

## PMR PROJECT IMPLEMENTATION STATUS REPORT (ISR)

### 1. SUMMARY INFORMATION

Implementing Country/Technical Partner:	Kingdom of Thailand
Reporting Period:	From 10/01/2016 to 9/30/2017
Report Date:	9/30/2017
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 2,110,000
Funding Committed (USD)	USD 2,108,924

### 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 PDO, firstly, two technical consultants, procurement officer and accountant (as a support team for the Project Management Unit (PMU)) started working. Three ToRs under Component 1, three ToRs under Component 2 and one ToR under Component 3 were contracted with the consulting firms. Secondly, the meetings with key stakeholders were organized periodically to inform the progress of the works and seek for suggestions including;

- 1) The PMR Steering committee which comprises of senior level representatives from 10 organizations and 1 expert, was organized once in January 2017 to acknowledge the project work plan and to update on the project implementation status;
- 2) The PMU meetings – 4 times in December 2016, March, June and September 2017 to inform the progress of the work and consider the work plan and budget plan;
- 3) The EPC working group – 4 times in March, May, July and September 2017 to consider the progress of the work under EPC scheme and draft ToRs;
- 4) The LCC working group – once in July to consider the framework and guideline for conducting city carbon footprint and developing GHG abatement plan.
- 5) Meetings with designated factories and buildings (DF&Bs) – more than 15 times to gather the comments and suggestions from industries.
- 6) Kick off meetings – 25 times to give the project information and work plan at the municipalities.

Finally, the memorandum of cooperation signing ceremony among TGO, piloting DF&Bs, municipalities and consulting firms was organized on July 6, 2017 which had a Deputy Permanent Secretary of the Ministry of Natural Resources and Environment act as a chairman. Furthermore, the Deputy Director General of Department of Local Administration, the renewable energy expert of the DEDE, the senior environmental specialist of the World Bank and the Executive Director of Thailand Greenhouse Gas Management Organization (TGO) delivered welcoming remarks. There were 140 participants attending the event.

### 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 substantive differences between the objectives/activities proposed in the Market Readiness Proposal endorsed by the PA of the PMR and those agreed to in the Grant Agreement with the World Bank as a Delivery Partner.</p>	

#### *Implementation Progress by Component*

<b>A. Component 1: Preparation of key market components of Energy Performance Certificate (EPC) scheme</b>	
<p>Status: Ongoing</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 DF&amp;Bs of the intensive energy consumption sectors which in turn leading to intensive GHG emissions.</p> <p>The PMR's support for Component 1 focuses on 6 activities. The details are as shown below.</p> <ul style="list-style-type: none"> <li>• <b>Activity 1: Reviewing and analyzing policies, laws, regulations and institutional arrangement required in order to implement the EPC</b> ToR for Activity 1 was submitted to the World Bank as a Delivery Partner and PMR secretariat for consideration and approved on June 2017. Since this activity needs some technical elements from other studies, it's planned to start in Q2 of 2018.</li> <li>• <b>Activity 2: Developing the MRV system for the EPC in Thailand</b> This activity aims to develop MRV Guideline and IT platform to support EPC scheme implementation, including electronic data interchange between DEDE and TGO. This work has been conducting since December 2016. The main progress activities are as follow:             <ol style="list-style-type: none"> <li>1. <u>Development of data reporting format for EPC scheme</u> Data reporting templates for factories and buildings are in line with energy management report of DEDE. The data collection consists of three parts which are general information, Energy data and Greenhouse gas information (optional).</li> <li>2. <u>Review existing MRV system</u> Similar MRV systems, such as DEDE, and PAT scheme, are</li> </ol> </li> </ul>

