



**TERMS OF REFERENCE (TOR) FOR  
TECHNICAL EXPERTS / CONSULTANT**

**PROJECT NAME:**

**“ASEAN Coal Transition Technologies (ASCOTRECH): Policy, Technology, and  
Financial Strategies”**

**DEADLINE:**

**11 August 2024**



## **I. PROJECT NAME**

ASEAN Coal Transition Technologies (ASCOTRECH): Policy, Technology, and Financial Strategies

## **II. POST TITLE**

Expert Consultant on ASEAN Coal Transition Technologies (ASCOTRECH): Policy, Technology, and Financial Strategies

## **III. BACKGROUND**

The ASEAN Centre for Energy (ACE) is an intergovernmental organisation that independently represents the 10 ASEAN Member States (AMS) interests in the energy sector. The Centre serves as a catalyst for the economic growth and integration of the ASEAN region by initiating and facilitating multilateral collaborations and joint and collective energy activities. It is guided by a Governing Council composed of Senior Officials on Energy from each AMS and a representative from the ASEAN Secretariat as an ex-officio member. The ACE office is in Jakarta, hosted by Indonesia's Ministry of Energy and Mineral Resources.

As part of the efforts to fulfil its function as a regional centre of excellence that builds a coherent, coordinated, focused and robust energy policy agenda and strategy for ASEAN, ACE conducts joint studies, policy dialogues and capacity buildings for AMS to support the implementation of the ASEAN Plan of Action for Energy Cooperation (APAEC) 2016-2025. APAEC is the regional blueprint for enhancing energy connectivity and market integration in ASEAN to achieve energy security, accessibility, affordability, and sustainability for all AMS.

Energy demand in the ASEAN region will grow approximately 30% by 2030 and 170% by 2050 compared to 2020 levels of 385 Mtoe. Within the energy demand mix and against the energy transition agenda, coal will still reach 133 Mtoe in 2050, with the sectoral composition of coal demand is shifting towards industry, as coal use will grow by 66% from 2020 to 2050 in the sector. Meanwhile, notwithstanding the eventual downfall of coal use in the electricity sector in the long term (2050 and ahead), it still contributes significantly in the short and medium term at 42% in 2025.

However, most coal-fired power plants, as per 2021 data, are still using less efficient technology (i.e., subcritical), which accounts for 57% of the total generating capacity in Southeast Asia. They are also relatively young—averaging around 14 years—which means that they could be in operation for another 30 years, making it more challenging to curb CO<sub>2</sub> emissions from the power and industrial sectors.

One of the seven (7) Programme Areas under the APAEC Phase II: 2021-2025 is on Coal and Clean Coal Technology, with the aim that ASEAN Member States (AMS) could optimise the role



of clean coal technologies (CCT) in facilitating the transition towards sustainable and lower emission development. Nevertheless, in encouraging coal upgrading towards energy transition through the implementation of CCT and carbon capture utilisation storage (CCS/CCUS), AMS faces several technological, regulatory, and financial gaps.

In light of this, ACE, supported by the Economic Research Institute for ASEAN and East Asia (ERIA), will conduct a Project called “ASCOTRECH”, to formulate some recommendations to support the deployment of advanced retrofitted CCT, drive the development of supportive policies and draw financial mechanisms for the implementation of the technologies. ACE, therefore, seeks consultancy services (**individual or consulting firm**) to support the project activities to deliver a part of the Project’s output, as laid down below.

#### **IV. DURATION OF ENGAGEMENT**

The consultant awarded with the assignment will be hired for 20 – 25 man-days over a period of eight (8) months from August 2024 until March 2025, obliged to work within the required deadlines, and available for calls or meetings, virtually and in person, as needed.

The consultant will undertake this project for a period in line with Table 1 of clause VI, which can be continuous or intermittent due to further discussion between ACE and the consultant.

