



**TERMS OF REFERENCE (TOR) FOR
CONSULTANT FOR INVESTMENT GRADE AUDIT (IGA)**

PROJECT NAME:

“Investment Grade Audit in Industry Sector – GCF-KDB Project”

DEADLINE:

28 March 2025



I. PROJECT NAME

GCF-KDB Programme: Supporting Innovative Mechanisms for Industrial Energy Efficiency Financing in Indonesia with Lessons for Replication in other ASEAN Member States

II. POST TITLE

Consultant of Investment Grade Audit (IGA) in Industry Sector

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 as well as joint and collective activities on energy. 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. Hosted by the Ministry of Energy and Mineral Resources of Indonesia, ACE office is located in Jakarta.

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 ASEAN Member States to support the implementation of the ASEAN Plan of Action for Energy Cooperation (APAEC) 2016-2025.

APAEC 2016 – 2025 is served as the blueprint for enhancing energy connectivity and market integration in ASEAN to achieve energy security, accessibility, affordability, and sustainability for all AMS. These provide the regional blueprint for reducing the energy intensity of the region by 32% by 2025. One of the main program areas is Energy Efficiency and Conservation (EE&C). The EE&C program area has an outcome-based strategy (OBS) that is: OBS 5 – to advance Energy Efficiency and Energy Management in industry, which focuses on promoting energy management in industry to increase competitiveness and reduce energy consumption.

The industry sector accounted for 39.1% of total final energy consumption in the region in 2020, well above the other sectors¹. This number is on course to be tripled by 2050. Characterised as a hard-to-abate sector due to its fossil fuel-dependent operations, this sector requires strategies specifically tailored to decarbonise. For these reasons, implementing energy efficiency measures in the industrial sector is essential for near- and mid-term strategies before fuel or technological substitutes become viable in the future, further accelerating energy transition while enhancing energy security.

However, adoption of energy-efficient technologies and measures is often limited by a wide range of barriers, including lack of awareness, limited access to finance, regulatory challenges, and perceived risks associated with new investments.

IV. PROJECT DESCRIPTION

In 2023, Green Climate Fund and Korea Development Bank have signed a funded activity agreement (FAA) for a programme called ***“Supporting Innovative Mechanisms for Industrial Energy Efficiency Financing in Indonesia with Lessons for Replication in other ASEAN Member States programme”***.

¹ ASEAN Centre for Energy (2022), The 7th ASEAN Energy Outlook



The programme provides a package of innovative energy efficiency solutions including financial de-risking mechanisms, exploration of new energy service business models, development of a supportive regulatory framework, and technical assistance for industry sector in Indonesia. There are three main components of the programme:

1. Energy Efficiency Finance: provide backstopping credit risk of local FI's own loan with GCF Credit Guarantee via local FIs
2. De-risking Mechanism: introduce Energy Saving Insurance (ESI) and ESCO financing structure through knowledge sharing, workshops, consultations, and capacity buildings
3. Technical Assistance for the Market Readiness: strengthen Local Financial Institutions' capacity, provide technical advisory services for industry player, and develop regulatory frameworks.

ASEAN Centre for Energy (ACE) is an executing entity, providing technical assistance activities to execute component 2 and 3 of the programme mentioned above.

The programme starts from April 2024 and ends in April 2031.

V. OBJECTIVE

The consultant will conduct Investment Grade Audits (IGA) for selected industrial companies to assess energy efficiency opportunities and provide a comprehensive technical and financial evaluation of potential projects. The findings will help bridge the gap between industries and financial institutions, ensuring that viable projects can access GCF-KDB's financing mechanisms. ACE foresees to conduct Investment Grade Audit to three (3) potential projects / plants in Indonesia.

VI. TASKS TO BE UNDERTAKEN

The consultant will be responsible for the following tasks:

1. Pre-Audit Planning & Data Collection

- Develop a standardised data collection methodology for energy assessments.
- Coordinate with industrial company representatives to collect baseline energy consumption data.
- Review previous energy audit reports (if available).

2. Technical Assessment

- Analyse current energy consumption patterns across utilities, machinery, and electrical systems.
- Identify inefficiencies and areas for energy optimisation.
- Evaluate technical feasibility of potential energy efficiency improvements, such as equipment upgrades, retrofits, and process optimisations, with clear explanations of equipment's improvement specifications and parameter for optimisations.
- Provide detailed energy savings calculations based on industry best practices and benchmarks.
- Provide implementation plan for company to adapt with new technologies, including necessary training plan, monitoring & verification (M&E) and measurement and verification (M&V) framework.



3. Financial Assessment

- Provide cost estimates for recommended energy efficiency measures, including CAPEX and OPEX.
- Conduct a cost-benefit analysis, including Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period.
- Assess financial risks and identify suitable financing mechanisms available under the GCF-KDB Programme and explore other potential business model that fits to support the implementation of energy efficiency projects.

4. Reporting & Recommendations

Develop a comprehensive Investment Grade Audit report, including but not limited to:

- Executive Summary
- Methodology & Approach
- Measurement Results, Findings & Analysis
- Energy Savings Potential
- Recommended Measures
- Financial Feasibility and Business Model
- Implementation Roadmap

Present findings to ACE and key stakeholders

VII. EXPECTED DELIVERABLES

- Investment Grade Audit Report for the selected industrial company, including:
 - Energy efficiency opportunities identified
 - Technical and financial feasibility assessment
 - Implementation recommendations
- Presentation of findings to ACE and relevant stakeholders.

