

# **TERMS OF REFERENCE FOR ASSOCIATE SENIOR OFFICER ON GREEN COOLING TECHNOLOGIES AND PROCUREMENT**

## **LOW CARBON BUILDINGS (LCB) PROJECT IMPLEMENTATION**

### 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 programme areas is Energy Efficiency and Conservation (EE&C). The EE&C programme area has an outcome-based strategy (OBS) that is: OBS 3 - Strengthen Sustainability of Energy Efficiency in Buildings, which focuses on sustainable EE policies and technologies in the building sector through developing EE building and cooling roadmaps and sharing information on EE buildings initiatives.

The Low Carbon Buildings (LCB) project is supported by the International Climate Initiative (IKI) of the German Federal Ministry for Economic Affairs and Climate Action (BMWK) and implemented by a consortium comprise of the Global Green Growth Institute (GGGI), the ASEAN Centre for Energy (ACE) and the Energy Efficiency Services Limited of India. Rapid economic development in the region has led to a boom in building construction, with floor area projected to double by 2060. This growth drives energy demand and emissions, especially from cooling needs in hot climates. However, many Asian countries lack the frameworks, capacity, and financing to enable low-carbon buildings at scale. While regional plans like APEAC provide efficiency blueprints, targeted support is needed to assist governments, industries, and financial institutions in implementation. Therefore, the ALCBT project will address regulatory, capacity and financing gaps that prevent large scale adoption

of low carbon buildings (LCB). Project interventions build technical and institutional capacity for city and state governments to contribute to national GHG emission reduction targets from building materials and operations, particularly from cooling, complementing regional and global initiatives in the five target countries – Cambodia, India, Indonesia, Thailand and Vietnam.

The project Four strategies are employed to transform existing and new buildings towards carbon neutrality by 2050: (1) institutional capacity of governments is enhanced; (2) technical capacity of industry and service professionals to deliver LCB is substantially improved through trainings and tools; (3) financing is leveraged for efficient cooling and LCB through common metrics and innovative business models; and (4) creation of market demand for LCB, replication of project tools and approach through systematic sharing of lessons, between project countries and globally.

The project aims to achieve 4 outputs:

1. **Standardized tools and systems for managing carbon emissions from the building sector developed and piloted.** This includes developing an assessment tool to quantify embodied and operational carbon, piloting a building registry, and policy recommendations for net-zero buildings.
2. **Key industry stakeholders have enhanced capacity to deliver low carbon buildings.** This will be done through training programs, integration of low carbon concepts into university curricula, and promoting energy service companies.
3. **Financial pathways established to facilitate financing for low carbon buildings.** Activities involve engaging financial institutions, developing a taxonomy to link building performance with finance, and demonstrating innovative models like on-bill financing.
4. **Project knowledge documented and shared to facilitate replication and scaling up.** Knowledge products, training materials and project data will be disseminated online and through workshops to promote adoption in other regions.

Specifically, ACE's tasks include:

1. Developing online tools and processes for design standards, carbon and energy estimation for architects and developers, and a regional buildings database. (Output I)
2. Incorporating state-of-the-art technologies for efficient cooling into green procurement guidelines for the building sector. (Output I)
3. Facilitating pilots for energy performance contracting and on-bill financing in the building sector, particularly with SMEs. (Output III)
4. Evaluating policy and market readiness for on-bill financing and SME ESCO models in Thailand, Indonesia, and Vietnam. (Output III)
5. Piloting an integration of energy efficiency financing and business models through online processes for low-carbon buildings. (Output III)

To execute these initiatives effectively, ACE is seeking one (1) Specialist in Green Cooling Technologies and Solutions.