#### **V. TASK TO BE UNDERTAKEN**

The consultant will assist ACE for the ASCOTRECH project through developing a **Study Report on the Coal Transition Financing Guidelines**, with the output details as indicated in Section VI. The final outputs and deliverables may be subject to change based on the discussion and agreement between ACE and the consultant.

##### ***Study objective***

The study objective includes:

1. Assess Current Status of Coal Energy Consumption and Coal-Fired Power Plants (CFPPs): to map the current coal energy consumption status and the location and age of CFPPs across AMS.
2. CCT Transition readiness: to identify the benefits of utilising CCT and to map out the plans for existing CFPP to transition into CCT, or CFPP retirement plan (if any).
3. Identify Financial Needs and Gaps: to determine the financial requirements for transitioning to CCT and identify existing funding gaps, the types of financing needed and opportunities can be utilized to support this transition.
4. Analyse Global Best Practices: to review and analyse existing financing frameworks and its enabling policies related to CCT transition globally and in ASEAN.
5. Develop Financing Mechanisms and Guidelines: to propose innovative financing mechanisms and comprehensive guidelines tailored to the needs of AMS and ensure that these guidelines are aligned with international best practices and the ASEAN Plan of Action for Energy Cooperation (APAEC) targets.



### ***The scope of work***

The scope of the assignment for the technical experts will include:

#### **1. Data collection**

Qualitative and quantitative data are collected from various sources to support the development of CCT financing guidelines that are applicable to ASEAN. This will include:

a. Literature Review (Desk research)

Review the latest relevant policy documents, strategic reports, research journals, and any news/ press releases related to the development of the clean coal technology (CCT) projects and its existing financial mechanisms.

b. Consultation Workshop

Attend the Consultation Workshop on Policy, Economic, and Financial Mechanisms of Coal Transition (to be organised and facilitated by ACE), to engage with relevant stakeholders to gather additional information and viewpoints on CCT and its financing mechanisms, including the ASEAN Forum on Coal (AFOC) Focal Points, Heads of ASEAN Power Utilities/Authorities (HAPUA), and the ASEAN Energy Regulatory Network (AERN) to complement the missing information collected from desk research.

#### **2. Assessment and analysis**

The output of the report will primarily be delivered based on the following analytical techniques and frameworks:

a. Policy Analysis

Examines the existing policies relevant to the development of the CCT project and its existing financial schemes.

b. Stakeholder analysis

Describes relevant stakeholders in AMS to understand their interests and influence on promoting transformative policies in the power sector, especially related to CCT deployment (including those who affect the financial scheme or opportunities to be applied in the CCT)

c. Gap identification and Impact analysis

Identifies the existing gaps (challenges) and opportunities for financial sources to be applied for the development of the CCT in ASEAN.

d. Comparative study

Investigate the design of the existing policies and financing mechanisms in AMS or other jurisdictions and evaluate their applicability to form CCT Financing Guidelines in ASEAN.

#### **3. Report Development**



Based on the collected and analysed data and information, the appointed consultant will be expected to develop one (1) Technical Study Report on the Coal Transition Financing Guidelines.

## VI. EXPECTED DELIVERABLES

Expected outputs and deliverables, including timelines for the submission by the consultant, are the following:

*Table 1. Activity and Deliverables of the Consultant*

Activity	Deliverable	Deadline*
Develop a clear work plan	Work plan of the project	2 Weeks after the contract is signed
Data Collection and Analysis	Establish a study framework including data collection consists of a list of data, preliminary data, related references, and existing CCT project database**, and preliminary desk research	August – November 2024
	Attend the Consultation Workshop	October 2024
Report Drafting	Interim Report	W1 December 2024
	First draft report	W1 January 2024
	Final Report	W1 February 2024
Project Completion	Completion Report	W1 March 2025

\* Actual deadline may be adjusted based on the agreement and approval by ACE.

\*\* Depending on the data list proposed by the consultant, ACE will help provide the data from ASEAN if it is available in the ACE database.

