

# PARTNERSHIP FOR MARKET READINESS: PMR - Thailand

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## Ref. No. CS-10 Terms of Reference for Target Setting of Energy Performance Certificate (EPC) Scheme

### 1. Background of the Partnership for Market Readiness (PMR) Programme

The World Bank established a Partnership for Market Readiness (PMR) programme, which is supported by a grant-based capacity building trust fund<sup>1</sup>. The PMR aims to provide financial and technical support to developing countries to build up their capacity and pilot market instruments that would allow them to scale up their mitigation efforts. In addition, the PMR will provide a platform for technical discussions, and collective innovation on new market instruments. The PMR will also create and share, including with the UNFCCC, a body of knowledge on market instruments and lessons learned.

Thailand Greenhouse Gas Management Organization (Public Organization): TGO - under the Ministry of Natural Resources and Environment, the Royal Thai Government - as an Implementing Country Participant has proposed to the PMR to explore potential new domestic market mechanisms on the four main components that cover several activities for the preparation and implementation phases. These components include:

- Component 1* Preparation of key market components of Energy Performance Certificate scheme (EPC);
- Component 2* Development of Local Greenhouse Gas Abatement Plans and a study on pricing mechanism for Low Carbon City program (LCC);
- Component 3* Policy recommendation on legal framework to establish the Emission Trading Scheme (ETS);
- Component 4* Project management.

In this connection, *Component 1* which has a focus on planning for establishing the voluntary EPC scheme brings to the objective of this Terms of Reference. The EPC is planned to be a “voluntary target-and-reward scheme” targeting the Designated Factories and Buildings (DF&Bs) of the intensive energy consumption sectors which in turn leading to intensive GHG emissions.

The PMR’s support for *Component 1* will focus on activities including:

- Activity 1* Reviewing and analyzing policies, laws, regulations and institutional arrangement required in order to implement the EPC;
- Activity 2* Developing the MRV system for the EPC in Thailand
- Activity 3* Assessing the DF&Bs energy management system and updating Specific Energy Consumption (SEC) for 11 sectors;
- Activity 4* Verifying energy data of participating DF&Bs and setting up the baseline;
- Activity 5* Analyzing target setting methods for different industrial sectors and buildings; and
- Activity 6* Analyzing potential performance-based incentive and pricing mechanism for EPC.

This terms of reference (ToR) therefore aims at *Activity 5* to analyze target setting methods for different industrial sectors and commercial buildings which their data are collected and synthesized/analyzed by the consultants of the *Activity 3* and *Activity 4*.

<sup>1</sup>More information on the PMR is online available at: <http://www.thepmr.org>

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## 2. Objective of Consultancy

Setting up of the target for reducing energy consumption of the DF&Bs is one of the core building blocks of the EPC scheme. The consultant is responsible for studying and analyzing all relevant conditions for setting up the energy target, providing the most suitable methodology, collecting all relevant data, and then setting up of the targets in accordance with the specific levels and timeframes. Moreover, the consultant also has responsibility to develop roadmap for implementation of Thailand EPC and step-by-step practical guidelines for the DF&Bs, and to carry out the periodic consultation meetings.

## 3. Scope of Work

- 3.1 The consultant must review the conceptual design of the EPC scheme and Thailand Market Readiness Proposal (MRP) and design the system/process based on the principles/concepts provided in the MRP.
- 3.2 Execute assigned works and deliver outputs as defined in tasks 4.1 – 4.8.
- 3.3 Provide periodic reports on the progress of implementation of all activities under the consultancy services.
- 3.4 Coordinate with the key stakeholders, such as DF&Bs and the other consultants, which are the consultant CS-7 (Guidelines of MRV), CS-8 (SEC benchmarking of 11 sectors), CS-9 (Baseline setting of the participating sectors), and CS-14 (Study of Carbon Pricing Mechanism and Incentive) hired by TGO for component 1, to ensure seamless coordination and data/information sharing between all stakeholders under the EPC project. TGO will introduce the other consultants to the CS-10 consultant.
- 3.5 Organize stakeholder consultations, preparations of meeting materials as well as documenting the outcomes and next steps of the work.
- 3.6 Provide response to comments and suggestions of the EPC Working Group and the PMR Steering Committee and then adjust the operation according to these.
- 3.7 Present progress of works to TGO once every two (2) months including active consultations and data sharing with other consultants.
- 3.8 Organize trainings/knowledge sharing for the TGO staff and relevant agencies at least two (2) times with the main contents as given below. The trainings will be held in Bangkok.

