



Thailand

Final Market Readiness Proposal

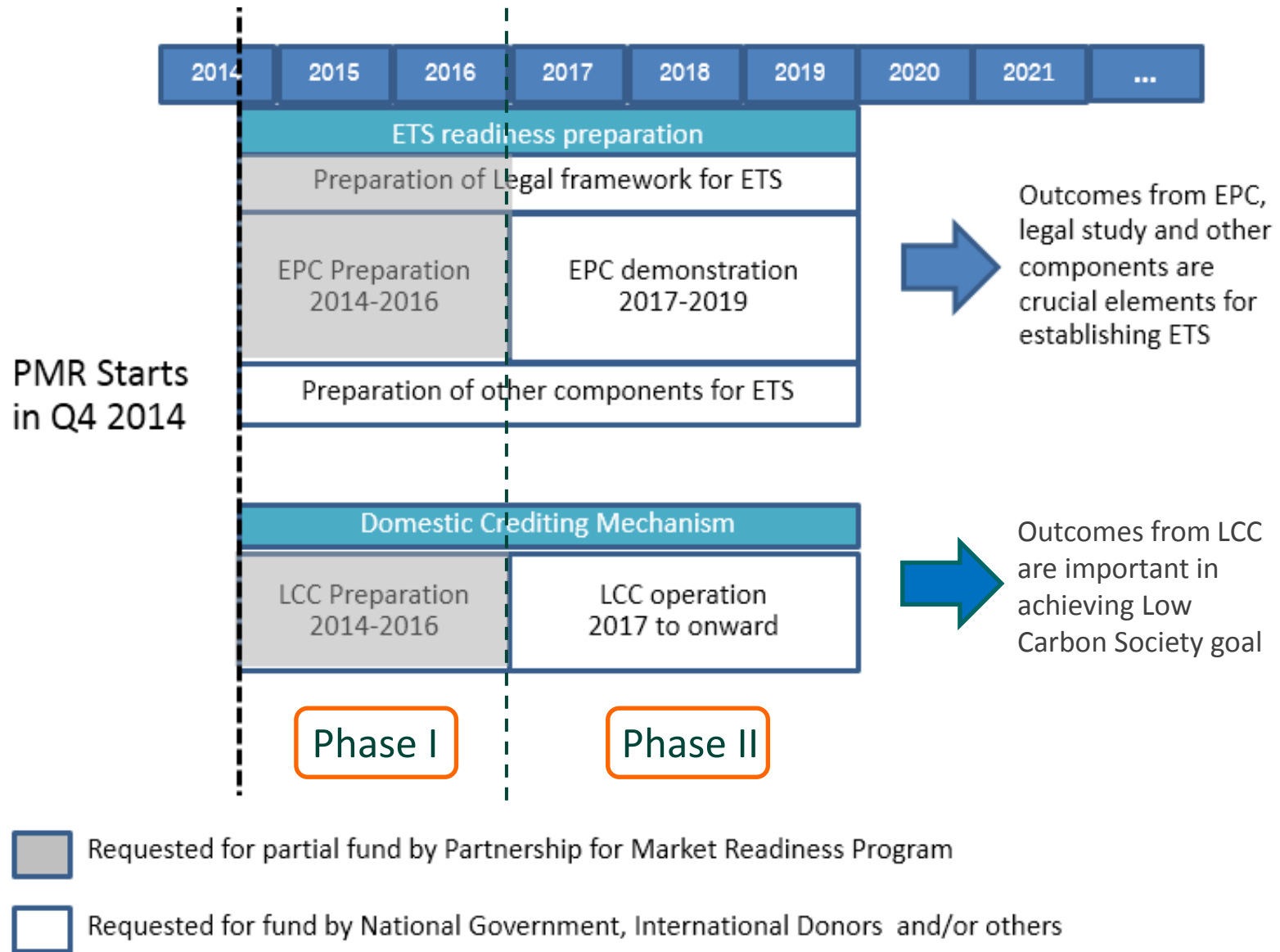
March 2014

MRP Objective

- ◆ 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 ETS in the future by:
 - Phase I – designing the Energy Performance Certificate Scheme (EPC) and preparing the infrastructure including database and MRV system and conducting a study on legal framework for the ETS.
 - Phase II - demonstrating the EPC scheme.