	<p>reviewed.</p> <p>3. <u>Propose MRV guidelines for supporting implementation of EPC Scheme</u> MRV guidelines for each targeted sectors are outlined to ensure that the measurement, reporting and verification process is reliable and applicable for the implementer.</p> <p>Stakeholder consultations on data reporting template were organized with industrial associations and related organizations as listed in the table below.</p> <table border="1"> <thead> <tr> <th>Stakeholder consultation Date</th> <th>Organization</th> </tr> </thead> <tbody> <tr> <td>15 February and 7 May 2017</td> <td>Iron and Steel Institute of Thailand</td> </tr> <tr> <td>12 May 2017</td> <td>Thai Cement Manufacturers Association</td> </tr> <tr> <td>19 May and 26 June 2017</td> <td>Thai Retailers Association</td> </tr> <tr> <td>21 June 2017</td> <td>The Private Hospital Association Thailand</td> </tr> <tr> <td>23 June 2017</td> <td>Thai Frozen Foods Association</td> </tr> <tr> <td>28 June 2017</td> <td>Thai Food Processors' Association</td> </tr> <tr> <td>29 June 2017</td> <td>Green Leaf Foundation</td> </tr> </tbody> </table> <p>A meeting with DEDE was organized in mid of June to discuss on the template and MRV system. Moreover, a stakeholder consultation was held in August to get feedback from DF&amp;Bs.</p> <ul style="list-style-type: none"> <li>• <b>Activity 3: Assessing the DF&amp;Bs energy management system and updating Specific Energy Consumption (SEC) for 11 sectors<sup>1</sup></b> This ToR aims to analyze sector-specific energy usage pattern, potential improvement to reduce energy consumption, energy profile, GHG emissions and Specific Energy Consumption (SEC) at product(s) level by review energy data from DEDE database. Activity 3 has been conducting since January 2017. The main progress activities are as follows:             <ol style="list-style-type: none"> <li>1. <u>Study and propose methodology for Specific Energy Consumption (SEC) analysis of the DF&amp;Bs</u> The review of methodology for SEC development from national and international papers was conducted. There are 2 approaches proposed to study including 1) development of average SEC from DEDE database and 2) development of energy equation.</li> <li>2. <u>Review and collect data of the DF&amp;Bs from the energy databases of the DEDE</u> Data from energy management report of DEDE was gathered</li> </ol> </li> </ul>	Stakeholder consultation Date	Organization	15 February and 7 May 2017	Iron and Steel Institute of Thailand	12 May 2017	Thai Cement Manufacturers Association	19 May and 26 June 2017	Thai Retailers Association	21 June 2017	The Private Hospital Association Thailand	23 June 2017	Thai Frozen Foods Association	28 June 2017	Thai Food Processors' Association	29 June 2017	Green Leaf Foundation
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<sup>1</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.

