

PMR PROJECT IMPLEMENTATION STATUS REPORT (ISR)

1. SUMMARY INFORMATION

Implementing Country/Technical Partner:	Kingdom of Thailand
Reporting Period:	From 02/16/2016 to 9/30/2016
Report Date:	9/30/2016
Implementing Agency:	Thailand Greenhouse Gas Management Organization (Public Organization)
Contact Person:	Ms. Bongkoch Kittisompun Dr. Puttipar Rotkittikhun

Grant Executed By:	Kingdom of Thailand
Grant Effectiveness and Closing Dates:	02/16/2016 - 12/31/2019
Grant Amount (USD):	USD 3,000,000
Funding Mobilized (USD):	USD 1,460,000
Funding Committed (USD)	USD 2,790,000

2. OVERVIEW

Objective

The Project Development Objective (PDO) is to provide selected technical and analytical support to Thailand that informs policy decisions to develop readiness of market-based instruments to reduce greenhouse gas (GHG) emissions in Thailand.

The Thailand MRP's objectives are to design and initially implement a domestic market mechanism to reduce energy consumption and GHG emissions in energy sector with a view to transform to Emission Trading Scheme (ETS) in the future. In this phase, it will be focused on preparation for a demonstration of the Energy Performance Certificate Scheme (EPC), including supporting infrastructure such as database and MRV system and a study on legal framework for the ETS. Another objective is to promote and support municipalities and local communities to implement GHG mitigation actions while achieving sustainable development and low carbon society goals through domestic market mechanism named Low Carbon City Program (LCC).

Indicators

PDO level results indicators are as follows:

- i) Submission of the core EPC readiness components (target setting methodology and MRV system) for the policy consideration of DEDE (The Department of Alternative Energy Development and Efficiency, Ministry of Energy).

- ii) Local GHG Abatement Plans for 24 cities submitted to city management to inform city's priority abatement projects.
- iii) Submission of the policy recommendation on legal framework to establish the ETS for TGO Board's consideration.

The project comprises of four components:

- 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.

Component 1, 2 and 3 will each support a different domestic carbon market scheme which will together contribute to the overall future domestic carbon market development in Thailand.

For the progress made towards the Grant's Objectives, firstly, the Project Management Unit (PMU) was established in March, 2016, chaired by TGO's Executive Director. The first PMU meeting was organized in May 2016 to consider the work plan and budget plan. Secondly, the procurement process of the technical consultants and procurement officer (as a support team for the PMU) was completed; moreover, the process of selection of the financial management officer is close to its completion. Thirdly, the selection process for consultancy services to implement the activities under the MRP is proceeding. Most of the ToRs for hiring the consultants have been developed and approved by the World Bank as Delivery Partner. The Request for Expression of Interest (REOI) and EOI evaluation of the 6 ToRs were concluded. The deadline of the proposal submission for the 3 ToRs on Component 1 was on September 19, 2016 and the 3 ToRs on Component 2 will be on October 10, 2016. Finally, the meeting of PMR Steering Committee, which comprises of senior level representatives from 16 organizations, was organized on September 22, 2016 to acknowledge the project work plan and to update on the project implementation status.

3. IMPLEMENTATION REPORT BY COMPONENT

Differences between the Objectives/Activities in the Market Readiness Proposal and the Grant Agreement

<p>Are there any important and material differences between the objectives/activities proposed in the Market Readiness Proposal and endorsed by the Partnership Assembly of the PMR and those agreed to in the Grant Agreement with the Delivery Partner and described in the Project's Results Framework?</p>	<p>No</p>
<p>There are no important differences between the objectives/activities proposed in the MRP and endorsed by the PA of the PMR and those agreed in the Grant Agreement. However, there are two</p>	

minor changes as mentioned below:

Component 1 -- After consultation with the World Bank as Delivery Partner during the preparation of procurement plan, we agreed to switch the activities on the area of target setting from the National budget to PMR fund and also set the study on target setting methodology as one of the core indicators since this activity is a key component of EPC scheme, which will lead to the achievement of the project objective. On the other hand, the activities on the area of MRV, including the capacity building for Personnel Responsible for Energy (PREs) and verifier, development of guidelines for PREs and guidebook on energy auditing which have been conducting by relevant agencies were switched to be funded by National budget.

Component 2 – The MRP was planned to provide support to 32 municipalities in Thailand to develop a local GHG abatement plan which will be used to guide mitigation actions and low-carbon investment. However, given the financial resources and time constraint, it would be more efficient and practical to concentrate in 24 municipalities.

