Voluntary Emission Trading Scheme (TVETS) and Voluntary Emission Reduction Program (T-VER) in Thailand

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Carbon Business Office

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• Voluntary Carbon Market in Thailand
• Thailand Voluntary Emission Trading Scheme (Thailand V-ETS / TVETS)
• Thailand Voluntary Emission Reduction Program (T-VER)
Objectives of Establishing VCM in Thailand

1. Support voluntary GHGs reduction activities

2. Encourage private companies, who attempt to reduce their GHG emissions, implement cost-effective GHGs reduction activities

3. Learn how to manage domestic emission trading scheme / carbon offsetting program

Structure of Voluntary Carbon Market in Thailand

Voluntary Emission Reduction Projects (VER)
- **Type:** Project-based
- **Eligibility:** Emission Reduction Projects, Pre-registered CDM
- **MRV:** International standards (VCS, GS, etc.)
- **Carbon Credit:** VERs
- **Registry:** Standard Owners
- **Buyers:** International buyers
- **Status:** Existing

Thailand Voluntary Emission Reduction Program (T-VER)
- **Type:** Project-based
- **Eligibility:** energy efficiency, etc.
- **MRV:** Domestic
- **Carbon Credit:** TVERs
- **Registry:** T-VER
- **Buyers:** Government / CSR companies / Brokers
- **Status:** Existing

Thailand Voluntary Emission Trading Scheme (Thailand V-ETS)
- **Type:** Cap-and-Trade
- **Target:** Industrial sector
- **MRV:** ISO 14064-1 / 14064-3 / 14065
- **Carbon Credit:** Allowances
- **Registry:** ETS
- **Buyers:** Entities / Traders
- **Status:** Launch in Oct 2014
Development of Infrastructure for VCM

Registry System

Incentives
- Subsidies
- Tax exemption

MRV System
- Measurement
- Validation
- Reporting
- Verification

Buyers
- Organizations in public/private sectors
- Industries
- Carbon Offsetting Program

Thai VCM

Thailand Voluntary Emission Trading Scheme (Thailand V-ETS)
Roadmap for Thailand V-ETS

2010
• Research Studies on calculation methodologies for GHG emissions from industries

2011
• Research Studies to identify target industries and cap-setting

2012
• Identify institutional framework / operating rules/model for Thailand V-ETS / incentives

2013
• Pilot project to develop MRV system for TVETS
• General guideline

2014
• Institutional Framework
• Target setting
• Revised MRV system
• Launch Thailand V-ETS

Thailand V-ETS Characteristics

• Emission Trading Scheme
  - Cap and trade system

• Target group
  - Allow firms to enter the carbon market voluntarily without identifying target industries.

• Carbon credit
  - Allowances

• Gas coverage
  - Energy related CO2

• Determination of Reduction Targets
  - Absolute reduction target

• Determination of Emission Baselines
  - Include both Scope 1 and Scope 2 (Further discuss with participants on how to avoid double counting)

• Allocation of allowances
  - Grandfathering in trial phase and further consider this issue later on

Target setting (% of emission reduction) and Cap setting

Allowances allocation

Allowances trading
Progress on MRV development

- Pilot Project for MRV Development
- **MRV System:** ISO 14064-1, ISO 14064-3
- **Target sector:** 7 industrial plants (Petrochemical, Food processing, Electronics, Automobile)
- **Project period:** Oct 2012 – Oct 2013
- **Expected Outputs**
  - Templates for Monitoring report, Verification Report
  - Monitoring and Reporting Guideline (MRG)
  - Verification Guideline (VG)

Dissemination of Knowledge and Consultation with Industries

<table>
<thead>
<tr>
<th>Year 2012</th>
<th>Concerns/ comments from industries</th>
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</thead>
<tbody>
<tr>
<td>15 May 2012</td>
<td>Is it necessary to adopt ETS?</td>
</tr>
<tr>
<td>- Steel, Cement, Glass industries</td>
<td></td>
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<tr>
<td>3 July 2012</td>
<td>Incentives for participants (subsidy/tax exemption)</td>
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<tr>
<td>- Thai Chamber of Commerce</td>
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<tr>
<td>20 July 2012</td>
<td>Early action reward</td>
</tr>
<tr>
<td>- Petrochemical, Plastic, Power, Refinery industries @ Rayong province</td>
<td>Allocation method (grandfathering/benchmarking)</td>
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<tr>
<td>10 August 2012</td>
<td>Structure of steering committee and all institutional framework</td>
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<tr>
<td>- Textile, Pulp and Paper, Non-metal industries</td>
<td>Most of industries don’t understand ETS and cannot differentiate between project-based and site-based</td>
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<tr>
<td>22 November 2012</td>
<td></td>
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<tr>
<td>- Pulp and Paper Industrial Association</td>
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</table>
Thailand Voluntary Emission Reduction Program (T-VER)