	<p>for the review. However, some technical parameters are missing. Therefore, the questionnaires were sent to the DF&amp;Bs for deeper analysis.</p> <p>3. <u>Grouping of the DF&amp;Bs – 11 Sectors</u> Currently, the DF&amp;Bs are classified based on Thailand Standard Industrial Classification (TSIC).</p> <p>Seminar and meetings which took place under this activity are listed in the table below.</p> <table border="1"> <thead> <tr> <th>Seminar/Meeting Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>24 April 2017</td> <td>Seminar on SEC analysis and benchmarking for energy efficiency in factories and commercial buildings in 11 sectors</td> </tr> <tr> <td>25 May 2017</td> <td>SEC analysis in iron and steel sector</td> </tr> <tr> <td>26 May 2017</td> <td>SEC analysis in paper sector</td> </tr> <tr> <td>6 June 2017</td> <td>SEC analysis in cement and ceramic sector</td> </tr> <tr> <td>8 June 2017</td> <td>SEC analysis in food and beverage sector and thermal power plant</td> </tr> <tr> <td>9 June 2017</td> <td>SEC analysis in hotel, hospital, department store and office</td> </tr> <tr> <td>22 June 2017</td> <td>SEC analysis in petro-chemical sector</td> </tr> </tbody> </table> <p> <ul style="list-style-type: none"> <li> <b>Activity 4: Verifying energy data of participating DF&amp;Bs and setting up the baseline</b>                      This activity aims to verify energy data of participating DF&amp;Bs in order to establish a baseline, pilot test the MRV guidelines and EPC data template and also to study on potential improvement to reduce energy consumption and GHG Emissions. Activity 4 has been conducting since January 2017.                      The sectors for implementing data verification were selected based on the proposed criteria and discussion between DEDE, TGO and consultant. The criteria used for considering the eligible sector are as follow:                     <ul style="list-style-type: none"> <li>- Total energy consumption in each sector</li> <li>- Average total energy consumption of participants in each sector</li> <li>- Energy management report submission rate</li> <li>- Amount of factory/building in each sector</li> <li>- Specific Energy Consumption</li> <li>- Average age of equipment</li> <li>- The number of manufacturing process (only industrial sector)</li> <li>- Benchmarking/Baseline/SEC study in the last 5 years</li> </ul>                     Two sectors of factories and two types of buildings are selected                 </li> </ul> </p>	Seminar/Meeting Date	Description	24 April 2017	Seminar on SEC analysis and benchmarking for energy efficiency in factories and commercial buildings in 11 sectors	25 May 2017	SEC analysis in iron and steel sector	26 May 2017	SEC analysis in paper sector	6 June 2017	SEC analysis in cement and ceramic sector	8 June 2017	SEC analysis in food and beverage sector and thermal power plant	9 June 2017	SEC analysis in hotel, hospital, department store and office	22 June 2017	SEC analysis in petro-chemical sector
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	<p>including ceramic (sanitary ware), frozen seafood, hospital and department store. There are 38 DF&amp;Bs<sup>2</sup> participating in the project (10 department stores, 14 hospitals, 4 ceramic sanitary ware factories and 10 frozen food factories). The first site visits for data collection are done by September 2017. In accordance with the ToR, energy data and related parameter for baseline setting is gathered for analysis.</p> <p>A kick off meeting was held on May 24, 2017 to inform the participating DF&amp;Bs on project information, project activities and work plan.</p> <ul style="list-style-type: none"> <li> <b>Activity 5: Analyzing target setting methods for different industrial sectors and buildings</b>            This activity aims to analyze target setting methods for different industrial sectors and commercial buildings, provide the most suitable methodology, collect all relevant data, and then set up of the target with the specific level and timeframe.         </li> <li> <b>Activity 6: Analyzing potential performance-based incentive and pricing mechanism for EPC</b>            This activity aims to set up price of EPC's surplus allowances as well as to develop EPC's sink fund.         </li> </ul> <p>Activities 5 and 6 are under procurement process and planned to start working in Q4 of 2017.</p>
<p>Comments:</p>	<ul style="list-style-type: none"> <li>- One of the main challenges in SEC development is data completeness. The method of energy equation analysis needs more production and operational data.</li> <li>- Regarding activities under the component 1 which have 6 activities, the coordination and synergies among consultant teams is very important, in order to ensure smooth delivery of work, go in the same direction and avoid overlaps in engagement with DF&amp;Bs and stakeholders. The TGO is addressing this challenge by organizing the meetings with all consultant teams to update progress of works and discuss the results every 2 months.</li> <li>- All consultant teams should have a clear project objectives and the same understanding.</li> </ul>
<p><b>B. Component 2: Development of Local Greenhouse Gas Abatement Plans and a study on pricing mechanism for Low Carbon City (LCC) program</b></p>	
<p>Status: Ongoing</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>

<sup>2</sup> TGO has just received the expression of interest to participate in the project after the deadline of application from 15 more department stores. The confirmation in participating the project will be discussed among TGO, consultant and representatives from department stores in October 2017.