- ◆ 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 by:
 - Phase I - preparing the Low Carbon City Program (LCC) and Low Carbon City Program Fund (LCC Fund).
 - Phase II - implementing the LCC program.

Vision Toward ETS and Low Carbon Society



MRP Focus

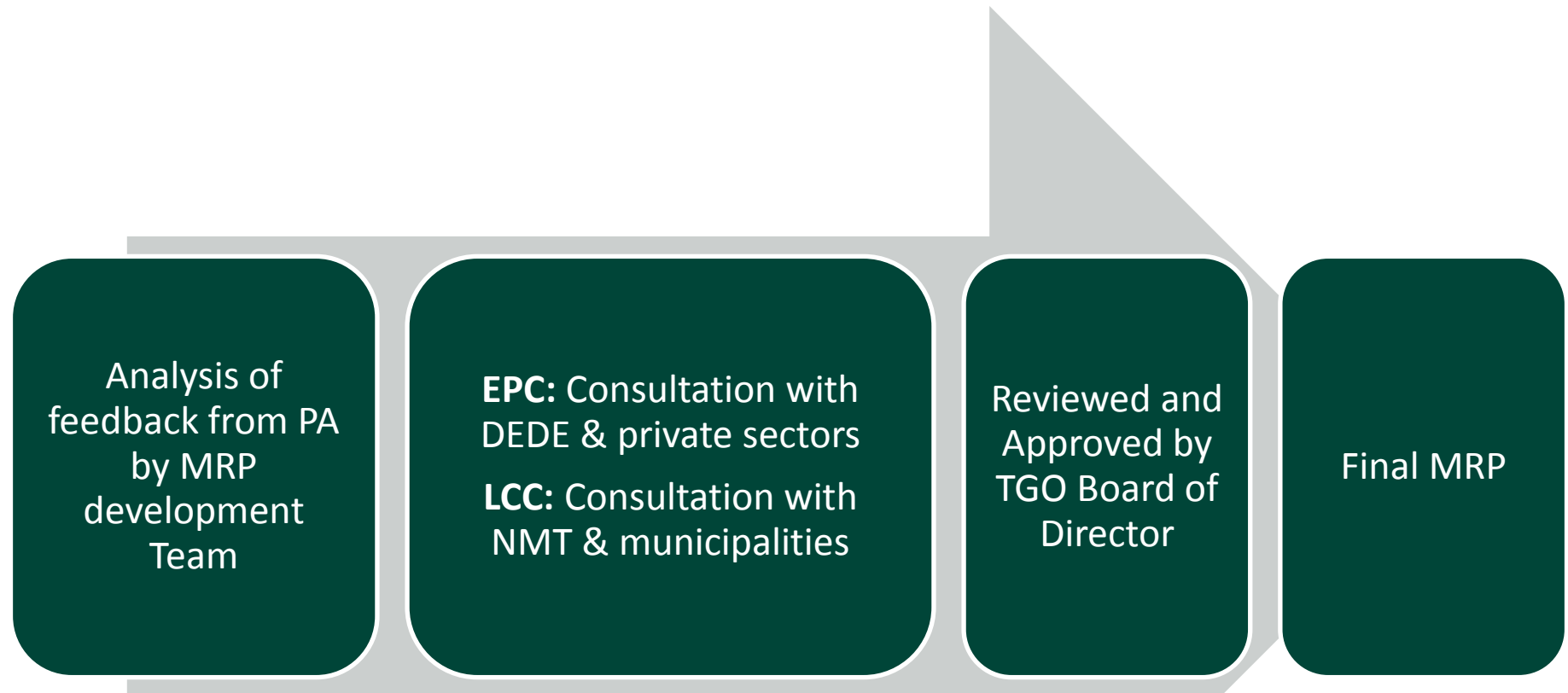
1. ETS Market Readiness Preparation

- **Study on legal framework**
- **EPC Preparation** – EPC focuses on energy intensive industrial units and commercial buildings.
 - Verify and improve quality of energy consumption data (and GHG emission data) for all DF&B (~7,000 installations)
 - Build data collection and management tools
 - Strengthen MRV system
 - Capacity building for PREs & verifiers
 - Legal framework
 - Study on incentives for voluntary participation to EPC and source of fund

MRP Focus (cont.)

