 years of work experience in coal-fired power generation technologies. The specialist will lead

the technical assessment related to the retirement of coal assets, and provide technical inputs on aspects related to dispatch, flexible operation and decommissioning costs of the assets to be retired.

36. Clean Energy Technologies Specialist (international, intermittent, 7 person-months). The specialist should have a master's degree in an engineering subject (mechanical, electrical, civil, etc.), and a minimum of 7 years of work experience in the assessment of the energy needs and resources of a country. The specialist will mostly focus on activities under Component 1 of the feasibility study by assessing the capacities to accelerate the deployment of renewable energies in target countries, identifying key barriers to the uptake of higher shares of renewables, and the identification of metrics to assess the impacts of the ETM.

37. Just Transition and Social Impact Specialist (international, intermittent, 3 person-months). The specialist should have at least a master's degree in social sciences or related field, and a minimum of 7 years of experience, including in countries of SEA. The specialist should have knowledge and experience in conducting safeguards, gender and social impact assessment studies as well as assessing the needs of local populations for a just transition, including on opportunities for the generation of alternative jobs, particularly on clean energy.

38. Environmental Specialist (international, intermittent, 3 person-months). The specialist should have at least a master's degree in environmental engineering or related field, and a minimum of 7 years of experience in the conduct of environmental impact assessment studies. The specialist will lead the environment assessment activities of the feasibility study, including in the areas related to biodiversity impacts.

39. Political Strategy Advisor (international, intermittent, 3 person-months). The specialist will have expertise in government affairs, public policy and political science, as well as experience in conducting political and economic analysis in the target South East Asia countries. Ideally, the specialist should have experience in assessing the challenges and opportunities of mobilizing investments in terms of the political and socio-economic context of the target countries. The specialist will mostly focus on activities under Component 2 of the feasibility study.

40. Legal Counsel (international, intermittent, 10 person-months). The specialist should have knowledge and experience in the design and setting up of funding mechanisms in the energy sector, and an understanding of the legal and fiduciary aspects related to the establishment of these mechanisms. The legal specialist will also lead and coordinate inputs from the national legal specialist of the three DMCs shortlisted for this feasibility study. Experience in countries of SEA is necessary is required for this position.

41. Financial Specialist (international, intermittent, 8 person-months). The specialist should have knowledge and experience in financing energy projects, covering both fossil fossil-based and renewable energy power generation. Knowledge of global best practice in the establishment of similar energy financing mechanisms, including the rules and regulations that govern its operation will be ideal. Past experience in providing guidance and technical advice on coal retirement financing will be an advantage. Experience in countries of Southeast Asia is also required.

42. Carbon Pricing Specialist (international, intermittent, 3 person-months). The specialist should have experience in the design and implementation of carbon pricing instruments, as well as in approaches related to the measurement, report and verification of greenhouse gas emissions. The specialist will assess opportunities for additional finance of the ETM through

carbon market, both voluntary and mandatory, including through innovative/emerging mechanisms under Article 6 of the Paris Agreement.

43. **Marketing and Communications Specialist (international, intermittent, 6 person-months).** The specialist should have knowledge and background in strategic communications, and experience with working on international campaigns relating to climate change and sustainability. The specialist would lead Component 5 of the feasibility study.

44. **Marketing and Communications Specialists (national, intermittent, 18 person-months).** The specialists will develop the marketing and communication approach related to the ETM work for their respective countries. They should have knowledge and background in strategic communications, as well as experience with working on international campaigns relating to climate change and sustainability. The national specialists will work in coordination with the international marketing and communications specialist.

45. **Energy Specialists (national, intermittent, 24 person-months).** The specialists will have a minimum of 7 years of experience in the power sectors of Indonesia, the Philippines and Viet Nam. The specialists will provide technical, research and analytical support in issues related to the power systems of their respective countries, and will also support the team identifying relevant stakeholders to the ETM.

46. **Legal Specialists (national, intermittent, 24 person-months).** The specialists will have a minimum of 7 years of experience in legal advisory on energy investments in Indonesia, the Philippines and Viet Nam. The specialists will support the international legal specialist in assessing the legal and fiduciary aspects related to the implementation of the ETM in their respective countries.

2. Reporting Requirements

47. The following deliverables are required from the consulting firm, structured by component. For Component 1:

- i) report exploring technical feasibility of removing CFPPs from the grid and the deployment of large-scale renewable energy and necessary storage and grid improvements (first draft October 2021; final report January 2022); and
- ii) report outlining the impact of coal retirement on local communities (including a gender and social equality analysis) and the necessary activities to deliver a “just transition” (first draft March 2022; final report June 2022).

48. For Component 2:

- i) report on ETM policy and legal feasibility and political-economy dynamics (First draft March 2022; final report June 2022); and
- ii) stakeholder map and summary of potential ETM “champions” (July 2022).

49. For Component 3:

- i) report exploring contractual feasibility and financial analysis of initial tranche of CFPPs (first draft March 2022; final report June 2022); and
- ii) development of materials to be used for asset owner engagement and negotiations (September 2022).

50. For Component 4:

- i) proposed ETM fund structure (first draft July 2022; final December 2022); and
- ii) outreach materials to introduce the ETM to investors (February 2023).

51. For Component 5:

- i) thought leadership articles (March 2023); and
- ii) global engagement strategy (June 2023).