	<p>This component focuses on activities including study on GHG emission, identifies potential GHG emission reduction, and develops 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: 20px;"><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: 20px;"><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: 20px;"><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: 20px;"><i>Activity 4</i></td> <td>Study on pricing mechanism for LCC-TVERs and incentive options for LCC-TVERs buyer.</td> </tr> </table> <p>Activity 3 has been conducting since April 2017 while Activities 1 and 2 have been conducting since July 2017.</p> <p>Three guidelines have been developed to be used as guidance for the Low Carbon City Program. These guidelines will be used in all 3 activities (3 regions) to ensure the consistency. The guidelines include (i) Guideline for developing the city carbon footprint (ii) Guideline for developing the GHG abatement plan (including Environmental and Social Management Framework, ESMF) and (iii) Guideline for project evaluation.</p> <p>The criteria were set to select municipalities for participating in the project which show as follows:</p> <ul style="list-style-type: none"> <li>• Medium to large municipality in terms of area and population which will have more potential in GHG mitigation;</li> <li>• The characteristics and types of municipality (for example tourism, residential, commercial, or industrial type);</li> <li>• The geographic distribution- Northern, Central, Eastern, Northeast, Western and Southern.</li> </ul> <p>The list of selected municipalities is shown below<sup>3</sup>.</p>	<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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<sup>3</sup> From the first ISR, Component 2 was planned to provide support to 24 municipalities in Thailand to develop their local GHG abatement plans which will be used to guide mitigation actions and low-carbon investment. However, after the invitation of municipalities to participate in this project and discussion between TGO and the consultants, 25 municipalities were selected.

No.	Municipality	No.	Municipality
1	Si Sa Ket	14	Nonthaburi
2	Patong	15	UdonThani
3	Amnat Charoen	16	Nakhon Sawan
4	Buriram	17	Songkhla
5	Roi Et	18	Hai Yai
6	Chum Phae	19	Lamphun
7	Yasothon	20	Hua Hin
8	MahaSarakham	21	Khao Sam Yot
9	Loei	22	KhuKhot
10	NongSamrong	23	Si Satchanalai
11	UbonRatchathani	24	Nan
12	Trang	25	Banchang
13	Sakon Nakhon		

Currently, the kick off meetings have been organizing for each municipality to inform the project information, work plan and preliminary survey the municipalities' data.

- 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 the EPC and LCC working groups. Selection of consultant is ongoing and expected to start working in Q4 of 2017 because the results from other studies will be used to support this activity.
- 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. In fiscal year 2016 (1 October 2016 – 30 September 2017), 28 municipalities are participating in the CCF project that makes the total number is 71 municipalities. Even though, the CCF project is not a part of Component 2 but this work is a good start and provides the useful information for the implementation of the LCC program. Furthermore, in this fiscal year, TGO supported five more municipalities (Prik municipality, Kham Kaen municipality, Hat Yai municipality, Sisaket Municipality and Hat Siao) to develop the Project Design Document (PDD) and validate by the third party to apply the T-VER program.
- TGO has organized trainings and workshops to develop numbers of independent validators and verifiers for T-VER program. As of September 2017, 17 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, municipalities' staff and TGO staff.
Comments:	Recently, TGO had organized a seminar on readiness preparation for validation and verification body to accredit with Nation Accreditation Council. This process will ensure the quality of T-VER credit and the environmental integrity.
<b>C. Component 3: Policy recommendation on legal framework to establish the ETS</b>	
Status: Ongoing	<p>The objective of this component is to support the Government's effort in its consideration for the establishment of a sound and effective legal framework for the ETS in Thailand.</p> <p>There are two main parts of this activity including:</p> <ol style="list-style-type: none"> <li>1) Study on the legal and institutional framework, including preparation of the draft laws and regulations, for the establishment of an integrated reporting system and</li> <li>2) Study on the legal and institutional framework, including preparation of the draft laws and regulations, for the establishment of the ETS in Thailand.</li> </ol> <p>ToR for this activity was approved in December 2016. The work started in August 2017 and an inception report was submitted by the consultant in September 2017.</p>
Comments:	N/A