Implementation Progress by Component

A. Component 1: Preparation of key market components of Energy Performance Certificate (EPC) scheme	
Status:	<p>Under implementation.</p> <p>This component focuses on planning for establishing the voluntary EPC scheme, which 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.</p> <p>The PMR’s support for Component 1 will focus on activities including:</p> <p><i>Activity 1</i> Reviewing and analyzing policies, laws, regulations and institutional arrangement required in order to implement the EPC;</p> <p><i>Activity 2</i> Developing the MRV system for the EPC in Thailand;</p> <p><i>Activity 3</i> Assessing the DF&Bs energy management system and updating Specific Energy Consumption (SEC) for 11 sectors¹;</p> <p><i>Activity 4</i> Verifying energy data of participating DF&Bs and setting up the baseline;</p> <p><i>Activity 5</i> Analyzing target setting methods for different industrial sectors and buildings; and</p> <p><i>Activity 6</i> Analyzing potential performance-based incentive and pricing mechanism for EPC.</p> <p>The terms of reference (ToRs) for consultancy services have been developed and reviewed by the EPC working group before submitting to the World Bank. The ToRs were developed in consultation with the DEDE. Activities 2, 3 and 4 are expected to start in Q4 of 2016.</p>

¹(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.

	Activities 1, 2 and 5 are planned to start the process of selection of the consultants in early of 2017.								
Comments:	N/A								
B. Component 2: Development of Local Greenhouse Gas Abatement Plans and a study on pricing mechanism for Low Carbon City (LCC) program									
Status:	<p>Under implementation.</p> <p>LCC program aims to support municipalities and communities to shift towards a low carbon society by implementing GHG emission reduction activities. The projects developed by municipalities may apply the Thailand Voluntary Emission Reduction Program (T-VER) for certifying and issuing carbon credits. The T-VER program is a project-based mechanism.</p> <p>This component will focus on activities including study on GHG emission, identify potential GHG emission reduction, and develop local GHG abatement plans and guidelines for municipalities. It shall also study on the pricing mechanism for LCC-TVERs (Thailand Voluntary Emission Reduction Program credits generated under LCC program) and incentive options for LCC-TVERs buyers respectively.</p> <p>The LCC program consists of four main activities for the preparation and operation phases including:</p> <table border="0"> <tr> <td style="padding-left: 40px;"><i>Activity 1</i></td> <td>Study on GHG emission and identify potential GHG emission reduction. Develop Local GHG Abatement Plans in 8 municipalities (Region 1);</td> </tr> <tr> <td style="padding-left: 40px;"><i>Activity 2</i></td> <td>Study on GHG emission and identify potential GHG emission reduction. Develop Local GHG Abatement Plans in 8 municipalities (Region 2);</td> </tr> <tr> <td style="padding-left: 40px;"><i>Activity 3</i></td> <td>Study on GHG emission and identify potential GHG emission reduction. Develop Local GHG Abatement Plans in 8 municipalities (Region 3). Develop GHG abatement plan guideline that include Environmental and Social Management Framework (ESMF)</td> </tr> <tr> <td style="padding-left: 40px;"><i>Activity 4</i></td> <td>Study on pricing mechanism for LCC-TVERs and incentive options for LCC-TVERs buyer.</td> </tr> </table> <ul style="list-style-type: none"> The ToRs for consultancy services of Activities 1, 2 and 3 have received no objection letters from the World Bank as Delivery Partner in May 2016. The procurement process is in progress. The operation of Activity 3 is expected to start in Q4 of 2016. Activities 1 and 2 are expected to start in Q1 of 2017. Activity 4 of this component was merged with Activity 6 of Component 1 to be one ToR since these activities are related to the study on pricing mechanism and also the incentives for the relevant stakeholders. The ToR for consultancy services has been developed and reviewed by 	<i>Activity 1</i>	Study on GHG emission and identify potential GHG emission reduction. Develop Local GHG Abatement Plans in 8 municipalities (Region 1);	<i>Activity 2</i>	Study on GHG emission and identify potential GHG emission reduction. Develop Local GHG Abatement Plans in 8 municipalities (Region 2);	<i>Activity 3</i>	Study on GHG emission and identify potential GHG emission reduction. Develop Local GHG Abatement Plans in 8 municipalities (Region 3). Develop GHG abatement plan guideline that include Environmental and Social Management Framework (ESMF)	<i>Activity 4</i>	Study on pricing mechanism for LCC-TVERs and incentive options for LCC-TVERs buyer.
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	<p>the EPC and LCC working groups. Selection of consultant and their operation are expected to start in 2017 because the results from other studies will be used to support this activity.</p> <ul style="list-style-type: none"> • In 2014, TGO launched the City Carbon Footprint (CCF) project by using the government budget. The objective of the project is to assess overall GHG emissions in cities and identify GHG mitigation potential, hence leading these cities to develop their low-carbon policies and activities. The project has been conducted in 43 municipalities so far. The CCF project is a good start and provides the useful information for the implementation of the LCC program. Furthermore, in this fiscal year, TGO has supported five municipalities/local authorities (Kokkruat municipality, Song municipality, Mapammarit municipality, Thamanao Subdistrict Administrative organization and Saraburi Provincial Administrative organization) to develop the Project Design Document (PDD) and validate by the third party to apply the T-VER program. • As proposed in the MRP, the study on MRV system of other voluntary carbon standards (VCS and GS) and compliance standard (CDM) were conducted. TGO has organized trainings and workshops to develop numbers of independent validators and verifiers for T-VER program. As of September 2016, eleven organizations have been registered as validators and verifiers. A guideline to develop the T-VER project has been conducted and published on the T-VER website. LCC registry (T-VER registry) has been developed and the trainings on LCC registry have also been organized for the project developers and TGO staff. <p>The seminars and stakeholder consultations have been organized several times to build up the capacity and get engagement from stakeholders.</p>
<p>Comments:</p>	<p>As indicated in the MRP, the T-VER program is a project-based mechanism. Currently, TGO is seeking for additional support to explore the suitable approach for Thailand's context to go beyond project-based mechanism in the future toward appropriate scaled-up crediting approaches. This activity can support urban mitigation actions with an enhanced scope and coverage, including through the market-based mechanisms for international cooperation established under Article 6 of the Paris Agreement.</p> <p>The rationales for exploring the relevance and the appropriate modalities of using a scaling-up crediting mechanism for cities are as follows:</p> <ul style="list-style-type: none"> - The scaled-up crediting mechanism could increase GHG emission reduction opportunities which may cover more sectors that are underrepresented in the project-based approach currently being developed by the LCC Program under the Thailand PMR Project;

