



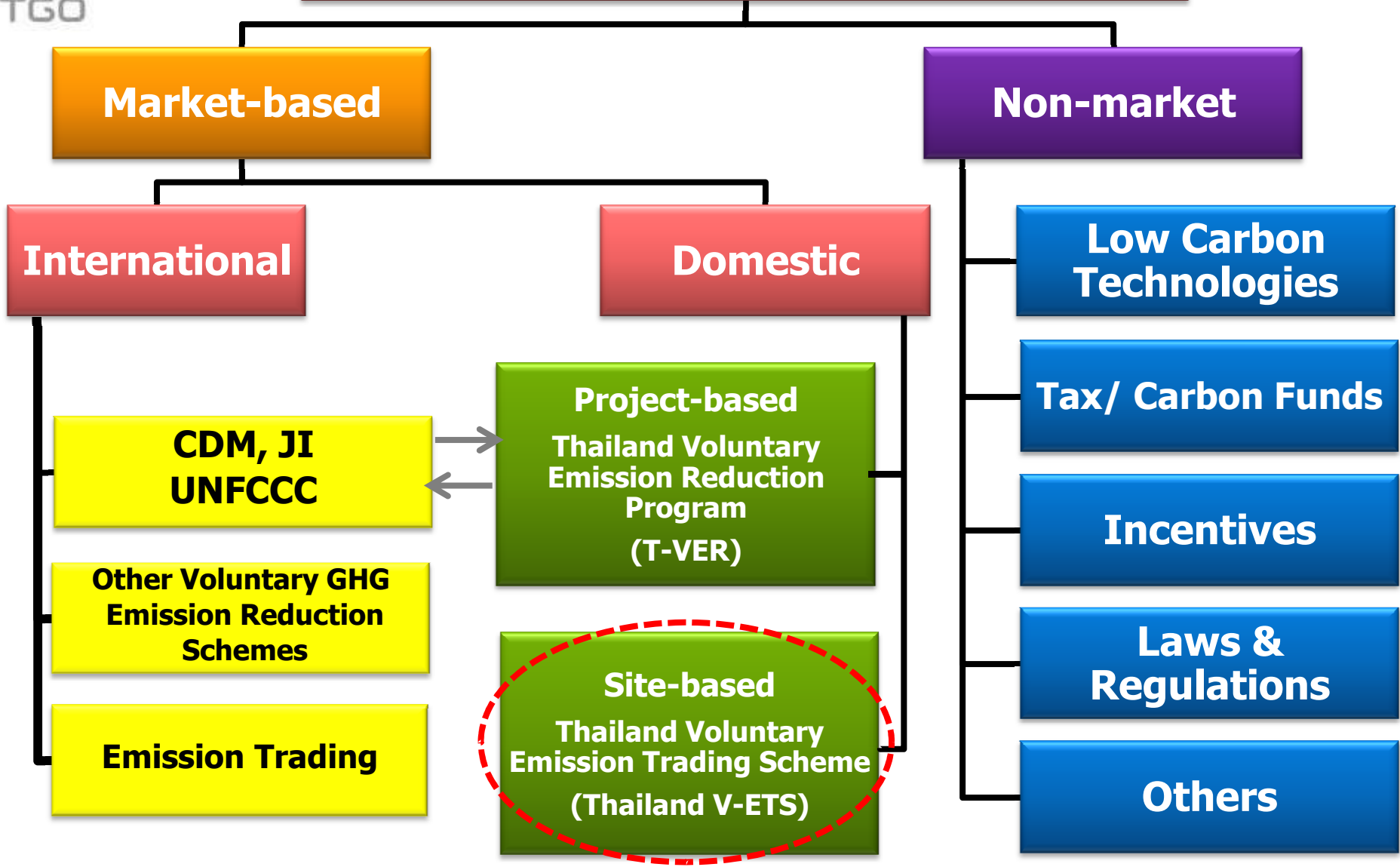
Technical Workshop on
“Laws, Regulations, Institutional Arrangement and Technical Aspects on
GHG Reporting and Emissions Trading Scheme (ETS) /Initiatives”
On 28 March 2014 @ Sukosol Hotel, Bangkok

Thailand Voluntary Emission Trading Scheme (Thailand V-ETS) and Other Low Carbon Business by TGO