#### 4. PROGRESS, CHALLENGES, AND LESSONS LEARNED

<p><b>Important policy or regulatory developments related to the Grant's objectives and activities:</b></p> <p>Developments:</p> <ol style="list-style-type: none"> <li><b>1. Paris Agreement</b> 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.</li> <li><b>2. Thailand Nationally Determined Contribution (NDC)</b> Thailand communicated its INDC to the UNFCCC on October 1<sup>st</sup>, 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 MtCO<sub>2</sub>e. As indicated in NDC, Thailand will continue to</li> </ol>
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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 2016, the Office of Natural Resources and Environmental Policy and Planning as the Thailand's national focal point to the UNFCCC developed the NDC roadmap in parallel with the study on mitigation potential in LULUCF sector. The NDC roadmap covers 3 sectors including energy and transport, waste and IPPU. To achieve the NDC, there are many sectoral plans and projects involved such as Energy Efficiency Plan (2015-2036), Alternative Energy Development Plan (2015-2036), Waste Management Plan (2016-2021) etc. The NDC roadmap<sup>4</sup> was approved by the National Committee on Climate Change Policy (NCCC) on February 10, 2017, then approved by the Cabinet on May 23, 2017. The timeframe of preparation phase and implementation phase are 2017-2020 and 2021-2030, respectively.

### 3. Twelfth National Economic and Social Development Plan (2017-2021)<sup>5</sup>

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

Challenges:

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. Furthermore, the results from the PMR Policy Analysis, which the PMR PA 16 endorsed in March 2017 will be critical and relied on to inform policy option regarding the role of carbon pricing in supporting the national GHG mitigation target and the suitability of carbon pricing instruments on the key sectors.

Lessons learned:

N/A

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

Developments:

From the first ISR, Component 2 was planned to provide support to 24 municipalities in Thailand to develop their local GHG abatement plans which will be used to guide mitigation actions and low-carbon investment. However, after the invitation of municipalities to participate in this project and discussion between TGO and the consultants, 25 municipalities were selected.

Challenges:

The above-mentioned minor change will not affect the implementation of the MRP. The expenses on

<sup>4</sup> <http://climate.onep.go.th/wp-content/uploads/2017/05/Thailand-NDC-Roadmap.pdf>

<sup>5</sup> [http://www.nesdb.go.th/nesdb\\_en/ewt\\_dl\\_link.php?nid=4345](http://www.nesdb.go.th/nesdb_en/ewt_dl_link.php?nid=4345)

study of one additional municipality (Banchang) will be covered by the consultant.

**Lessons learned:**

- The willingness of the mayor is one of the key successes in LCC preparation.
- From TGO's 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.
- The development of guidelines will ensure the consistency of the work indifferent regions.

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

**Developments:**

- Training on SEC development was organized for stakeholders and TGO staff. There were more than 50 participants attended.
- Trainings on Thailand Voluntary Emission Reduction Program (T-VER) were organized for municipalities.
- The procurement and financial administrative task has been improved due to close collaboration between TGO and the World Bank.

**Challenges:**

Regarding the procurement process which requires the country to submit the documents through the World Bank's online system named STEP, the system is still not stable and there are some technical problems. Therefore, it takes more time than expected.

**Lessons learned:**

N/A

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

**Developments:**

- **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, the project has already completed. The next step, TGO and The Foundation Future of the Carbon Market will discuss on tendering the carbon credit reduced from the projects developed by the municipalities.

- **Achieving Low Carbon Growth in Cities through Sustainable Urban Systems Management in Thailand**

This project funded by GEF and has UNDP as a delivery partner. This project aims to strengthen the capacities and processes at local level for bottom-up integrated low carbon development planning and the implementation & sustainable management of low carbon development projects. The 4-year project will focus on low carbon urban systems, in particular waste management and sustainable transport.

