
Technical Assistance Programme for Energy Efficiency Demonstration Projects in the Cement Sector in Vietnam

Expression of Interest (EOI) – Guidelines

These guidelines are designed to support submission of an Expression of Interest (EOI) for receiving technical assistance services from the UK-ASEAN Low Carbon Energy Programme, in developing an energy efficiency Demonstration Project in the cement sector in Vietnam

The Carbon Trust is seeking applications from interested cement plant owners, ESCOs or other project developers in Vietnam with the capacity to develop and implement Energy Efficiency (EE) projects in the cement sector. The Carbon Trust is offering support in the form of technical assistance to implement best available EE technologies to achieve significant energy savings. Successful applicants will also receive support in the development of a bankable Investment Grade Audit and assistance in securing project finance for implementing their proposed Demonstration EE Project.

Carbon Trust is able to support the following types of applicants:

- i. Cement plant owners who are interested to develop an EE project but have not identified any EE projects as yet;
- ii. Cement plant owners, ESCOs, or other project developers that have already identified EE measures or technologies and are interested to receive technical assistance.

Deadline for submission of EOI: 31st August, 2020

Date of decision: 7th September, 2020

Application should be submitted to: kalyani.basu@carbontrust.com

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1. BACKGROUND

1.1 About the Carbon Trust

The Carbon Trust's mission is to accelerate the move to a low carbon economy. We provide specialist support to business and the public sector to help cut carbon emissions, save energy and commercialise low carbon technologies. By stimulating low carbon action, we contribute key goals of lowering carbon emissions, developing low carbon businesses and associated jobs, and increasing energy security.

We help to cut carbon emissions by:

- Providing specialist advice and finance to help organisations cut carbon;
- Setting standards for carbon reduction.

We reduce potential future carbon emissions by:

- Opening markets for low carbon technologies
- Leading industry collaborations to commercialise technologies
- Investing in early-stage low carbon companies.

1.2 Introduction to ASEAN Low Carbon Energy Programme (LCEP)

The Prosperity Fund was announced in 2015 as part of the UK Aid Strategy, and is a cross-government Fund that aims to reduce poverty through inclusive economic growth. The ASEAN Low Carbon Energy Program (“LCEP”) is providing policy support, capacity building and technical assistance to facilitate green finance flows and improve the regulatory, policy and practical conditions for EE measures across South East Asia. Moreover, as a UK Aid funded Prosperity Fund programme, LCEP is bound to comply with international commitments to mainstream Gender and Inclusion (G&I) by ensuring that the needs of women, other socially excluded groups and SMEs are directly addressed by all LCEP interventions.

It supports four broad types of activity: capacity building of government, institutions and business; policy reform of energy frameworks and standards; market development by strengthening connections between project developers and investors; raising awareness of available technologies to increase the uptake of energy efficient products and services; and partnership coordination and commercial ventures. All components of the programme aim to improve energy security and inclusive access to clean and reliable energy sources.

The LCEP focuses on two topics – Green Finance (GF) and EE. The Carbon Trust is leading the delivery of the EE component in five countries: Malaysia, Myanmar, the Philippines, Thailand, and Vietnam.

In Vietnam, the Carbon Trust is running a Technical Assistance Programme for Demonstration EE Projects in the Cement sector between July 2020 to March 2022. As part of this, the Carbon Trust will provide technical assistance services to cement companies that are interested to implement a Demonstration EE Project.

2. OVERVIEW OF THE TECHNICAL ASSISTANCE PROGRAMME FOR AN ENERGY EFFICIENCY DEMONSTRATION PROJECT IN THE CEMENT SECTOR

As part of the ASEAN LCEP, the Carbon Trust is running a technical assistance programme to support a cement company to develop a bankable investment grade audit containing fully developed EE measures and technologies in order to secure financing and implement a savings-based EE project in the plant.