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Mitigation Actions





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: launched in Oct 2013

Thailand Voluntary Emission Trading Scheme (Thailand V-ETS)

Type: Cap-and-Trade

Target: Industrial sector

MRV: ISO 14064-1 / 14064-3 / 14065

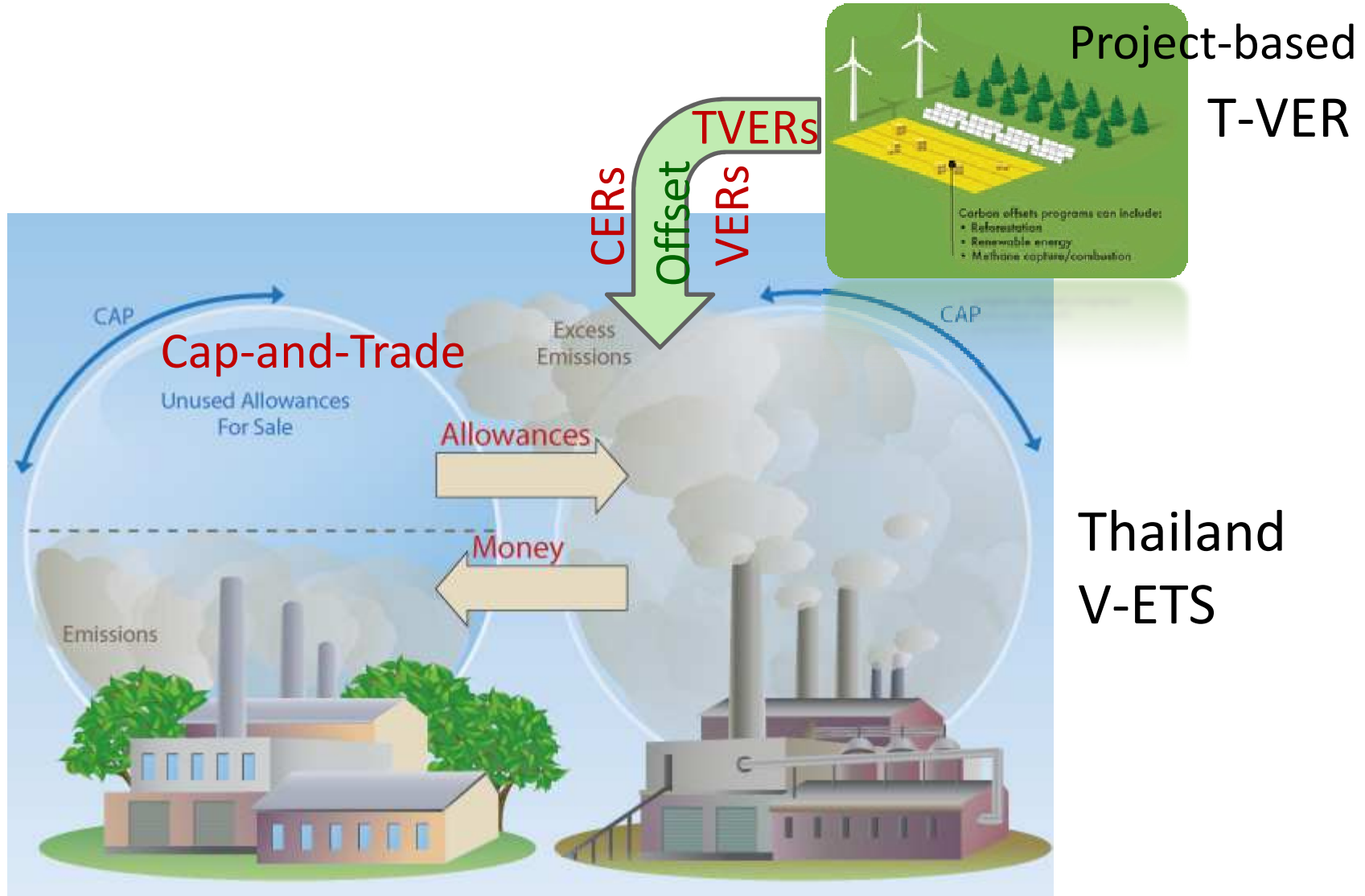
Carbon Credit: Allowances

Registry: ETS

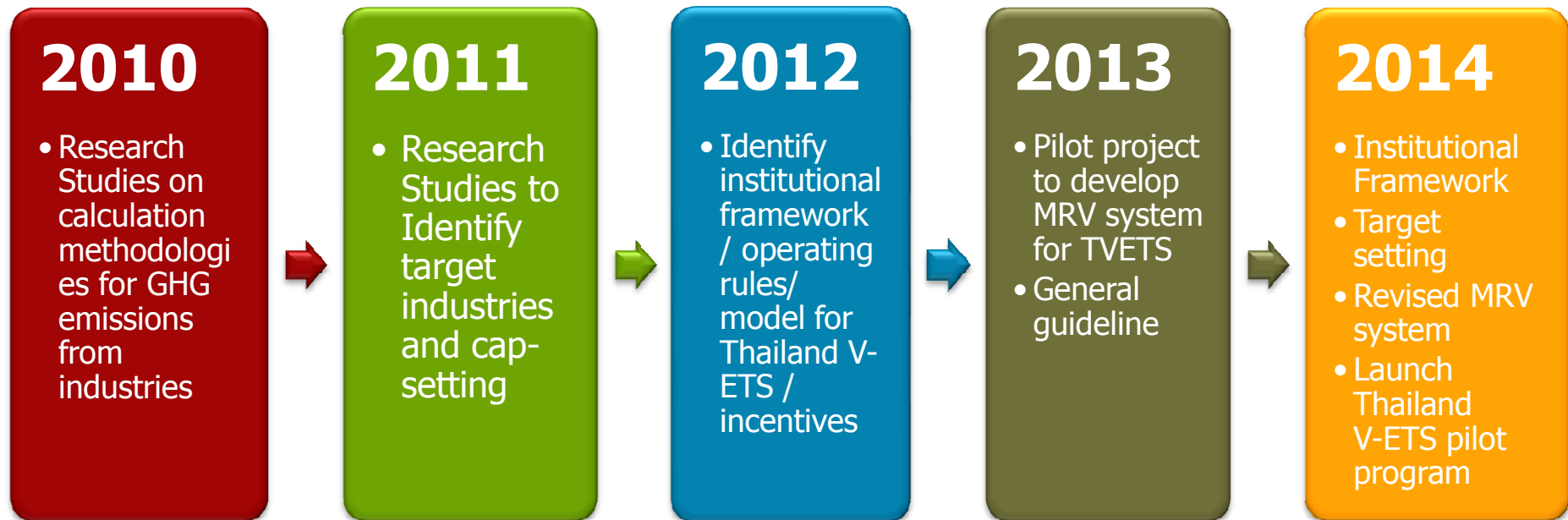
Buyers: Entities / Traders

Status: launch in Oct 2014

Linkage between Thailand V-ETS and T-VER