Contents	Time Frame	Participant	Number of Participant (at least)
- Major National and/or International energy policies that are relevant to EPC, Energy target setting methods, and etc.	Within 3 months from the date of contract	TGO staff, DEDE staff and/or relevant agencies	20
- Dissemination of the findings of the consultant's study, i.e. criteria and methods for finalization of the study, target(s) of the Thailand EPC scheme	Within 1 month before closing date of contract	TGO staff, DEDE staff and/or DF&Bs staff and relevant agencies	50

## 4. Specific tasks to be carried out

### 4.1 Review of existing national and international energy policies related to the EPC scheme

The consultant shall conduct review on the following topics;

- Government policies and action plans on energy, energy efficiency measures in Thailand, current statistical basis as well as energy policies and regulations which probably relate to both top-down and bottom-up approaches for setting energy targets for DF&Bs.
- Energy saving or energy management schemes in industrial and building sectors or similar schemes implemented in other countries and consolidate the key success factors and lessons learnt as well as implication to the energy target setting.

### 4.2 Study on energy target setting methodology

The consultant shall study on energy target setting approaches of similar energy certificates trading schemes adopted in other countries, consolidate the key features and processes, compare their advantages and disadvantages, and propose the most appropriate approach for Thailand EPC scheme in term of energy performance with appropriate justifications. The consultant shall propose a list of all relevant data and parameters required for the target setting, their functions in process, and potential sources of the data.

Moreover, the consultant should consider the guiding principles for target setting proposed in the MRP as follows;

- Mix approaches of “Top-down” and “Bottom-up”, such as allocation of sectoral target should originate from the national goal like Energy Efficiency Plan (EEP) of the Ministry of Energy.
- The targets should be correlated with the potential assessment results from CS-8 and CS-9.
- The target setting methodology should be simple, transparent, and scientifically correct and avoid one-to-one negotiation,
- It should be practical to achieve by the target year and create market for energy performance certificates.

### 4.3 Review and collect data for setting up the energy target

The consultant shall propose data required for target setting which will be acquired from the other consultants (the data of 11 sectors<sup>2</sup> from CS-8 and the data of 4 selected sectors from CS-9) and related stakeholders, i.e. the Ministry of Energy. In case the consultant requires additional data for target setting, the consultant shall collect some new data from other primary and/or secondary sources. All these data shall be verified for completeness and accuracy.

<sup>2</sup>(i) Cement (ii) Ceramic (iii) Iron & Steel (iv) Petro-chemical (v) Paper (vi) Food & Beverage (vii) Thermal power plant (viii) Department store (iv) Office (x) Hotel and (xi) Hospital.

## 4.4 Setting up the energy target(s) under the EPC scheme

The consultant shall set up the energy reduction target(s) for the Thailand EPC scheme in relative with the national energy target. The consultant shall set up the sectoral targets and/or sub-sectoral targets (taking into account the study results of CS-8) and plant specific targets (taking into account the study results of participating DF&Bs from CS-9), including identify target years and periods to achieve these targets. The scope of work covers;

- Eleven (11) sectors, corresponding sub-sectors and clusters that can lead to plant specific targets;
- Participating DF&Bs from the four (4) participating sectors selected from CS-9.

## 4.5 Finalisation of the targets

SWOT analysis or other appropriate methods shall be carried out to determine the optimal targets for improving energy efficiency under the Thailand EPC scheme. Moreover, the consultant shall provide the summary report on the EPC target(s) which will be proposed to the decision makers.

## 4.6 Development of Step-by-step Practical Guidelines for DF&Bs

The consultant shall develop Step-by-step Practical Guidelines for eleven (11) sectors to initiate the EPC implementation in Thailand from pilot phase to completed implementation phase. The guidelines should provide a step-wise “to-do-list” for the DF&Bs to determine the work to be carried out, i.e. data requirements, data collection and methodology, technical requirement, and etc.

## 4.7 Development of Roadmap for Implementation of Thailand EPC

The consultant shall develop a country-specific (tailor-made) roadmap for EPC implementation in Thailand covering all sectors, sub-sectors and clusters as mentioned above. The main output of this assignment will be a comprehensive analytical report titled “*Roadmap for Implementation of Thailand Energy Performance Certificate (EPC) Scheme*”. This report will be used to inform the key stakeholders, i.e. the Ministry of Energy, TGO, DF&Bs, for their consideration. The roadmap will at minimum include following contents;

- Identification of key relevant policies and measures, policy mapping and policy interactions on the related sectors.
- Identification of potential EPC designs scenario(s), i.e. the design options of core elements of the Thailand EPC, options for voluntary and mandatory schemes, and others as suitable and requested.
- Identification of key components needed if transformation from voluntary to mandatory is necessary.
- Identification of frameworks and timing for Thailand EPC pilot phase and implementation phase.
- Lessons learned from the EPC preparation phase and activities undertaken under the current PMR project, including recommendations

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of all relevant CSs (CS-6: A legal study to support the readiness preparation for the EPC scheme in Thailand, CS-7, CS-8, CS-9, and CS-14).

- Linkage and impacts of the different designs scenario(s) on the other relevant issues, i.e. linkage on climate change policy, advantages and disadvantages of each scenario, etc.