2.1 Technical Assistance Programme Objectives

- a. To facilitate filling of current EE project development, technical and financing gaps in Vietnam through the successful implementation of a pilot EE project that demonstrates:
 - A '**Bankable**' Investment Grade Audit (**IGA**);
 - Project-based financing;
 - Implementation of best available EE technologies in the cement sector such as waste heat recovery generation;
 - Achievement of targeted energy savings.
- b. To have the Demonstration Project model be replicated across the cement sector in Vietnam

2.2 Technical Assistance Programme Activities

The technical assistance is designed to offer the following activities for a Demonstration EE Project at a cement plant in Vietnam:

- i. Prepare a bankable Investment Grade Audit (IGA) for the cement company by upgrading any existing feasibility studies, or developing new analysis to build into the IGA for the proposed EE project;
- ii. Prepare a project-based financing structure and proposal on the IGA's EE Project, identify, introduce and make presentations to potential funding sources, and assist in negotiating the best financing option;
- iii. Prepare performance-based equipment/implementation specifications and facilitate procurement of the contractor/ESCO to implement the Demonstration Project;
- iv. Provide project management services to oversee the selected contractor or ESCO's implementation of the Demonstration Project;
- v. Obtain, analyse data and perform initial Measurement & Verification (M&V) of savings from the Demonstration Project

2.3 Bankable IGA

A 'Bankable' IGA will enable the cement plant owner and prospective lenders and/or investors to evaluate the benefits and risks of implementing/financing a proposed EE project. The proper preparation of the IGA will include:

- Description of current facility energy profile, operations and conditions, proposed EE project changes, how and where its proposed savings will be realized.
- Current facility energy baseline developed from most recent energy consumption and costs from actual bills/invoices for each fuel, utility type and costs with list of major energy-consuming equipment.
- Detailed calculation method and support for savings estimates reconciled to the energy baseline and including the 'interdependency' effect of other energy savings measures
- Detailed Project Cost Breakdown of hard costs based on actual contractor quotes to include design, installation labour, materials and equipment, and miscellaneous items like project management, permits, bonds, taxes, insurance, etc.

- Detailed Measurement & Verification (“M&V”) protocol to be followed in calculating and measuring the savings to be realized by facility owner

***Please note that the Technical Assistance Programme will not offer direct funding to successful applicants.**

2.4 Technical Assistance Programme Benefits

The technical assistance offered to successful applicants will include the above services tailored to the organisation’s key needs and provide the following benefits:

- No cost to pilot cement plant owner for a fully-developed comprehensive EE project (more than just Waste Heat Recovery) that applies best-practice EE methods and technologies
- Assistance in securing favorable financing and managing implementation of the EE Project
- Access to global international practitioners who have implemented and financed savings-based EE Projects in many industrial plants similar to the intended Demonstration Project
- Deep energy audit expertise to identify further energy savings opportunities available in the cement plant
- A bankable IGA, including financial modelling, to international standards;
- Development of business models and associated business plans;
- Brokering of conversations with relevant funds/funders/investors;
- Energy savings monitoring and verification, to international standards

2.5 Applicant Eligibility Requirements

i. Types of eligible Cement Companies:

- Registered in Vietnam
- Plant Capacity of at least one million clinker tons per year
- Majority owned by private sector entity/person
- Has a Gender and Inclusion (G&I) policy in place that includes social safeguarding and anti-sexual harassment (at a minimum) and aims to promote gender equality and inclusion (in terms of age, civil status, ethnicity, disability, religion etc). If this is not the case, the company should be willing to accept Technical Assistance from the LCEP to co-develop and implement such a customised policy during the wider development of the EE pilot.

ESCOs and other project developers are also eligible to receive programme support and may submit the Expression of Interest Application on behalf of the cement company.

ii. Types of eligible energy savings measures:

- Any thermal or electrical EE measures including but not limited to the following:
 - a. Waste Heat Recovery Power Generation
 - b. Waste Heat Recovery energy efficiency
 - c. Kiln upgrades to multi-stage pre-heater kilns or precalciner kilns
 - d. High efficiency equipment upgrades (for classifiers, roller mills, ball mills, etc.)
 - e. Efficiency improvements to raw material transport system
 - f. Retrofit with new EE equipment (e.g. motors, drives, etc.) for system improvements

- Demonstration Projects related to fuel switching or carbon capture, utilisation and storage is not within the scope of this technical assistance programme.

iii. Demonstration Projects with the following attributes will be considered favourably:

- EE opportunities have already been identified in a feasibility study
- EE technologies or processes that allow for (i) the creation of new economic opportunities in Vietnam, (ii) as well as for international, including UK business, and (iii) mutually beneficial economic relationships.

2.6 Expected Timelines

Deadline	Activity
31 st August, 2020	Complete and submit EOI
7 th September, 2020	EOIs assessed, successful applicants invited to submit a full application form
14 th September, 2020	Complete and submit application form
21 st September, 2020	Applicants informed of decision
25 th September, 2020	Memorandum of Understanding drafted and agreed
1 st October, 2020	Technical assistances services begin
31 March, 2022	Target programme completion

3. EOI GUIDELINES

The following sections provide specific guidance to completing the Expression of Interest form. Applicants should read this guidance prior to completing the EOI form. If applicants need any further guidance or have questions on completing the form, they are encouraged to contact the Carbon Trust team at kalyani.basu@carbontrust.com

The structure of this section follows the EOI Form with further explanation of requirements for each section of the form.