	<ul style="list-style-type: none"> - More comprehensive, scaled-up approaches could contribute to engage cities into national mitigation action; - Cities are the key actors for implementing GHG emission reduction efforts in Thailand; - Innovative, streamlined design and implementation approaches under the scaled-up crediting mechanism could facilitate cities in implementing GHG emission reduction projects.
C. Component 3: Policy recommendation on legal framework to establish the ETS	
Status:	Under implementation. ToR for consultancy services has been developed and reviewed by the legal framework working group. Currently, the ToR is considering by the World Bank team. Selection of consultants and their operation are expected to start in Q4 of 2016 and Q1 of 2017, respectively.
Comments:	N/A

4. PROGRESS, CHALLENGES, AND LESSONS LEARNED

Important policy or regulatory developments related to the Grant's objectives and activities:

Developments:

1. Paris Agreement

Thailand signed the Paris Agreement on April 22, 2016 at a High-level Signature Ceremony convened by the Secretary General in New York and deposited its instrument of ratification at a High-level Event on the Entry into Force of the Paris Agreement on September 21, 2016 at the UN headquarters in New York.

2. Thailand Intended Nationally Determined Contribution (INDC)

Thailand communicated its INDC to the UNFCCC on October 1st, 2015 Thailand intends to reduce greenhouse gas emissions economy-wide by 20 percent from the projected business-as-usual (BAU) level by 2030. The level of contribution could increase up to 25 percent, subject to adequate and enhanced access to technology development and transfer, financial resources and capacity building support through a balanced and ambitious global agreement under the United Nations Framework Convention on Climate Change (UNFCCC). The baseline emission is projected from BAU scenario from reference year 2005 in the absence of major climate change policies. The baseline emission in 2030 is projected to be 555 MtCO₂e. As indicated in INDC, Thailand will continue to explore the potentials of bilateral, regional and international market mechanisms as well as various approaches that can facilitate, expedite and enhance technology development and transfer, capacity building and access to financial resources that support Thailand's efforts towards achieving sustainable, low-carbon and climate-resilient growth, as appropriate. In order to explore the possibility of using market-based mechanisms as one of the tools to support the country in achieving the national GHG mitigation target, TGO Board of Director had decision on June 23, 2016 to establish

the **working group on carbon market**, comprising of representatives from 10 key related ministries/organizations and 3 experts.

