

**PROJECT INFORMATION DOCUMENT (PID)**  
**APPRAISAL STAGE**

Report No.: 94709

<b>Project Name</b>	Partnership for Market Readiness (PMR)
<b>Region</b>	EAST ASIA AND PACIFIC
<b>Country</b>	Thailand
<b>Sector(s)</b>	General Energy Sector (50%), General Industry and Trade Sector (50%)
<b>Theme(s)</b>	Climate Change (100%)
<b>Lending Instrument</b>	Investment Project Financing
<b>Project ID</b>	P128965
<b>Borrower(s)</b>	Ministry of Finance
<b>Implementing Agency</b>	Thailand Greenhouse Gas Management Organization (TGO)
<b>Environmental Category</b>	B
<b>Date PID Prepared/Updated</b>	February 23, 2015
<b>Estimated Date of Board Approval</b>	N/A
<b>Decision</b>	
<b>Other Decision</b>	

**I. Project Context**

**Country Context**

1. **Thai economy has grown at an average rate of 5–6 percent over the past decade largely driven by the manufacturing and tourism services.** The impressive performance of the Thai economy is a result of strong economic fundamentals, coupled with a sound mix of macroeconomic policy. Over the last decade, the economic structure is characterized by the rapid growth of manufacturing sector which explained the rising energy intensity in Thailand. Thailand’s sustained economic growth has contributed to dramatic poverty reduction, but inequality and sustainability remain key development challenges.

2. **Thai economy is growing on a high-carbon growth path.** According to the latest data from the U.S. Energy Information Administration, Thailand emitted 278.49 million tons of carbon dioxide equivalent (MtCO<sub>2</sub>e) in 2010 and was the 22nd largest CO<sub>2</sub> emitter in the world (not including land use change and forestry (LUCF)) and 5th largest in the East Asia and Pacific region (after China, Japan, the Republic of Korea, and Indonesia). Thailand’s carbon intensity was 1,121 tCO<sub>2</sub>e/million USD which was the 47th largest CO<sub>2</sub> intensity in the world and the 6th largest in the region. Thailand’s energy intensity was relatively high at 17.8 mega joules (MJ) per USD while share of non-fossil fuels in power mix were relatively low at 8.1 percent compared to well-performing countries (20-90%). Future economic growth will further drive

energy demand and emissions. It was projected that during 2010-2050, in the business-as-usual case, the total amount of GHG (greenhouse gas) emissions will reach 1,331 MtCO<sub>2</sub>e per year and the energy sector will continue to represent the most important source of GHG emissions contributing 76 percent of the total. The key challenge for the country is to avoid embarking on a high-carbon growth path and instead take a low-carbon growth path.

## **Sectoral and Institutional Context**

**3. Although Thailand is a Non-Annex I country with no obligation for implementing measures to reduce GHG emission, Thailand has considered climate change as one of the key national priorities.** The 11th National Economic and Social Development Plan (NESDP) adopted Green Growth and Low-Carbon Development as part of its strategy for balanced and inclusive growth. The Plan identified climate change as one of the significant development challenges and stressed the importance of environmental management, improving energy efficiency, and low-carbon growth path for cities as the key priorities. The Royal Thai Government (RTG) signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and ratified the Convention in 1994 as a Non-Annex I country. The government has prepared the Climate Change Master Plan of Thailand (2014-2050) and the Nationally Appropriate Mitigation Actions (NAMAs) pledge which are both pending approval by the Cabinet. Thailand has been active in the Clean Development Mechanism (CDM) market. As of December 2014, the total amounts of 146 projects have been registered, with an expected annual Certified Emission Reduction (CER) generation capacity valued at around 7 MtCO<sub>2</sub>e.

**4. Given slow progress in the development of global carbon market post-Kyoto Protocol, there is increasing attention internationally to focus the climate change mitigation efforts at the domestic level.** It is well-recognized that GHG emissions can be reduced most cost-effectively through “market-based” approaches that put a price on carbon. Several domestic market-based instruments and carbon pricing initiatives have been introduced in various countries, particularly in the Non-Annex I parties under the UNFCCC. As the RTG is studying several policy options to reduce emissions and their suitability to apply in the country’s context, the RTG seeks to learn more from these international experiences.

## **II. Project Development Objective(s)**

5. 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.