- 2. **Low Carbon City Preparation using domestic crediting mechanism**
 - **LCC Preparation**
 - Study on potential GHG emission reduction from LCC program
 - Prepare guideline for the development of local GHG abatement plan
 - Development of the local GHG abatement action plan
 - **LCC Fund Preparation**
 - Study on pricing for LCC-TVERs and incentives for LCC-TVERs buyers and philanthropists

Process of Revising MRP



TGO's Members of the Board of Directors comprise of

- Director Generals from Ministry of Natural Resources and Environment, Ministry of Energy, and Ministry of Transport
- Honorary Advisors (Energy, Industry, Science & Technology, Forestry, F.T.I.)
- Advisors to the Board of Directors (Legal, etc)

Response to General PA Feedback

PA Feedback	Response
Consideration on the studies to assess if individual BB were mutually supportive or antagonistic	<input type="checkbox"/> Both schemes are independent and the target participants of each scheme are different so it will not lead to double counting.
Explanation on the plan to spend the MRP budget	<input type="checkbox"/> Budget plan is provided.

Summary of Chapter 1 – Big Picture: Policy Context

- ◆ Outlines the big picture and existing relevant policies on climate change in Thailand.
- ◆ Provides an overview of the country's low emissions development strategy and its GHG mitigation plan.
- ◆ Historic and projected GHG emissions trends. The total amount of GHG emissions in 2050 is valued at 1,331 MtCO₂e/yr, the energy sector represents the most important source which contributing 76% of the total.
- ◆ This chapter also includes carbon market experience including CDM and international voluntary carbon market.

Summary of Chapter 2.1: Vision Toward Mandatory Carbon Market

- ◆ Describes the background and country's necessity.
- ◆ A vision toward the establishment of mandatory carbon market

Activity	Deliverable	Timing	Funding (US\$)	
			Overall Budget	Request to PA
ETS readiness preparation				
Legal framework	1) A proposal on the legal framework for establishing the ETS in Thailand, including a review from other ETSs 2) A draft proposal on the administrative guidelines for Thai ETS	2015 - 2016 (24 months)	400,000	400,000
Total			400,000	400,000

Chapter 2.1: Response to PA Feedback

PA Feedback	Response
<p>Clarification on a roadmap from a voluntary trading scheme to the future mandatory scheme: involvement of private sector during the gap years</p>	<ul style="list-style-type: none"><li data-bbox="898 480 1984 716">❑ At the time of the submission of the MRP, Thailand is not able to commit to the exact timeline for establishing the ETS -- largely depend on political view.<li data-bbox="898 760 1984 873">❑ Outcomes from PMR activities will be crucial elements for establishing the nation-wide ETS.<li data-bbox="898 917 1984 1211">❑ Whether there'll be a need to continue the EPC or use any interim measures during the transition period (after 2019) will be decided based on the outcome of the EPC demonstration.