In 2016, the Office of Natural Resources and Environmental Policy and Planning as the Thailand's national focal point to the UNFCCC is developing the INDC roadmap in parallel with the study on mitigation potential in LULUCF sector. After that, the MRV system will be developed including the MRV guideline and proposal on institutional arrangement.

3. Draft Twelfth National Economic and Social Development Plan (2017-2021)

The Cabinet approved the Draft Twelfth National Economic and Social Development Plan (NESDP) (2017-2021) on September 13, 2016. Under the Twelfth NESDP, the development of GHG mitigation mechanisms/measures to reduce GHG emissions in all sectors is indicated. In addition, the revision of law/legislation and city infrastructure development to move towards the environmentally friendly and low carbon city is indicated.

4. MoU between Department of Local Administrative and TGO

On June 15, 2016, TGO and the Department of Local Administration (DLA), Ministry of Interior signed the MoU on promoting the development of Carbon Footprint Organization (CFO) and City Carbon Footprint (CCF) for Local Administration to move towards the Low Carbon City. The DLA's main responsibility is to support the work of the local government organizations through series of advices on the development of local development plan, personnel administration, finance and administration in order to increase the capacity and efficiency of the local government organizations in public service provision. Under this MoU, the curriculum on CFO and CCF, developed by TGO, will be added to the existing subjects of the Local Personnel Development Institution. In the beginning, the DLA's officials and the representatives from City Municipalities will be attended this course. After that it will be expanded to cover the representatives from the Town and Sub district Municipalities. This cooperation could increase the understanding on the importance of GHG mitigation for policy level and practitioners which will support the preparation and implementation of LCC program.

Challenges:

- Thailand recognizes the important role of market-based mechanisms to enhance the cost effectiveness of mitigation actions as indicated in the INDC; however, there is no study directly related to the assessment of readiness gaps for INDC/NDC implementation and carbon pricing instruments; however, TGO has conducted a study to examine economic impacts of applying the cap-and-trade system to Thai economy, compared to carbon tax and imposing only the cap on the highly GHG emitting sectors using the Dynamic Computable General Equilibrium model. Under the PMR support, a study to propose the legal framework for establishing the ETS in Thailand will be conducted. All studies both under PMR support and National budget will support the policy decisions on using carbon pricing instrument to achieve the national GHG mitigation target.
- At the moment, there are no policy and regulation on mandatory carbon pricing instruments in the country. Under the PMR support, a study on the legal, policy and administrative landscape for establishing of a greenhouse gases reporting system to support the ETS and a study on legal, policy and administrative landscape for establishing the ETS in Thailand will be conducted. Law is one of the most important elements which might take a long period of time to get approval.

Lessons learned:

N/A

Important changes in the technical design or approach related to the Grant's activities:

Developments:

In the beginning, Component 2 was planned to provide support to 32 municipalities in Thailand to develop their local GHG abatement plans which will be used to guide mitigation actions and low-carbon investment. However, given the financial resources and time constraint, it would be more efficient and practical to concentrate on 24 municipalities.

Challenges:

The above-mentioned minor changes will not affect significantly on the implementation of the MRP. TGO will ensure that selection of municipalities under PMR will be based on their different characteristics and mitigation potential among other criteria.

Lessons learned:

- From three years of experiences in CCF project, we found that the assessment of overall GHG emissions and identification of GHG mitigation potential in municipalities are slightly complicated. One of the key challenges is data collection system. Nowadays, most of data are collected and reported at Provincial level, while the data at Municipal level are limited.
- In order to assure the quality of work and obtain more details on GHG mitigation potential in the municipalities, financial resources and time constraint should be taken into account during the project design to achieve the project objective.

Key capacity issues (implementation, technical, financial management, procurement) related to the Grant's activities:

Developments:

Procurement

- The trainings on procurement process for the step of Request for Expression of Interest (REoI) and Request for Proposal (RFP) were organized by the World Bank for TGO staff during April to June 2016. Moreover, the trainings for the next step of procurement process will be organized in the near future.

Financial management

- TGO staff attended the financial management trainings organized by the World Bank during March to April 2016.

Challenges:

The complexity of financial management and procurement according to the World Bank requirement is one of the major challenges. In addition, there are some differences in procurement process and methods between Thai regulation and the World Bank guidelines; therefore, it is necessary to build up capacity of the PMU staff on the World Bank procurement guidelines immediately after the Grant Agreement signing.