Please note, the application must be no longer than 4 pages, with size 11 Calibri font.

Section 1: Mandatory Details

Details in this section must be provided by the applicant where available.

1. Organisation Details

Please describe briefly for the applicant: company name, type of organisation, year in which the organisation started operations and core business model.

Organisation Name	
Type of organisation	<i>Please mention (i) legal form – for profit, (ii) ownership – private or state owned</i>
Start of operations (Month, Year)	
Cement plant capacity	

Cement production technology			
Summary of organisation operations and geographic scope			
<i>Please include your company's mission, all revenue generating operations, type of customers, geographic reach</i>			
Corporate Governance:			
<i>Please indicate the total number of owners/board members, managers, and employees, and please also disaggregate by gender.</i>			
	Total	Female	Male
Owner			
If corporation: Board Members			
Managers			
Workers/ Employees			
Please describe your organisation's Gender and/or Inclusion policy.			
<i>Gender and inclusion policies relate to any workplace guidelines, programs or policies that include social safeguarding and anti-sexual harassment (at a minimum) and aim to promote gender equality and inclusion (in terms of age, civil status, ethnicity, disability, religion, etc)</i>			
Name and title of contact person			
Email of contact person			
2. Energy Efficiency Studies			
If applicable, provide an overview of any feasibility studies that have been conducted by your plant on potential EE measures or technologies.			
<i>Please detail the objective of the feasibility studies, and the main findings as to which energy efficiency measures are and are not viable for your plant.</i>			

Section 2: Optional Details

If the applicant has identified EE projects that are being considered for implementation by the cement plant, then please provide further details below where relevant.

1. Aims and Objectives to Reduce Energy Consumption

a) Describe your company's current challenges with reducing energy consumption and energy intensity. Specify existing technologies, measures or processes that are currently being used in your plant and why they are insufficient in reducing energy use.

Provide a high-level description of challenges faced in reducing energy use. Where possible, include an overview of previous EE measures or technologies that have been used by the plant and why these have been insufficient.

b) Are there any energy efficiency measures that your company is considering to implement? If yes, please describe briefly how the company plans to reduce energy consumption and energy intensity.

Please outline and explain the aims and objectives of the energy efficiency measures your company is considering. . Explain how these measures will address the challenges mentioned in part (a).

2. Track Record in Energy Efficiency

a) Has your company implemented energy efficiency projects or measures in the past? If yes, please provide examples of the projects previously implemented, noting any challenges and successes.

Please describe significant energy efficiency projects that your company has implemented in the past. Please provide details on the year of implementation, difficulties encountered in implementing the project, investment requirements, and the resulting energy and cost savings.

3. Technical Overview

a) If applicable, please describe the type(s) of energy efficiency technology being considered by your company as well as how this technology will reduce energy consumption in the cement plant.

Please describe the basic underlying principles of the process/technology.

Please provide a narrative of how the technology will reduce energy consumption on site.

b) What are the foreseeable challenges and risks that might be faced in the implementation of the energy efficiency technology being considered?

List any barriers that you anticipate to face in the implementation of the technology as well as the level of risk they present.

4. Required Funding and Technical Assistance

a) If applicable, describe the source and use of funding for energy efficiency measures that has been received to date. State any funding that has been secured for future activities, including energy efficiency measures that are currently being considered.

It is important to know that Demonstration Projects have a good chance of commercialisation. Understanding continued funding sources (beyond grant funding) is important. Please indicate secured funding to date for any energy efficiency measures being considered.

b) Please indicate any technical assistance support you will require (please refer to the 2.2 Programme Offerings for the type of support offered by this programme).

The Carbon Trust can provide the following technical assistance services:

- i. EE technology expertise
- ii. Energy audit expertise to identify further energy savings opportunities available in the cement plant
- iii. Investment Grade Audit (IGA) capability, including financial modelling, to international standards;
- iv. Development of business models and associated business plans;
- v. Brokering of conversations with relevant funds/funders/investors;
- vi. Energy savings monitoring and verification, to international standards;
- vii. Co-development and implementation of a customised Gender & Inclusion policy and related activities (as agreed).