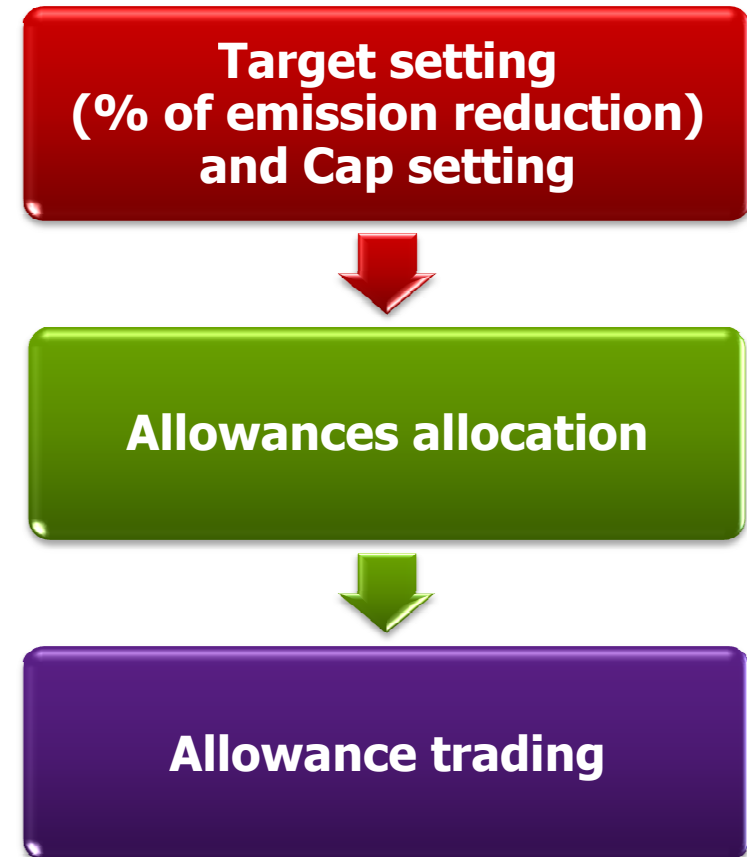


Action Plan for Thailand V-ETS



Thailand V-ETS Characteristics

- Emission Trading Scheme
 - Cap and trade system
- Target group
 - Allow CFO firms to enter the carbon market **voluntarily**
 - Identify **target industries** (Electricity, Petrochemical)
- Gas Coverage: CO₂
- Carbon credit - Allowances
- Reduction Target:
 - Absolute reduction target ?
- Base year emission:
 - Average of 2-3 years emissions?
- Scope of GHG Reporting: 1 & 2
- Allowance Allocation:
 - Grandfathering in an initial phase?