VIII. WORK MECHANISMS

The implementation of the project is arranged as below:

- Led by the Energy Efficiency and Conservation (CEE) Department, ACE is responsible providing technical assistance to the GCF-KDB Programme as the implementing entity while KDB is responsible for handling the financial mechanism. In this activity, ACE will manage and facilitate the work and communication with Korea Development Bank (KDB).
- The Consultant provides the technical expertise and support as described in this TOR. The consultant is responsible for communicating with external parties required under this project, particularly selected companies or plants to be assessed. During the work period, the consultant must have regular check-in call meetings with ACE to discuss progress in every step of the work. Any interaction with the external parties to support the project by the consultant must be approved by ACE.



IX. DURATION OF ENGAGEMENT

The Consultant awarded with the assignment will be hired **for a year**, starting from **April 2025** and obliged to work within the required deadlines and be available for call if needed. An indicative timeline is provided below:

Consultant shall complete the investment grade audit report for one plant within **6 weeks upon receiving the instruction to assess a selected plant**.

X. 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:

- Postgraduate degree in engineering (mechanical, electrical, industrial), energy management, or environmental science.
- Relevant certifications such as Certified Energy Manager (CEM), Certified Energy Auditor (CEA), or International Performance Measurement and Verification Protocol (IPMVP) Certification.
- Minimum of 10 years of experience in industrial energy auditing, efficiency assessments, and project implementation.
- Demonstrated experience in conducting Investment Grade Audits (IGA) and benchmarking energy performance in industrial settings.
- Familiarity with ISO 50001 Energy Management Standard, ISO 50006, or other relevant industry standards.
- Strong analytical skills in energy consumption data analysis, cost-benefit evaluations, and technical feasibility assessments.
- Understanding of local and regional energy policies and financing mechanisms.
- Proficient in English (both written and spoken)

XI. SERVICE FEE

- The Consultant shall be compensated with a fixed lump sum fee for the satisfactory completion of the assignment for each plant assessed.
- The candidates shall **submit a competitive price proposal**, with clear definition on the pricing structure depending on the size of the plants to be assessed (i.e: price for IGA for plant that consume less than 4,000 TOE/year, 4,000 – 6,000 TOE/year, and more than 6,000 TOE/year) and other relevant factors.
- Given the high level of competition, proposals that demonstrate equivalent qualifications at a more favourable price point will be given preferential consideration
- The final service fee shall be determined based on the plant size, scope of work, and specific tasks required. ACE may consider **budget adjustments, as deemed appropriate, to accommodate assessments of larger plants or additional scope of work** through discussions with the Consultant.
- A detailed breakdown of the agreed-upon pricing shall be finalised between ACE and the Consultant prior to the commencement of activities.
- The agreed fee shall cover all necessary site visit audits at the designated industrial plants in Indonesia.
- Payment will be made to Consultant's nominated bank account. The first payment will be issued upon submission of the initial draft of the document, with the final payment made after the successful approval of the completed report.



- ACE is an intergovernmental organisation and not liable for any taxes. You shall file and settle any payment for income tax arising from the income from ACE. ACE shall not be responsible for any consequences of your failure to fulfil your obligation relating to income taxation laws of your respective country.

XII. REQUIRED DOCUMENTS

Interested consultants or individual experts should submit a proposal (maximum 15 pages), divided into two sections, which becomes the evaluation criteria

- **Introduction:** explain your expertise and experience that is relevant to the ToR,
- **Scope of work:** understanding about the tasks and deliverables of the study
- **Methodology:** explain your data collection method, data to collect, analysis to perform
- **Timeline:** breakdown detail activities with gantt chart and milestones towards completion of the project
- **Resource Management:** provide experts' profile/CV to be involved in the projects with their roles, identify potential risks that may hamper the projects and how to mitigate, and regular reporting mechanisms to ACE
- **Financial Proposal:** provide a comprehensive cost breakdown, clearly aligned with the scope of work and plant size variations. The proposal must detail the fee structure for different plant sizes and include a transparent breakdown of manpower costs, hourly/daily rates, and specific activities required to conduct the Investment Grade Audit.

XIII. SELECTION PROCESS AND TIMELINE

The selection process and timeline for this procurement are as follows:

- Call for Proposals : From 17-28 March 2025
- Shortlisting of Proposals : From 8-11 April 2025
- Interview : From 14-16 April 2025
- Clarification & Evaluation : From 17-22 April 2025
- Winner Announcement : 23 April 2025

XIV. SUBMISSION OF APPLICATION

Please submit the proposal alongside your CV or Company Profile to email with the subject: "Investment Grade Audit_GCF-KDB", to ACE's Procurement Division (procurement@aseanenergy.org) and cc to cee@aseanenergy.org no later than **28 March 2025 (GMT+7)**.

We encourage early applications as the recruitment process will close upon the selection of a suitable candidate.

XV. AMENDMENT TO TERMS OF REFERENCE

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

XVI. CONFIDENTIALITY AGREEMENT

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



XVII. 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.

XVIII. 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.

XIX. CONTACT PERSON

All communications and queries related to this ToR shall be submitted in writing through email to cee@aseanenergy.org and procurement@aseanenergy.org