- **Support for the development of Thailand ETS**

This project is supported by the ADB. The overarching objective is to support TGO in its work to develop an emissions trading system (ETS) design. The technical scope of work will be considering all of the main ETS design elements. Consequently it will not involve detailed analytical study, but will rather identify the issues and options for each design element and how each could be taken forward.

- **ETS-KSP**

Thailand is participating the regional platform for knowledge sharing on the development and linking of Emissions Trading Schemes in Asia and the Pacific (ETS-KSP) that the Asian Development Bank (ADB) has established in partnership with the International Carbon Action Partnership (ICAP)

- **Asia-Pacific Carbon Market Roundtable**

Thailand is participating the carbon market roundtable of Asia-Pacific region to update the information on market development of the countries in this region and share experiences.

### Challenges:

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.

### Lessons learned:

Experiences shared from the experts and other countries are useful for the carbon pricing instruments development.

### Stakeholder engagement related to the Grant's activities:

#### Developments:

- The memorandum of cooperation signing ceremony was organized on July 06, 2017 which was opened by the Deputy Permanent Secretary of the Ministry of Natural Resources and Environment and delivered welcoming remarks by 4 chairpersons from key relevant agencies including The Deputy Director General of Department of Local Administration, The Renewable Energy Expert of DEDE, The senior environmental specialist of the World Bank and the Executive Director of TGO. There were 140 participants attended the ceremony.
- EPC working group and LCC working group were organized every two months. The working groups considered the ToRs for EPC scheme and LCC program and also discussed on the result

of the works.

- 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.
- The meeting of PMR Steering Committee was organized on January 26, 2017 to acknowledge the project work plan and update on the project implementation status.
- The meetings between DEDE and TGO were organized three times to discuss on the EPC scheme including the template for data reporting, MRV system etc.
- Kick off meeting with the 25 municipalities were organized at the municipality offices to inform the project information, work plan and preliminary survey.
- Focus group meetings with DF&Bs in 11 sectors on EPC scheme were organized more than 15 times.
- A stakeholder consultation on MRV guideline for EPC scheme was organized.

Challenges:

- Building capacities and raising awareness for the stakeholders are the key important issues.
- There are many projects which involve the DF&Bs implementing currently; therefore, it may increase the burden of the DF&Bs.

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 and lighten the burden of DF&Bs. Recently, an MoU on integration of GHG data reporting in industrial sector had been signed by ONEP, TGO (Ministry of Natural Resources and Environment) and Department of Industrial Work (Ministry of Industry). The timeframe of this work is 2016-2020. The results of this work will support the government on GHG database development, policy design and this reporting platform will lighten the burden of DF&Bs in data reporting.

**Other issues related to the Grant's activities**

N/A

## 5. ADDITIONAL INFORMATION

From the 16<sup>th</sup> meeting of the PA, Thailand received the additional funding to carry out the study on impact of carbon pricing instruments on national economy and contribution to NDC. This policy analysis will complement the ongoing MRP by filling in analytical gaps at the national policy level, in particular, aiming to understand the linkage between climate policy, carbon pricing and the economy. The policy analysis will help answer what role carbon pricing can play in helping country achieve NDC in the cost-effective manner and what is the impact on the economy if carbon pricing is adopted.

The ToR was drafted in cooperation between TGO and the World Bank as a delivery partner. This assignment comprises the following tasks:

1. Review and develop economic modeling for carbon tax and ETS with and without crediting mechanism as a part of ETS/carbon tax (for offsetting purpose) to contribute to Thailand's NDC mitigation goal.
2. Model and assess the interaction and consistency between the carbon pricing policy (carbon

tax/ETS) and national existing policies and regulations.

3. Support capacity building and dissemination of the knowledge and understanding of the effectiveness of the carbon pricing instruments for the mitigation goal achievements.

Recently, the request for proposal was sent to the short-listed consulting firms. The proposal will be submitted at early of October and the work is planned to start in Q4 of 2017.