Lessons learned:

The capacity building on procurement and financial management at the early stage of implementation will accelerate the process. Good communication and coordination between the PMU and the World Bank could help the implementation smoothly.

Coordination with other carbon pricing initiatives, including those funded by other donors:**Developments:**

- **United States-Thailand Cooperation on Enhancing Capacity for Low Emission Development Strategies: EC-LEDS**

The USAID LEAD program collaborated with TGO to build an online reporting platform (GHG Registry) that facilitates organizational GHG reporting under TGO's Carbon Footprint for Organization (CFO) program. This online platform permits institutions and organizations to report and verify their carbon emissions easily, accurately and flexibly. GHG measurement, reporting, and verification experts from the Climate Registry assigned by the USAID LEAD led a training on this matter to provide step-by-step instructions on the functions and use of the reporting platform to TGO and its relevant stakeholders in order to strengthen this system for achieving its goal in a sustainable way. The period of the project was between May 2014 – October 2015.

- **Development of simplify calculation tool on city carbon footprint**

This work will be supported by the Networked Carbon Markets (NCM) initiative of the World Bank. TGO and the World Bank team are discussing on the details of the cooperation.

- **Standardized Baseline Study Project (SBL project)**

The SBL project was initiated by TGO in cooperation with The Foundation Future of the Carbon Market from Germany in 2015. TGO and the Foundation plan to launch the pilot carbon procurement tender under the T-VER and LCC programs to support Thai municipalities in the implementation of low-carbon activities that also help to achieve sustainable development goals. Municipalities under the tender will have the opportunity to offer carbon units from their emission reduction projects for purchase by the Foundation and, if applicable, other buyers. Due to the limited scope of the pilot tender, its coverage will be restricted to only several selected sectors, sub-sectors or activities.

The purpose of the SBL project are as follows:

1. Identification and selection of eligible sectors, sub-sectors or activities for the pilot tender and
2. Preparing standardised baselines (SBL) for the selected sectors, sub-sectors or activities, which municipalities can use in the future to assess GHG mitigation impacts of their projects.

Three activities were selected and developed the standardized baselines including 1) Implementation of organic waste composting 2) Installation of solar photovoltaic system for building and 3) Installation of energy efficient street lights. Currently, this project is close to its completion.

Challenges:

This project improved CFO scheme in term of standardization with other international schemes and built up the stakeholders' capabilities in GHGs reporting as well as enables the preparedness for mandatory carbon market in the future. Nevertheless, this work is an initial development, TGO still need to modify this reporting platform to be more suitable with Thai context and ready to be used by

the end of 2017.

Lessons learned:

It is important to integrate different components from the activities under the MRP and other projects being done by TGO and relevant agencies to build the complete carbon pricing instrument.

Stakeholder engagement related to the Grant's activities:

Developments:

The project launching ceremony was organized on April 05, 2016 which was opened by 4 chairpersons from key relevant agencies including The Deputy General of Department of Alternative Energy Development and Efficiency (DEDE), The Chair of Environmental committee, The National Municipal League of Thailand (NMT), The senior environmental specialist of the World Bank and the Executive Director of Thailand Greenhouse Gas Management Organization (TGO). There were 95 participants attended the ceremony.

- EPC working group and LCC working group were established. The working groups meetings were organized to consider the ToRs for EPC scheme and LCC program.
- TGO organized the focus group meetings to discuss on market-based mechanisms under Paris Agreement and brainstorm the possibility on applying a new market-based mechanism to Thailand. The participants comprised of representatives from public and private sectors.
- Trainings on Thailand Voluntary Emission Reduction Program (T-VER) were organized for municipalities. More than 100 participants from 42 municipalities were attended.
- The meeting of PMR Steering Committee was organized on September 22, 2016 to acknowledge the project work plan and update on the project implementation status.

Challenges:

Building capacities and raising awareness for the stakeholders are the key important issues.

Lessons learned:

- Stakeholder consultation is one of the key factors for the successful implementation.
- The close collaboration between the government agencies will accelerate the implementation.
- The training/seminar for municipalities should be organized in each region to facilitate the participants on logistic.

Other issues related to the Grant's activities

N/A

5. ADDITIONAL INFORMATION

In this Section, please provide any additional information that may be relevant for the achievement of the Grant's objectives and/or the implementation of the Grant's activities. Please also provide any relevant information related to carbon pricing and the use of market-based instruments for climate change mitigation.

N/A