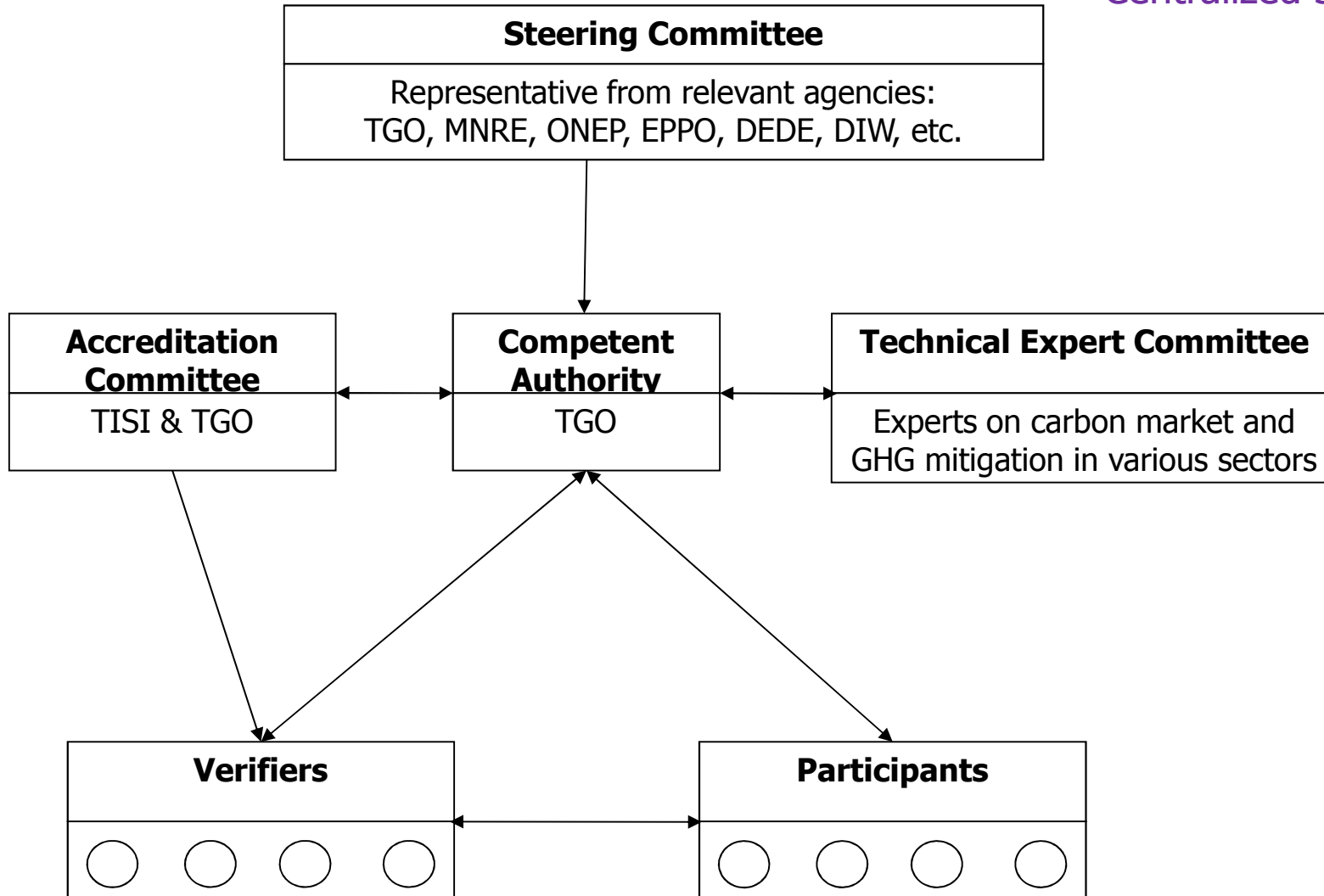
MRV for Thailand V-ETS

- Developed based on ISO 14064-1, 14064-3, and 14065
- GHG Reporting
 - Gas coverage: CO₂ emissions only
 - Organizational boundary
 - Geographical boundary: Follows Factory Act and Building Control Act (permit for building construction / factory permit)
 - operational control approach
 - Operational boundary: Scope 1 และ 2
- Third-party verification
 - Registered VBs (approved by TGO)
- Draft Monitoring and Reporting Guideline (MRG) and Verification Guideline (VG)
 - under development



Proposed Institutional Framework for Thailand V-ETS

Centralized system





Proposed Options for Thailand V-ETS model

1. Basic Voluntary Model I
2. Basic Voluntary Model II
3. Basic Voluntary Model III
4. Negotiation-Based Model
5. Free Audit Model
6. Mitigation Bidding Model
7. Guarantee Buying Model
8. Public Buyers Model

Market Options: No Incentive

1. Basic Voluntary Model I

- Phase I (Trial Phase): “Grandfathering” use historical emissions as baseline
 - Year 1: X% reduction from baseline
 - Year 2: X+1% reduction from baseline
 - Year 3: X+2% reduction from baseline
- Firms can bank/borrow within phase I, but cannot bank/borrow to phase II.

2. Basic Voluntary Model II

- 3 groups of participants
 - Regular Participants: same of Model I
 - Premium Participants: take deeper cuts
 - Propose targets at least $y\%$ ($y > x$)
 - Premium Participants II: firms with low EI (compared to EU-ETS benchmark) can set targets at $z\%$ ($x < z < y$).]