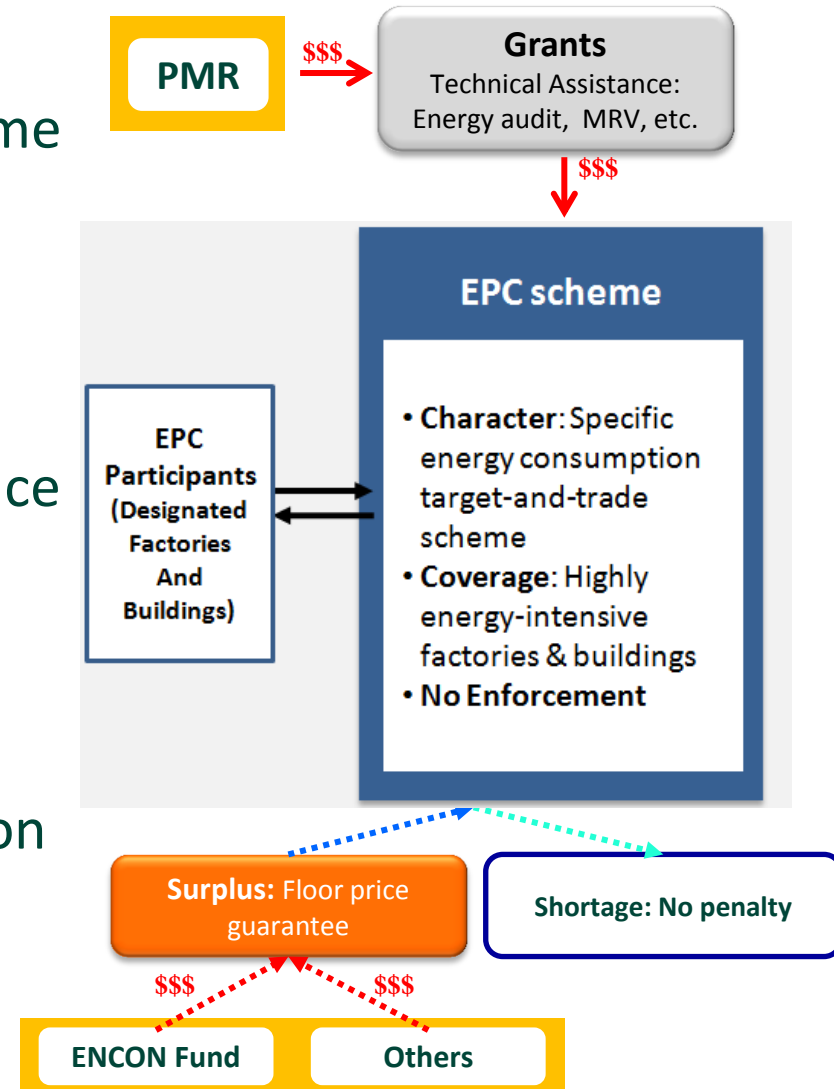
Summary of Chapter 2.2: EPC scheme

1. Assessment and rationale for establishing the EPC scheme
 - Background
 - Existing relevant policies and political tools
 - Outline and rationale of the EPC
 - How the EPC would evolve into the ETS

Summary of Chapter 2.2: EPC scheme (cont.)

2. Design of the EPC scheme

- Conceptual framework of the EPC scheme
- Scope and coverage
- Target setting methodology
- Allocation of allowances
- System for domestic MRV and compliance
- Fostering stability
- Regulatory framework and institutional arrangement
- Use of offset and/or linking consideration
- Incentives for EPC participants



Chapter 2.2 – Response to PA Feedback

PA Feedback	Response
<p>Allowance-based VS Certificate-based</p>	<ul style="list-style-type: none"> ❑ From several stakeholder consultations, allowance-based scheme was finalized and selected to generate interest for participation. ❑ The allowance-based scheme will also help to build capacity and provide lesson learnt for Thailand in establishing future ETS. <p>(More clarification has been made in Chapter 2.2, Section 2, Sub-section iv -- Allocation of Allowances.)</p>
<p>Conversion from “toe” to “tCO₂”</p>	<p>The conversion will take into account:</p> <ol style="list-style-type: none"> 1) Existing methodology used by TGO to determine emission factors 2) Fuel mix in the energy basket of participating sectors. <p>(More clarification has been made in Chapter 2.2, Section 2, Sub-section iv -- Allocation of Allowances.)</p>

Chapter 2.2 – Response to PA Feedback

PA Feedback	Response
Incentive for voluntary participation	Various forms of incentives will be provided: <ul style="list-style-type: none">❑ Technical: Facilitation in identifying energy saving potential, capacity building, facilitation in selecting technology options.❑ Financial: Grants for compensation of the transaction cost, Reward for over-performers❑ Others: Positive image building
EPC Contribution to the national goal	With 100% participation, the EPC scheme will result in savings of about 1385 KTOE (by 2019). This implies a contribution of 15% of national savings target for industrial and buildings sector in 2019.