\*\*\* Consultant may attend the Consultation Workshop virtual/ in person, but the arrangement will be covered by ACE, including the logistics, venue and invitation for participants. This only includes the travel cost for one (1) personnel for the consultant to travel to ASEAN. If more than one (1) personnel wish to travel, please include the travel cost for the consultant in the financial proposal. The amount of mandatory offline workshops for consultants to attend is one (1) time.

## VII. WORK MECHANISM

The implementation of the project is arranged as below:

- Led by the Power, Fossil Fuel, Alternative Energy and Storage (PFS) Department, ACE is responsible for the project's full implementation. It will manage and facilitate the work and communication with government officials, ASEAN Forum on Coal (AFOC) Focal Points, Heads of ASEAN Power Utilities/Authorities (HAPUA), and the ASEAN Energy Regulatory Network (AERN), Senior Officer Ministry of Energy (SOME), and ASEAN Ministry on Energy Meeting (AMEM), including with other official parties if needed.
- External Consultant to provide the technical expertise and support as described in this TOR. The consultant is responsible for communicating with external parties required under this



project, particularly private sectors or companies. During the work period, the consultant must have a regular conference call meeting with ACE to discuss progress in every work step. Any interaction with the external parties to support the project by the consultant must be approved by ACE.

## **VIII. CONSULTANT QUALIFICATION**

ACE requires a consulting service provider or technical experts with proven experience and capacity to provide the necessary tasks, outputs/deliverables as described above.

- The expertise of the firm/organisation: The consulting service provider or technical experts should demonstrate proven records of delivery for similar tasks/products over the most recent five years. Bidders are to attest their expertise by submitting, e.g., reports, studies, analyses, consultancy products, research analyses, and data management related to the aim of the consultancy.
- Team capabilities: The team involves a senior consultant/team lead with more than 10 years of experience as either 1) a financial and investment expert with a focus on sustainable finance, and/or 2) an energy transition (including CCT) expert, with the support of an adequately skilled team. Bidders to submit CVs.
  - The team must consist of at least one (1) regional (ASEAN) expert and one (1) international expert who has a portfolio in working on energy transition financing particularly related to the CCT financing scheme.
  - Regional expert has experience in the ASEAN coal energy landscape and has done policy/ financing-related work in at least three (3) ASEAN countries.
  - International expert with international experience in assisting/establishing/being involved in the development of energy transition financing guidelines (the CCT financing is preferred) or similar analysis work at the international level.
- Excellent command of English and the capacity to write high-quality reports in the language; the ability to deliver high-quality workshops and discussions in English is also required.
- Capacity and flexibility to complete the assignment within the required time frame.

## **IX. SERVICE FEE**

The compensation for the entire performance is arranged according to the project budget.

- For the satisfactory performance of the assignment, the consultant will be paid a fixed fee of a maximum of USD 10,000 (Ten thousand US dollars).
- Payment will be made to the consultant's nominated bank account.
- ACE is an intergovernmental organisation and is not liable for any taxes. Consultant shall file and settle any payment for income tax arising from the income from ACE. ACE shall not be



responsible for any consequences of the failure to fulfil obligations relating to the income tax laws of the respective country.

- The disbursement timeline shall be proposed by the consultant under the proposal and the mechanism will be agreed between ACE and the consultant within the contract signing process.
- The consultant must submit a report on the person-days usage and timesheet to ACE for each disbursement.

## **X. REQUIRED DOCUMENT**

Interested Consultants or Technical Experts are invited to submit a proposal in response to these Terms of Reference (Max 10 pages, excluding CV).

1. The Technical component should present the following information (80% weight):

### 1.1 Expertise of the Firm/Organization

- Provide a brief description of the organisation/firm submitting the Proposal, its legal mandates/authorised business activities, the year and country of incorporation, types of activities undertaken, and approximate annual budget. Include reference to reputation or any history of litigation and arbitration in which the organisation/firm has been involved that could adversely affect or impact the performance of services, indicating the status/result of such litigation/arbitration.
- Track record and experiences: Provide the following information regarding corporate experience within the last five (5) years, which are related or relevant to those required for this Contract.