- Premium Participants get higher privilege.



Market Options: No Incentive

3. Basic Voluntary Model III

- Premium Participants only.
- Limited number of participants with stringent targets – is this possible to allow markets to be viable?

4. Negotiation-Based Model

- From Focus Group: An equal x% is not fair
- Negotiation is necessary.
- Industrial Group can help/provide info (framework?) for negotiation.
- It would be useful if TGO has ideas about “x & y” in mind beforehand.



Market Options: Medium Incentive

5. Mitigation Bidding Model:

- Government set a fixed budget, firms that propose the lowest subsidy per ton CO₂ receive the funding + corresponding reduction targets

6. Free Audit Model:

- Participants get free mitigation potential audit, under condition that participant agrees to set targets $> \frac{1}{2}$ of identified mitigation potential that has payback period < 2 years.

7. Guarantee Buying Model:

- Government promises to buy all surplus allowances at a pre-determined price (floor price) or price formula.

8. Public Buyers Model:

- Government agencies set relatively high reduction targets, thus become potential buyers of the market.



Penalty and Risk Management

- Penalty : no?
- Risk Management Options
 - Offsets (CERs/VERs in Thailand, TVER, Low Carbon City)
 - Banking and Borrowing?
 - Do it in phases, i.e., do not allow b/w “trial” and “real” phases
 - Price Floor and Price Ceiling?
 - Floor: Gov’t guarantee purchase at min price
 - Ceiling: Safety Value