Chapter 2.2: List of EPC Preparation Phase Activities

Activity	Deliverable	Timing	Funding (US\$)	
			Overall Budget	Request to PA
EPC preparation				
Data	<ol style="list-style-type: none"> 1) A data template in the context of EPC and Thai ETS requirement including the propose methods of collecting and managing the data. 2) A proposal on methodology in converting 'toe' to 'tCO₂' for transferring EPC unit to ETS unit. 	2015 (6 months)	50,000	50,000
Data	<ol style="list-style-type: none"> 1) Assessment study on present data and storage system (list of DF&Bs, annual energy consumption of each DF&B, data capture and storage system) and collect 3 years data (2010, 2011 and 2012). 2) An analysis report on the data requirement for EPC and Thai ETS. 3) Research study on sector-specific energy usage pattern and potential improvement for energy efficiency. 4) Development of sector-specific technology compendium. 	2014 – 2015 (15 months)	300,000	300,000
MRV	<ol style="list-style-type: none"> 1) Assessment study on existing data reporting and MRV system. 2) An e-portal to facilitate the submission of annual energy report by DF&Bs to DEDE. 3) Propose and build a data reporting system that can be used for both EPC and future ETS. 	2014 – 2015 (15 months)	225,000	225,000
MRV	<ol style="list-style-type: none"> 1) Assessment of demand-supply gap of certified energy auditors and their skill level to do the verification (list of PREs and energy auditors) 2) Create suitable number of certified energy auditors, develop & maintain a list of available independent verifiers 3) Capacity building of PREs and verifiers 4) Develop guidelines for PREs on how to fill-up the data format and for certified energy auditors on how to verify the data 5) Development of a guidebook on energy auditing 	2014 - 2016 (24 months)	325.000	325.000

Chapter 2.2: List of EPC Preparation Phase Activities (cont.)

Activity	Deliverable	Timing	Funding (US\$)	
			Overall Budget	Request to PA
MRV	<ol style="list-style-type: none"> 1) 100% verification of all existing data by independent verifiers. 2) A guideline on how to make the best use on available data and how to improve data quality. 	2015 - 2016 (24 months)	400,000	400,000
Legal framework	<ol style="list-style-type: none"> 1) Assessment study on provisions of present Law and amendments required for EPC scheme. 	2014 - 2015 (12 months)	100,000	100,000
Incentive and Sink Fund	<ol style="list-style-type: none"> 1) A study to determine the price level to buy back the surplus of allowances. 2) A proposal to request funding from national budgets (e.g. ENCON fund, Environmental fund) and a recommendation on the responsible party. 3) To propose the structure of the sink fund and its admin and legal requirement. 	2014 - 2015 (15 months)	200,000	200,000
Outreach	<ol style="list-style-type: none"> 1) Outreach and media campaign to invite participation in the pilot phase. 	2015 - 2016 (24 months)	140,000	-
Scope and coverage	<ol style="list-style-type: none"> 1) A research report on scope and coverage of EPC and Thai ETS (e.g. types of GHG, compliance sectors, size and numbers of installations etc) by taking into account the experience from EPC and other ETSS. 	2015 - 2016 (24 months)	300,000	-
Cap & Target setting	<ol style="list-style-type: none"> 1) Analysis of Data for baseline estimation and target setting. 2) Research study on Sector-specific energy usage pattern and potential improvement for energy efficiency; 3) Propose a target setting methodology; 4) Consultation process of finalizing the methodology of baseline and target setting of DF&Bs 	2015 - 2016 (24 months)	350,000	-

Chapter 2.2: List of EPC Preparation Phase Activities (cont.)