## Scope of work

- Lead the development of online tools and databases on energy efficient and climate-friendly cooling technologies and best practices for the building sector.
- Conduct research and analysis to integrate specifications of cooling equipment with high energy efficiency and low global warming potential into green procurement guidelines for governments and companies.
- Advise project countries on implementing green public procurement policies and practices for sustainable cooling products and services.
- Design and evaluate pilot projects to demonstrate innovative cooling system technologies, financing models, and business solutions for energy efficiency in buildings.
- Assess policy and market readiness for emerging energy efficiency financing tools such as bulk procurement, on-bill financing and ESCO models to drive adoption of green cooling solutions.
- Support capacity building activities on efficient cooling technologies, standards, and integration of renewables through training programs and university curriculum development.
- Represent ACE at conferences, forums and expert panels to share knowledge on green cooling technologies, procurement policies, and financing solutions.
- Publish articles, tools, case studies and research that advances technical knowledge and supports the uptake of energy efficient and climate-friendly cooling in Southeast Asia's building sector.
- Collaborate with partners across the region's cooling value chain including governments, financial institutions, efficiency regulators, R&D centres, industry players and civil society organizations.
- Stay up to date on international trends, best practices and technologies that can support sustainable cooling and de-carbonization of buildings in tropical developing countries. Identification and recruitment of large public and private procurers for key cooling appliances
- Support the Formation of a coalition of procurers committed to green procurement for cooling products
- Organise a physical and online workshops targeting coalition partners including an in-depth discussion on sustainable procurement guidelines

## Qualification

### Educational Qualifications:

- Bachelor's degrees in mechanical, electrical, chemical, physics, architecture, civil, industrial, and environmental engineering, as well as energy systems and building

science.

- Master's degree in a relevant discipline such as Energy Management, Climate & Sustainability is an advantage.

#### Professional Experience:

- 5+ years of experience in design, analysis, implementation and evaluation of energy efficient cooling technologies and systems.
- Experience in renewable energy integration, thermal storage, district cooling, passive cooling is desirable.
- Some experience in public/private cooling procurement processes is an advantage.
- Familiarity with building energy codes and green building certification systems.
- Understanding of financing and business models for energy efficiency for efficient cooling is beneficial.

#### Knowledge and Skills:

- Strong analytical and technical knowledge regarding cooling technologies and building energy systems.
- Knowledge of international standards, metrics, and certifications for efficient cooling products.
- Understanding of refrigerants, and technologies to reduce climate impacts.
- Research, modelling, analysis skills to evaluate cooling technology options.
- Ability to conceive pilot projects and conduct feasibility assessments.
- Project management and stakeholder engagement competencies.
- Fluency in English language.
- Regional experience in Southeast Asia's climate and building sector preferred.
- Knowledge on Energy Efficiency Finance Mechanism, green procurement and Business Model

#### Personal Competences

- Teamwork, action oriented, problem solving, analytical and creative thinking.
- Ability to work accurately, pay attention to detail and meet deadlines, as well as organize work efficiently and deal simultaneously with a wide variety of tasks.
- Excellent interpersonal attributes including sensitivity, sound, and strong organizational and leadership capability, able to work effectively and efficiently in a multicultural environment.
- Promote open reporting culture, that is transparent, compliant, and having integrity.

#### Remuneration And Benefits:

- The successful candidate will be stationed in Jakarta, Indonesia and will be offered a one-year contract, with a probationary period of three (3) months. The contract may be extended annually up to xxx by the Executive Director depending on performance.

- The monthly salary ranged from USD 1500-2500. The compensation shall be commensurate with the educational qualification and experience of the candidate. All other applicable benefits (transportation allowance, communication allowance, health, and life insurance, etc.) shall be subject to the ACE consolidated rules and regulations.
- The successful candidate is expected to be on board by May 2024.

## How To Apply

Read more information at <https://aseanenergy.org/vacancies/> and click “Apply now” or directly submit at <https://www.ace.aseanenergy.org/employment-application-form> by 8 May 2024 at the latest.

The Selection Committee’s decision is final; only shortlisted candidates will be notified.

Note: the official acronym for the project is ALCBT (Asia Low Carbon Buildings Transition).