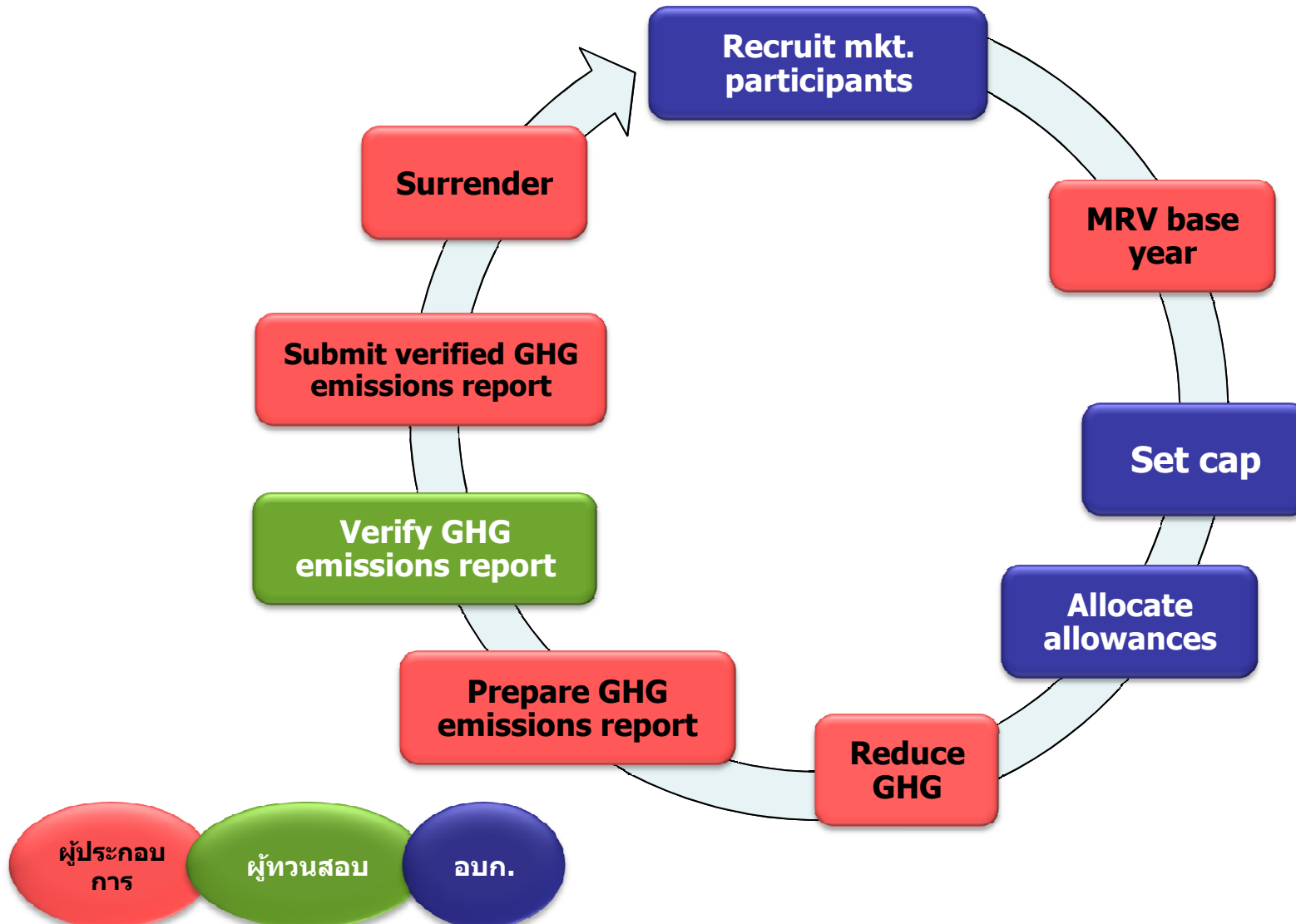


Market Cycle

Three operation periods

- **Preparation Period (1 year => 8 months)**
 - Recruit and select participants
 - Monitor, report and verify base year emissions
 - Make Agreement on cap setting (and Subsidy?)
 - Make Agreement on monitoring plan
 - Prepare/Implement mitigation actions
- **Compliance Period (1 year)**
 - Mitigation actions and monitor GHG emissions
 - Allowance Trading
- **Concluding Period (6 months => 4 months)**
 - Conclude and verify of monitoring report
 - Finalize allowance trading
 - Surrender allowance