Activity	Deliverable	Timing	Funding (US\$)	
			Overall Budget	Request to PA
Allowance Allocation	<ol style="list-style-type: none"> 1) A report summary lesson learnt and experience from other ETSs with regards to allocation methodologies. 2) A proposal on methodology for allocating allowances of EPC. 	2015 - 2016 (24 months)	300,000	-
Registry	<ol style="list-style-type: none"> 1) A registry which can manage both EPC and ETS allowance units. 2) Training officials and staff for EPC registry. 	2015 - 2016 (24 months)	300,000	-
Total			3,040,000	1,600,000

Summary of Chapter 2.3: LCC program

1. Assessment and rationale for establishing the LCC program
 - Background
 - Existing relevant policies and political tools
 - Outline and rationale of the LCC
 - LCC expanded to cover all municipalities
2. Design of Low Carbon City Program (LCC)
 - Conceptual framework of the LCC program
 - LCC program cycle
 - Scope and coverage
 - Quantification of emission reductions and the MRV system
 - Potential emission reductions generated from LCC program
 - Regulatory framework and institutional arrangement

Chapter 2.3– Response to PA Feedback

PA Feedback	Response
Clarification on the possibility to use the same registry for T-VER and LCC	<ul style="list-style-type: none">❑ The same registry will be applied.
Clarification on how capacity built in municipality will be retained	<ul style="list-style-type: none">❑ Guidelines and management system will be established to ensure the sustainability of the project.❑ Thailand incorporated with Japan International Cooperation Agency (JICA) are developing the training courses on low carbon society development for local government at all levels including Lord Mayors and practitioners.

Chapter 2.3: List of LCC Preparation Phase Activities

Activity	Deliverable	Timing	Funding (US\$)	
			Overall Budget	Request to PA
Data	<ol style="list-style-type: none"> 1) A research report to identify potential GHG emission reduction from LCC program. 2) Guideline for the development of local GHG abatement plan. 3) Local GHG abatement action plan for pilot municipalities 	2015 - 2016 (24 months)	600,000	600,000
Data	Development of the project design documents for the LCC program	2015 - 2016 (24 months)	400,000	-
MRV	<ol style="list-style-type: none"> 1) Assessment study on present MRV system of other voluntary carbon standards (e.g. VCS, Gold Standard) and compliance standard (e.g. CDM) 2) Create suitable number of independent verifiers 3) Development of a guidebook on T-VER 4) Capacity building of validators and verifiers 5) Propose a domestic MRV system is well-received in global market 	2015 - 2016 (27 months)	350,000	-
Registry	<ol style="list-style-type: none"> 1) Development of system for LCC registry (using TVER registry) 2) Training officials and staff for LCC registry. 	2015 - 2016 (24 months)	300,000	-
Total			1,650,000	600,000

Summary of Chapter 2.4: LCC Fund

1. Assessment and rationale for establishing the LCC fund
2. Design of the LCC fund
 - LCC Fund function and activities
 - Pricing mechanism for LCC-TVERs & carbon finance
 - Promotion, outreach and business development to promote LCC program
 - Potential sources of funding
 - Administrative arrangement

Chapter 2.4– Response to PA Feedback

PA Feedback	Response
Assessment of the synergies between the EPC sink fund and the LCC Fund to reduce administrative overhead	<input type="checkbox"/> The EPC sink fund and the LCC fund are planned to be established for different purposes and they will provide support to different target groups. The latter focuses on municipalities and communities. In addition the source of funds are different.
Clarification on the function of LCC program and LCC fund	<input type="checkbox"/> Clarification has been made in Chapter 2.4, Section 2, Sub-section i -- LCC Fund function and activities.

