Thailand Voluntary Emission Reduction (T-VER)

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Thailand Greenhouse Gas Management Organization

Thailand Greenhouse Gas Management Organization
(Public Organization)
Presentation outline

- Principle of T-VER development
- Characteristics of T-VER
- Institutional Framework for T-VER
- T-VER Cycle
- Approved T-VER Methodologies
- Procedures for request for registration as T-VER project
- Procedures for request for issuance of TVERs
- Progress of T-VER Development
- Challenge
International Cooperation on Development of VCM in Thailand

- The **Project for Dissemination of Voluntary Emission Reduction Program (KVER) to Thailand** (Phase I-II) – Implemented by Korea Energy Management Corporation (KEMCO) and supported by Global Green Growth Institute (GGGI) (2011-2012)

- **Capacity Building and Consultation on Establishment of Thailand Voluntary Emission Reduction (T-VER) Program and Thailand Voluntary Emission Trading Scheme (TVETS)** – Implemented by IGES and supported by MOEJ (2011-2013)
**Principle of T-VER Development**

**Basic principle in developing T-VER**

- Transparency
- Relevance
- Accuracy
- Completeness
- Consistency
- Conservativeness

**Approach for reliability assurance of T-VER’s carbon credit**

1) T-VER project is designed and operated in accordance with the principles and requirements of ISO 14064-2

2) Validation and verification is conducted according to the principles and requirements of ISO 14064-3

3) Validation and Verification is performed by registered Validation and Verification Body (VVB)
Characteristics of T-VER

- **GHG reduction projects**
  - Baseline-and-credit

- **Size of projects**
  - No limitation
  - Can be bundled (in the near future)

- **Carbon Credits**
  - TVERs (Thailand Verified Emission Reductions)

- **Gas coverage**
  - CO$_2$, CH$_4$, N$_2$O

- **Crediting Period**
  - 7 years for non-forestry project / 20 years for forestry project
Characteristics of T-VER

➢ Additionality

- For the large scale project, PP has to prove additionality of the project. At the initial state, pay back period is used to prove additionality.

➢ Co-benefit

- PP has to clarify co-benefit that occur from the project according to the type of the project
### Criteria for additionality demonstration

**Is it a micro-scale T-VER project activity?**

- Yes
- No

**Is it a small-scale T-VER project activity?**

- Yes
- No

**Is it a Large scale T-VER project activity?**

- Demonstrate additionality

**Payback Period**

- ≤ 3 years
- >3 years

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Micro</th>
<th>Small</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable Electricity Generation with installed capacity</td>
<td>≤ 5 MW</td>
<td>≤ 15 MW</td>
<td>&gt; 15 MW</td>
</tr>
<tr>
<td>Energy efficiency improvement which reduce energy consumption</td>
<td>≤ 20 GWh/y</td>
<td>≤ 60 GWh/y</td>
<td>&gt; 60 GWh/y</td>
</tr>
<tr>
<td>Other project activities which reduce GHG emission</td>
<td>≤ 20,000 tCO₂/y</td>
<td>≤ 60,000 tCO₂/y</td>
<td>&gt; 60,000 tCO₂/y</td>
</tr>
</tbody>
</table>

Project activity is additional

Project activity is not additional
Institutional Framework for T-VER

Board of Director of TGO

Subcommittee of Methodology

Meth. Working Group of Energy, Industry, Transportation and Waste sector

Meth. Working Group of agriculture and Forest Sector

Subcommittee of GHG Emission Reduction Project

TGO : Secretary

VVB
T-VER cycle

Preparing all documents by PP

- Validation by VVB

1) Registration request form
2) Validated PDD
3) Validation report
4) Co-benefits evaluation report

Registration by TGO

- Monitoring by PP
- Notify to PP and open account by TGO (CI)

Monitoring report

Issuance of TVERs by TGO

- Notify to PP and record in the registry system by TGO (CI)

Verification report

- Verification by VVB
**MRV for T-VER**

**M**
- Measurement
  - Measuring values of parameters as specified in the Project Design Document (PDD)

**R**
- Reporting
  - Preparing monitoring report using provided template

**V**
- Verification
  - Verified by registered Validation and Verification Body (VVB) to assure that T-VERs reflect real emission reduction
## Approved T-VER Methodology