## **4.8 Conduct on the consultation meetings**

The consultant shall propose plans and conduct the periodic consultation meetings with participation of the designated sectors and stakeholders which will be expected to be participants of the Thailand EPC scheme.

4.8.1 The meetings will be organised for sharing experience in both international and nation target setting for 4.1, consulting on suitable target setting methodology for Thailand EPC in 4.2.

4.8.2 Consultation meetings on data requirement for target setting in 4.3, presenting the energy target(s) set up from 4.4, and finalized targets from 4.5.

4.8.3 Consultation meetings to present the step-by-step guidelines from 4.6

4.8.4 Consultation meetings to present the roadmap set up from 4.7, and conferring with the key stakeholders on the key findings and also provide response to comments and suggestions from the stakeholders.

## **5. Contract Supervision**

The consultant will work under the overall oversight of the Thailand Greenhouse Gas Management Organization (Public Organization: TGO), and in close cooperation with The World Bank as well as the other consultants hired by TGO for component 1.

## **6. Timeline and Key Deliverables**

The Consultant shall complete its work within a total of 18 months from the date of the signature of the consultancy contract. The overall timeline for the tasks, consultation meetings and delivery of reports is shown in Annex I to this ToR.

The Consultant shall prepare the reports, with timeline, as indicated below. The reports, with the exception of the inception report, draft final and final reports, shall be in Thai, with the executive summary in English. The draft final and final reports shall be delivered in both Thai and English.

Upon submission of the inception, interim and draft final reports, TGO may request the Consultant to present the reports to the EPC Working Group for comments and suggestions. The summary of such comments and suggestions shall be prepared and included in the subsequent reports.

Upon submission of the final report, the Consultant shall present the report to TGO for consideration on the completion of the tasks required under this Consultancy. TGO may require

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further improvement of the report, if necessary, in accordance with the requirements specified under this ToR.

- 1) **Inception report** 10 copies and CD recording 3 copies within 1 month from the date of the contract. This report should cover monthly operational plan, and tasks 4.1.
- 2) **Progress report (1)** 10 copies and CD recording 3 copies within 3 months from the date of the contract. This report should cover tasks 4.1 - 4.2, and 4.8.1.
- 3) **Progress report (2)** 10 copies and CD recording 3 copies within 9 months from the date of the contract. This report should cover tasks 4.1 - 4.5, and 4.8.2.
- 4) **Draft final report** 10 copies and CD recording 3 copies within 15 months from the date of the contract. This report should cover tasks 4.1 - 4.8.
- 5) **Final report** 10 copies and CD recording 3 copies within 18 months from the date of the contract.

**All reports should be submitted both in Thai and English.**

- Reports as mentioned in 6.1-6.3 should be full report in Thai and summary in English.
- Draft final and final report should be submitted both in Thai and English.

## **7. Minimum Qualifications Requirement**

The consultants will be selected through Consultant's Qualifications Selection (CQS) process.

**The consulting firm** is expected to meet the following minimum qualifications:

- Minimum five (5) years of demonstrated experience in international and national energy policy, energy efficiency improvement, energy management, and/or climate change policy related with energy intensive sectors;
- Deep experience in target setting for energy conservation, design and development of roadmap for policy decision-making, and/or climate change roadmap;
- Familiar with Thai' circumstances especially energy regulations, policies and strategies, energy management, and/or related issues;
- Documented experience in consultation with industry stakeholders and in facilitating and conducting training workshops and seminars.

**Key staff:** which must comprise of a team leader and at least two energy and policy specialists, and one coordinator (The qualifications of the proposed key staff will be evaluated at the proposals stage)

- Key staff of consultant and their committed availability to have experience in similar projects.
- Key staff must comprise of a team leader and at least one energy specialist, one policy specialist, and one coordinator
- **Team Leader's** minimum requirement:
  - (i) At least Master's Degree in relevant field on energy, environment or economics;
  - (ii) Minimum 10 years of substantive experience in energy target setting, energy data management, energy policy and strategy, and/or climate change policy;

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- (iii) Demonstrated experience in policy and technical support for energy conservation, and/or climate change;
- (iv) Experience in leading teams and project management at least in 3 projects;
- (v) Good command of written and spoken English.

- **Energy and Policy specialists'** minimum requirement:

- (i) At least Master's Degree in Energy Engineering, Energy Management, Economics and Environmental Policies, or related fields;
- (ii) Minimum 10 years of substantive experiences in energy target setting, energy data management, energy policy and strategy, and/or climate change policy;

- **Project Coordinator's** minimum requirement:

- (i) Bachelor's Degree in Engineering, Science, Environmental Science or related fields;
- (ii) Minimum 2 years of substantive experiences in project coordination, data management, computer literacy and administration

### Annex I

Figure 1: Overall timeline for the tasks, consultation meetings and delivery of reports, as indicated in the ToR