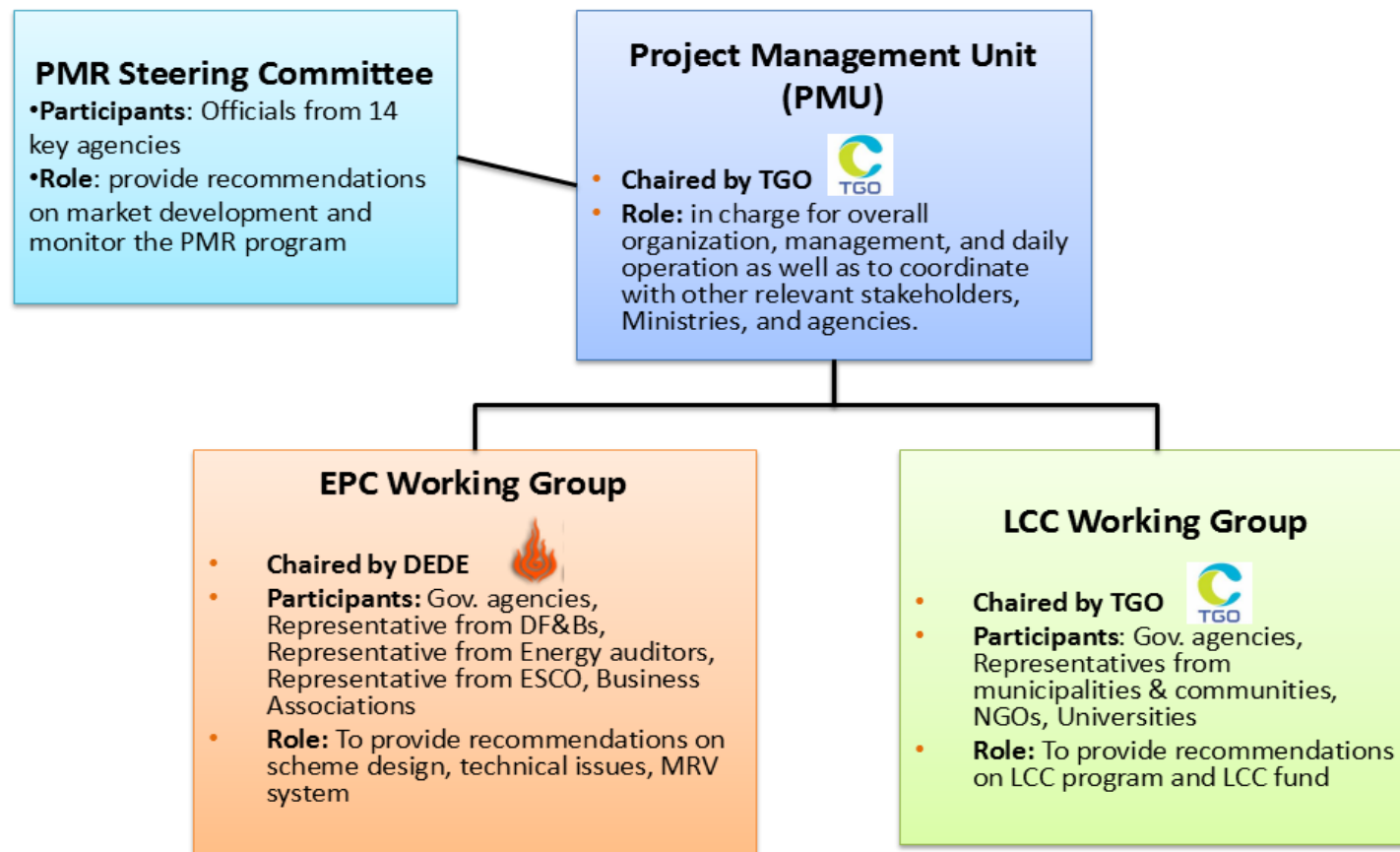
Chapter 2.4: List of LCC Fund Preparation Phase Activities