### 1.2 Approach and Implementation Plan

- Provide a detailed description of the methodology for how the organisation/firm will achieve the Project's Terms of Reference, considering the appropriateness to local conditions and the project environment.
- Provide the Proposer's internal technical and quality assurance review mechanisms.
- Submit a Gantt chart or Project schedule indicating the detailed sequence of activities undertaken and their corresponding timing.
- Describe the potential risks for implementing this Project that may impact the achievement and timely completion of expected results and their quality. Describe measures that will be put in place to mitigate these risks.
- Provide a brief description of the mechanisms proposed for this project for reporting to ACE, including a reporting schedule.
- A discussion on how measures to ensure the future sustainability of the project outcomes will be addressed.



### 1.3 Personnel

- Provide a spreadsheet to show the activities of each staff member and the time allocated for their involvement. (Note: This spreadsheet is crucial, and no substitution of personnel will be tolerated once the contract has been awarded except in extreme circumstances. Any substitution shall be made only with ACE's approval of the justification for the substitution and with ACE's approval of the replacement, who shall be of either equal or superior credentials to the one being replaced and which shall not involve any additional cost to ACE. No cost increase will be considered as a result of any substitution.)
- Provide the CVs for key personnel (team leader, managerial and general staff) that will be provided to support the implementation of this project. CVs should demonstrate qualifications in areas relevant to the Scope of Services. The indication of international and regional experts must also be included.

2. The Financial component should specify the following information (20% weight):

The Financial Proposal must provide a detailed cost breakdown. The format shown on the following pages is suggested for use as a guide in preparing the Financial Proposal. The format includes specific expenditures, which may or may not be required or applicable but are indicated to serve as examples.

*Table 2. Format of Man-days proposed by the Consultant and Cost*

Description of Deliverable (referring to Table 1)	Cost per person day – per expert as indicated in the ToR	Number of Man-days	Total cost USD

## XI. SUBMISSION OF APPLICATION

The proposal should be submitted to [procurement@aseanenergy.org](mailto:procurement@aseanenergy.org) and cc [pfs@aseanenergy.org](mailto:pfs@aseanenergy.org), [Dwiky.syarief@aseanenergy.org](mailto:Dwiky.syarief@aseanenergy.org) by **11 August 2024** (GMT+7).

Technical and Financial proposals are to be submitted as two (2) separate electronic files. The proposals are to be submitted in pdf format.

Please indicate the subject heading: **Document for ASCOTRECH Consultant.**

## XII. AMENDMENT TO TERMS OF REFERENCE

These Terms of Reference may be amended in writing only, subject to the agreement of both parties.





### **XIII. CONFIDENTIALITY AGREEMENT**

Without written permission from ACE, the consultants shall not disclose any data or information to external parties.

### **XIV. ACE GOVERNANCE POLICIES ON FRAUD AND CORRUPTION**

ACE takes a zero-tolerance approach to fraud and corruption involving ACE Staff Members and third parties concerning their work with ACE. ACE encourages the use of the Whistle-Blower Policy to report any identified cases of fraud and/or corruption in ACE operations.

### **XV. COPYRIGHT AND INTELLECTUAL PROPERTY**

All material produced under this assignment will belong to ACE and remain the property of ACE. The consultants will not have any control over copyright claims and intellectual property.

### **XVI. CONTACT PERSON**

All communications and queries related to this ToR shall be submitted in writing through email to [pfs@aseanenergy.org](mailto:pfs@aseanenergy.org) and cc [procurement@aseanenergy.org](mailto:procurement@aseanenergy.org), [Dwiky.syarief@aseanenergy.org](mailto:Dwiky.syarief@aseanenergy.org).