D. Consulting Services – Firm (9 person-months of international inputs for Output 3)⁶

52. Under Output 3 of the TA, opportunities for energy efficiency improvements through public and private investments will be fostered in countries of SEA as one of the means of accelerating the clean energy transition in the region. ADB consultations planned during Q4 2021 and Q1 2022 with energy ministries of SEA countries will lead to the identification of at least two countries where activities under Output 3 of the TA will be carried out. These activities will consist of the following: (i) drafting and enactment of policies, regulations and standards on energy efficiency; (ii) design of public procurement programs for more efficient appliances; and (iii) development of new projects and business opportunities centered on “energy as a service” for the digital economy. To undertake these activities, the TA will require the services of an international consulting firm (hereinafter referred to as the “consulting firm”) for a total of 23 person-months of international consulting services. Activities will be implemented over a period of 18 months, with expected start in Q3 2022.

53. ADB will recruit the consulting firm in accordance with the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions using a quality- and cost-based selection method. A quality-cost ratio of 90:10 will be applied for the final selection of the firm based on the simplified technical proposals from short-listed firms. The consulting firm will be engaged using a partial lump sum contract.

1. Scope of Work

54. Under the guidance of and in close coordination with ADB and the government agencies concerned, the consulting firm will undertake the following activities: (1) the drafting and enactment of policies, regulations and standards on energy efficiency; (2) the design of public procurement programs for more efficient appliances; and (3) the development of new projects and business opportunities centered on “energy as a service” and the digital economy.

55. Activity 1 shall be based on a thorough analysis of global best practices in the design of energy efficiency policies, regulations, and/or standards. It should also take into account the specific circumstances of the selected country(ies), including major energy consuming sectors and sub-sectors, energy demand patterns, national legal and regulatory framework, etc. Consultations shall be carried out with government officials, as necessary, to incorporate their views in the policy documents prepared in the scope of the project. The public procurement program under Activity 2 will involve the development of a procurement approach based on international best practice in at least one SEA country. The consulting firm shall assist the national government focal agency in all steps required to implement the program, and will also document

⁶ Additional firms may be recruited during implementation based on needs arising from the TA activities.

the procedures adopted for further replication. Under Activity 3, the consulting firm will develop a pipeline of investment projects for shortlisted countries, which shall include a high-level profitability analysis of the projects identified.

56. The consulting firm should have a track record and demonstrated experience in demand side energy efficiency consulting for at least 10 years, specifically in the areas of energy efficiency project development and technologies, energy efficiency policy, regulation and financing, public procurement and energy efficiency in industrial, residential, and commercial facilities. The consulting firm should have considerable experience working in developing countries of Southeast Asia. English language skills are essential for all positions.

57. The following team of international experts will be engaged under the consulting firm:

58. **Senior Energy Efficiency Specialist (international, intermittent, 3 person-months).** The expert should have at least a master's degree in a relevant field (energy, economics, engineering), and a minimum of 10 years of relevant work experience on energy efficiency. The expert should have a proven-track record on: (i) demand-side energy efficiency; (ii) policy and strategy development; (iii) project development and implementation; (iv) deployment of energy efficiency technologies including in industrial and commercial applications; and (v) financing and development of innovative business models. The expert will support the development of energy efficiency policies, regulations, technical standards, guidelines, and operational manuals in selected SEA countries.

59. **Energy Efficiency Technology Specialist (international, intermittent, 2 person-months).** The expert should have a master's degree in an engineering subject (mechanical, electrical, civil, etc.), and a minimum of 5 years of work experience on energy efficiency. The expert will work in coordination with the Senior Energy Efficiency Specialist and provide technical inputs in the identification of energy efficiency technologies suitable to the national context of SEA countries, including on matters related to development, commercial application and implementation.

60. **Energy Efficiency Finance Specialist (international, intermittent, 2 person-months).** The expert should have at a master's degree in a relevant field (engineering, finance, economics), and a minimum of 5 years of work experience on energy efficiency. The expert will work in coordination with the Senior Energy Efficiency Specialist in identifying financing options for energy efficiency investment pipelines as well as innovative business models that could enable energy investments in SEA countries.

61. **Energy Efficiency Policy Specialist (international, intermittent, 1 person-months).** The expert should have a master's degree in a relevant field (engineering, economics, public finance), and a minimum of 5 years of work experience on energy efficiency. The expert will work in coordination with the Senior Energy Efficiency Specialist in the preparation of policy documents on energy efficiency in selected SEA countries. The expert will provide technical assistance in drafting those documents taking into account regional and global best practices, and in close consultation with national governments.

62. **Procurement Specialist (international, intermittent, 1 person-months).** The expert should have a bachelor's or master's degree in public administration, procurement or related field, and have a minimum of 5 years of relevant work experience. The expert should have proven experience in successfully conducting at least one public procurement process in a developing

member country. The expert will provide technical support and expert advice to a public procurement process for energy efficient equipment to be carried out in one SEA country.

2. Reporting Requirements

63. The following deliverables will be required from the consulting firm:

- i) first draft of policy, regulation or standard on energy efficiency supported in SEA country;
- ii) first draft of public procurement documents for more efficient appliances, including step-by-step approach;
- iii) mid-term report with progress on activities 1, 2 and 3;
- iv) final draft of policy, regulation or standard on energy efficiency supported in SEA country and endorsed by the government;
- v) report on outcomes of public procurement process; and
- vi) final report with investment pipeline for energy efficiency projects and business models centered.