Activity	Deliverable	Timing	Funding (US\$)	
			Overall Budget	Request to PA
Outreach	<ol style="list-style-type: none"> 1) Researching and attracting new businesses/individual that desire to reduce their carbon footprint in partnership with the LCC Fund. 2) Identifying and soliciting direct donations from corporations, institutions, and event participants to reduce their impact on climate change and contributing to support the LCC program. 3) Assisting potential voluntary buyers of LCC-TVERs by responding to inquires about calculating their carbon footprint. 4) Program promotion and education with a broad array of stakeholders. 5) Development of website, writing blogs, releases, proposals, using social medias and promotional materials to promote LCC program and LCC Fund. 	2016 (12 months)	100,000	-
Incentive and pricing for LCC-TVERs	<ol style="list-style-type: none"> 1) A research report on pricing mechanisms for LCC-TVERs. A study shall include the pricing of voluntary credits and current status from global & other domestic voluntary carbon markets, then propose a suitable practice for pricing LCC-TVER. 2) A research report on incentive options for LCC-TVER buyers. The study shall show how to create demands for LCC-TVERs and incentives for LCC-TVER buyers (e.g. tax incentives). 	2015 (12 months)	100,000	100,000
Institutional structure	A research report to propose a proper fund structure, including administrative and legal arrangement.	2015 - 2016 (24 months)	100,000	-
Total			300,000	100,000

Summary of Chapter 3 – Organization, Communication, Consultation and Engagement

- ◆ Propose the organization structure for implementing the PMR activities.
- ◆ Propose the specific activities to ensure proper communication, consultation and engagement with stakeholders.

Organization of Thailand's PMR implementation phase



Chapter 3: Organization, Communication, Consultation and Engagement

Activity	Deliverable	Timing	Funding (US\$)	
			Overall Budget	Request to PA
Management	<ol style="list-style-type: none"> 1) Project management and capacity building for staff of PMU office. 2) Corpus Fund for human resource required for overall administration of the scheme at PMU, issuance of EPC and LCC units, and other miscellaneous expenses. 	2014 - 2016 (27 months)	225,000	225,000
Consultation	<ol style="list-style-type: none"> 1) Consultation, engagement and workshop. 2) Direct interview with potential EPC and LCC participants 	2015-2016 (24 months)	100,000	-
Program review	<ol style="list-style-type: none"> 1) Annual PMR implementation reports 2) Financial audit report 	2014 - 2016 (27 months)	75,000	75,000
Total			400,000	300,000

Summary of Total PMR Funding Request during 2014-2016

Activities	2014*	2015	2016	Total
ETS	-	200,000	200,000	400,000
EPC	170,000	1,810,000	1,060,000	3,040,000
LCC	50,000	800,000	800,000	1,650,000
LCC Fund	-	200,000	100,000	300,000
Organizational management	50,000	175,000	175,000	400,000
Total required Budget	270,000	3,185,000	2,335,000	5,790,000

*PMR expects to start from Q4 2014

Activities	PMR	National Gov.	Total
ETS	400,000	-	400,000
EPC	1,600,000	1,440,000	3,040,000
LCC	600,000	1,050,000	1,650,000
LCC Fund	100,000	200,000	300,000
Organizational management	300,000	100,000	400,000
Total required Budget	3,000,000	2,790,000	5,790,000

Conclusion

For the 1st phase :

- ◆ Thailand MRP proposes works on 4 components including
 - (1) Legal framework for the establishment of Thai ETS
 - (2) Preparation of core readiness components for EPC scheme
 - (3) Preparation of local GHG abatement plan for municipalities
 - (4) Pricing mechanism for LCC-TVER and incentive for LCC-TVER buyers and philanthropists.
- ◆ Implementation phase of MRP is estimated to continue for 2 yrs and 3 months, through 2016.
- ◆ Total budget required for all proposed activities is estimated at USD 5,790,000. Thailand requests funding of USD **3,000,000** from PMR.

Conclusion

For the 2nd phase :

- ◆ Once Thailand finishes the preparation phase of EPC and LCC, Thailand plans to implement EPC scheme and LCC program in order to build capacity for all relevant stakeholders and establish infrastructure for the ETS. Thailand also plans to prepare other market readiness components for the ETS such as compliance mechanism, scope and coverage, target setting, etc. These activities will be performed during the year 2017 to 2019.
- ◆ The additional budget required for these activities is estimated at USD 3,800,000. To implement these activities, Thailand would need additional grant support from PMR at least USD 2,000,000.

THANK YOU



ขอบคุณค่ะ
KOB-KOON-KA