Thailand Greenhouse Gas Management Organization (Public Organization) (TGO)

Roadmap for T-VER

2011
- Literature Review
- Develop MRV system (KVER/JVER)

2012
- Develop T-VER general guideline
- Develop MRV system
- Develop registry system

2013
- Revised MRV system
- Completed registry system
- Launch T-VER
Characteristics of T-VER

- GHG reduction projects
  - Baseline-and-credit
- Size of project
  - No limitation
  - Can be bundled
- Carbon Credit
  - TVERs (Thailand Verified Emission Reductions)
- Gas coverage
  - CO2, CH4, N2O
- Crediting period
  - 7 years for non-forestry project / 20 years for forestry project
  - The crediting period takes into effect from the starting date of a project and/or not more than one year prior to submission for T-VER registration
- Starting date
  - The first date of recording data on GHG emission, as indicated in methodology
- Assessment tools for co-benefit and additionality
  - under development

T-VER: Eligible Projects

<table>
<thead>
<tr>
<th>Types of Project</th>
<th>Potential list</th>
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<tbody>
<tr>
<td>Energy Efficiency</td>
<td>Efficiency improvement on electricity consumption and/or generation</td>
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<tr>
<td></td>
<td>Efficiency improvement on heat consumption and/or generation</td>
</tr>
<tr>
<td>Alternative Energy</td>
<td>GHG emission reduction from utilization of Bio-diesel</td>
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<td>GHG emission reduction from utilization of Ethanol</td>
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<tr>
<td>Renewable Energy</td>
<td>Electricity generation from renewable resources</td>
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<td></td>
<td>Heat generation from renewable resources</td>
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<tr>
<td>Solid Waste Management</td>
<td>Emission reduction through landfill management</td>
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<td></td>
<td>Emission reduction through fertilize organic waste</td>
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<td></td>
<td>Waste to energy (RDF)</td>
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<td>Transportation Management</td>
<td>Fuel switching in vehicle</td>
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<td></td>
<td>Emission reduction through non-motorized transportation</td>
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<tr>
<td></td>
<td>Fuel switching in transportation system</td>
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<td></td>
<td>Energy saving vehicle</td>
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<tr>
<td>Forestry and Green Area</td>
<td>Carbon capture through public parks and urban forest</td>
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<td>Vertical gardening</td>
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<td>Forest conservation (A/R, REDD+)</td>
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<td></td>
<td>Agro-forestry</td>
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<tr>
<td>Agriculture</td>
<td>Good practice on using fertilizers in agricultural areas</td>
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<td>Low carbon rice from management of agricultural practice</td>
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<tr>
<td>Others</td>
<td>Any type of project/activities approved by TGO</td>
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</table>
Set up Procedure of the T-VER project

Develop PDD → Validation → Registration

TVERs Issuance → Verification → Monitoring

Set up T-VER Scheme Framework

TGO Board

Methodology Sub-committee

Methodology Technical WG

GHG Reduction Sub-committee

Secretariat (TGO)

Validation/Verification Body (VVB)

Project Developer (PD)

1. Registration Process
2. Approve registration
3. Issue TVERs
4. Approve VVB registration

Submit application, PDD, evidences
Submit application, monitoring reports
Inform PD
Inform PD

Submit validation report
Submit verification reports
Submit PDD for validation

Submit monitoring report for verification
Progress on MRV development (1)

- Pilot Project for Increasing Energy Efficiency and Reducing GHG in Building Sector
- **MRV System:** ISO14064-2, ISO14064-3
- **Target sector:** 11 pilot buildings
- **Project period:** Nov 2011 – Oct 2012
- **Outputs**
  - Templates for PDD, Monitoring report, Validation and Verification Report
  - Monitoring and Reporting Guideline (MRG)
  - Validation and Verification Guideline (VVG)
  - 9 T-VER Methodologies
    - Lighting system (approved by TGO’s Methodology Development Sub-committee)
    - Air conditioning, Chiller replacement, VSD for pump and fan, Free flow, Cooling pad, Ball cleaning system, voltage regulator, UPS replacement

Progress on MRV development (2)

- Established **Technical Working Groups** on Methodology Development
  - TWG 1 : Energy, Industry, Transportation, and Waste Management Sector
  - TWG 2 : Agriculture and Forestry Sector
- Methodologies will first be submitted to working group (WG) before approved by the Methodology Sub-committee
- TGO collaborates with Chiangmai University on modifying and simplifying CDM methodologies and then compare results from using both methodologies and decide which ones to use in T-VER
- In the next fiscal year, TGO will do a test run with additional 5 pilot projects (hydro, biogas, reforestation, etc)
Next Step

1. Incentives

5. Numbers of VVBs

2. Transparent and standardize reporting system

What next?

4. Accreditation system for VVBs (ISO 14065)

3. Industry’s knowledge on GHG calculation & reporting

Thank you for your attention