<table>
<thead>
<tr>
<th>Project type</th>
<th>T-VER-METH-</th>
<th>Approved methodologies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy efficiency</strong></td>
<td>EE-01</td>
<td>Energy Efficiency Improvement from Lightings</td>
</tr>
<tr>
<td></td>
<td>EE-02</td>
<td>High Energy Efficiency Lighting Installation in Buildings</td>
</tr>
<tr>
<td></td>
<td>EE-03</td>
<td>Installation of Cogeneration System to Replace the Separated System</td>
</tr>
<tr>
<td></td>
<td>EE-04</td>
<td>New Installation of Cogeneration System</td>
</tr>
<tr>
<td><strong>Alternative and renewable energy</strong></td>
<td>RE-01</td>
<td>On-Grid Renewable Electricity Generation</td>
</tr>
<tr>
<td></td>
<td>RE-02</td>
<td>Off-Grid Renewable Electricity Generation</td>
</tr>
<tr>
<td></td>
<td>RE-03</td>
<td>Switching of Fossil Fuel or Increasing of Renewable Energy Utilization to Generate Thermal Energy</td>
</tr>
<tr>
<td></td>
<td>RE-04</td>
<td>New Installation of Renewable Energy System to Generate Thermal Energy</td>
</tr>
<tr>
<td></td>
<td>RE-05</td>
<td>Biodiesel Production for Use as Fuel of Vehicle or Agricultural Machinery</td>
</tr>
</tbody>
</table>
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<tr>
<td><strong>Waste management</strong></td>
<td>WM-01</td>
<td>Methane Capture from Anaerobic Wastewater Treatment for Utilization or Flaring</td>
</tr>
<tr>
<td><strong>Agriculture</strong></td>
<td>AGR-01</td>
<td>Good Fertilization Practice in Agricultural Land</td>
</tr>
<tr>
<td></td>
<td>AGR-02</td>
<td>Carbon Sequestration and Reducing Emission in Orchards</td>
</tr>
<tr>
<td><strong>Forestry</strong></td>
<td>FOR-01</td>
<td>Sustainable Forestation</td>
</tr>
<tr>
<td></td>
<td>FOR-02</td>
<td>Reducing Emission from Deforestation and Forest Degradation and Enhancing Carbon Sequestration in Forest Area (Project Level: P-REDD+)</td>
</tr>
<tr>
<td><strong>Tools</strong></td>
<td>TOOL-FOR/AGR-01</td>
<td>Calculation for Carbon Sequestration</td>
</tr>
<tr>
<td></td>
<td>TOOL-FOR/AGR-02</td>
<td>Calculation for Soil Carbon</td>
</tr>
</tbody>
</table>
Procedures for request for registration as T-VER project

1. **Preparation** by PP:
   - 1) Registration request form
   - 2) Validated PDD
   - 3) Validation report
   - 4) Co-benefits evaluation report

2. **Initial Screening** by TGO (RMO) (20 working days)
   - Incomplete
   - Complete

3. **Project Evaluation** by TGO (RMO)

4. **Consideration & Approval** by GHG reduction Sub-committee
   - Approved/Not Approved

5. **Results Notify**
   - E-mail & upload to TVER website

6. **Registration** to PP and open account by TGO (CI) (7 working days)

7. **Validation** by VVB

**Notes:**
- RMO: Review and Monitoring office of TGO
- CI: GHG information Center
- PDD: Project Design Document
- TGO Board
- GHG reduction Sub-committee
- 80 Working days

Procedures for request for issuance of TVERs

1. Preparation of all documents by PP
   - Verification by VVB

2. Initial Screening by TGO (RMO) (10 working days)
   - Complete

3. Project Evaluation and On-site visit by TGO (RMO)

4. Consideration & Certification by GHG reduction Sub-committee
   - Certified/Not Certified

5. Results
   - Notify

6. Issuance of TVERs

Incomplete

Request additional Information

Incomplete

Request to PP and record in the registry system by TGO (CI) 7 working days

E-mail & upload to TVER website

100 Working days

RMO: Review and Monitoring office of TGO
CI: GHG information Center
Progress of T-VER Development
Activities

- **14 Approved Methodologies and 2 Tools**
  - **7 Methodologies and 2 Tools in the pipelines**
  - Revised T-VER General Guidelines (T-VER GG) (eligibility criteria, starting date of crediting period, procedure)
  - PDD template (T-VER PDD) and Guidelines for completing PDD (T-VER-PDD Guideline)
  - Approval criteria for registration as T-VER project
  - Criteria for additionality demonstration
  - Co-benefit checklist for RE, EE and Forest/Agriculture and Co-benefit evaluation report (template)
  - Monitoring report (template) and Guidelines for completing Monitoring report
  - Validation and Verification Guidelines for VVB
  - VVB qualification and VVB registration criteria
  - Validation Report, Verification Report for VVB (template)
  - Registry System
Implementation of demonstration projects

Objective: To test methodology, tools, rules and procedure etc.

- 15 projects from 8 organizations.
- Cover 7 methodologies
- Duration: start from February 2014 – January 2015
- 9 projects were registered in September 2014, expected GHG Emission reduction 114,237 tonCO$_2$e/year
Challenge

- Number of VVBs and transaction cost
- Real Market
- Floor price setting
- Incentive
THANK YOU

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KOB-KOON-KA