## **III. Project Description**

### **Component Name**

Component 1: Preparation of key market components of the Energy Performance Certificate (EPC) Scheme

### **Comments (optional)**

This component will provide technical assistance to support the preparation phase of the

EPC scheme focusing on data readiness, target setting methodology for different industrial sectors and buildings, development of monitoring, reporting and verification (MRV) system, assessment of laws and regulations and modifications required to implement EPC, and an analytical study on performance-based incentive and pricing mechanism for EPC.

**Component Name**

Component 2: Development of Local GHG Abatement Plans and a study on pricing mechanism for the Low Carbon City (LCC) Program

**Comments (optional)**

This component will provide support to 24 local municipalities to develop a Local GHG Abatement Plan which will be used to guide mitigation actions and low-carbon investment, from which carbon credits can be generated for trading under the existing domestic voluntary carbon market<sup>1</sup>. In addition, the PMR will support GHG Abatement Plan Guidelines and the study on pricing mechanism and incentives to create demand for domestic carbon credits.

**Component Name**

Component 3: Policy recommendation on legal framework to establish the Emission Trading Scheme (ETS)

**Comments (optional)**

This component will complement RTG’s ongoing and planned activities on assessing the applicability of ETS in Thailand. The PMR will specifically support the legal aspect of the overall ETS assessment.

**Component Name**

Component 4: Project management

**Comments (optional)**

This component will support the daily project management activities as well as provide technical support to TGO project management unit staff.

**IV. Financing (in USD Million)**

Total Project Cost:	5.79	Total Bank Financing:	3.00
Financing Gap:	2.79		
<b>Financing Source</b>			<b>Amount</b>
BORROWER/RECIPIENT			2.79
Partnership for Market Readiness			3.00
Total			5.79

**V. Implementation**

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<sup>1</sup> Thailand Voluntary Emission Reduction Program (T-VER) was initiated by TGO in October 2013 as a domestic carbon offset program using “baseline and credit” approach.

## A. Institutional and Implementation Arrangements

6. TGO<sup>2</sup> was designated as the implementing agency of the PMR project. TGO had established the PMR Steering Committee, which is a cross-ministerial committee comprising of representatives at senior level, to oversee the PMR project implementation. Member of the PMR Steering Committee include officials from 15 key agencies<sup>3</sup>. The Department of Alternative Energy Development and Efficiency (DEDE), which is the key agency in energy efficiency policy, will be an implementing partner of the EPC component.

## B. Result Monitoring and Evaluation

7. The World Bank team and PMR Secretariat will provide implementation support for the execution of PMR grant and implementation of activities to ensure achievement of PDO.

## C. Sustainability

8. **The project's sustainability lies in capacities built in core climate change and energy policies agencies and the use of project's output to progress the development of domestic carbon market schemes.** Given clear policy framework (on climate change, energy efficiency and low-carbon city), strong commitment of the agencies involved, and the fact that PMR complement key technical gaps of the government's own long-term plan (in developing domestic carbon market and achieving long-term energy efficiency target), the results of the project will be used by policy makers to further refine and develop domestic carbon market scheme and market-based energy efficiency policy measure which is most suitable in the Thai context. For low-carbon city, the development of the Local GHG Abatement Plan Guidelines will help replicate the impact of the project beyond 24 municipalities covered in the project.

## VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X

<sup>2</sup> TGO is an autonomous governmental organization under the Ministry of Natural Resources and Environment (MONRE). Its Board of Directors comprises of several executive officers from MONRE, MOEN and Ministry of Transport. It was established with a specific purpose as an implementing agency on GHG emission reductions in Thailand.

<sup>3</sup> Such as NESDB, Department of Alternative Energy Development and Efficiency (DEDE), Public Debt Management Office (PDMO), Fiscal Policy Office (FPO), National Municipal League of Thailand, Metropolitan Electricity Authority (MEA), Provincial Electricity Authority (PEA), Electricity Generating Authority of Thailand (EGAT) and Department of Local Administration (DOLA)

Involuntary Resettlement OP/BP 4.12		X
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

### Comments (optional)

The project will be solely on technical assistance activities. It is anticipated that the project will lead to long term positive impacts to the environment particularly on GHG emission reduction and energy consumption reduction. No separate safeguards instrument is required for this TA project. The Bank will review and provide inputs on key TORs to ensure that appropriate safeguards measures, including environment and social screening criteria, are incorporated in relevant studies. In addition, the Bank will work with the counterpart to ensure stakeholder participation and that perspective of men and women on GHG and its mitigation actions are taken into account in all activities.

## VII. Contact point

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