Thailand V-ETS Cycle



Other Low-carbon Business

Carbon Footprint



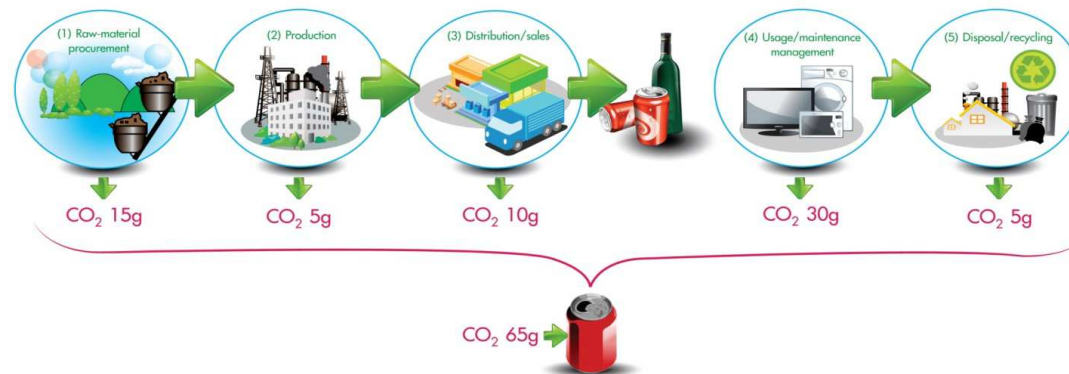
Carbon Reduction

CoolMode



Carbon Footprint of Products Project

- TGO and MTEC launched the “Carbon Footprint of Products” Project in Thailand in 2009.
- **Objectives:** To promote the use of a carbon footprint on Thai products; which in turn could increase the competitiveness of Thai industries for meeting the global trend market and to provides GHG emission of products to consumers



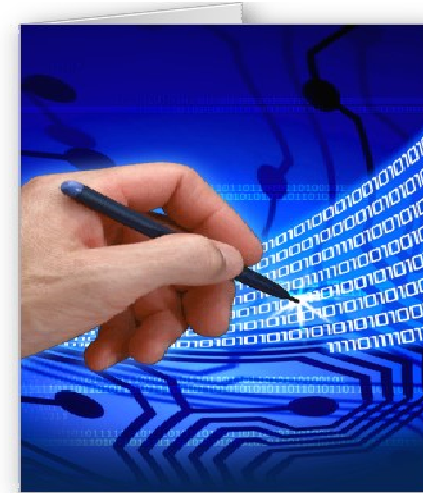
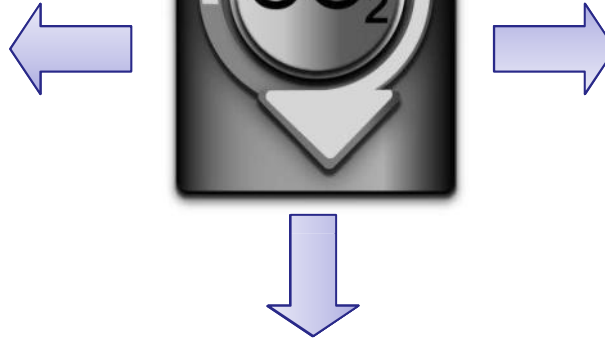
Carbon Footprint Products: 1,164 products / 269 companies



Carbon Reduction Label



GHG emissions from the manufacturing process are reduced by 10 percent according to 2002 baseline compared with the most recent year



There is the use of electricity produced from biomass or wastes either from the system installed within the factory or the electricity purchased from outside cannot exceed 5 percent



Carbon Reduction Products : 189 products / 49 companies



Carpets Inter®



CoolMode Label



- Approximately 60 % of electricity consumption in large cities is used for air conditioning.
- Choosing the right clothes to wear is the key to reducing of electricity for air conditioning and consequently reduces the emission of GHG



“CoolMode” : the fabric material is specially-made to absorb sweat and is good for heat ventilation.

CoolMode Products : 25 Fabric Structures



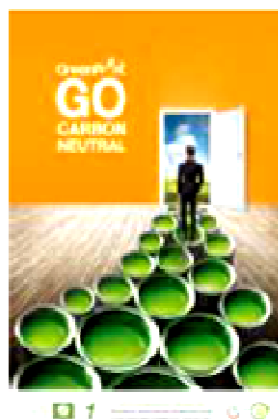
Carbon Footprint >> Carbon Offset

- Products and Services
- Organizations
- Seminars and Events
- Individual --> Carbon Neutral man



Carbon Offset & Carbon Neutral Certification

- 1 Carbon Offset organization
- 2 Carbon Neutral organizations
- 4 Carbon Neutral Products
- 2 Carbon Neutral Events
- 200 Carbon Neutral Men





Thank you for your attention



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