



Seminar on the Joint Crediting Mechanism (JCM) Implementation in Thailand
– Further Contributions to GHG Emission Reductions in Thailand through the JCM –

Introduction of JCM & Benefit from Development of JCM Project



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Thailand Greenhouse Gas Management Organization



Thursday, December 19, 2024



09:00-12:00 Thailand Time



Mayfair Ballroom A, The Berkeley Hotel Pratunam, Bangkok





Implementation of JCM in Thailand



**MoC
Signing Ceremony**

19 Nov 2015



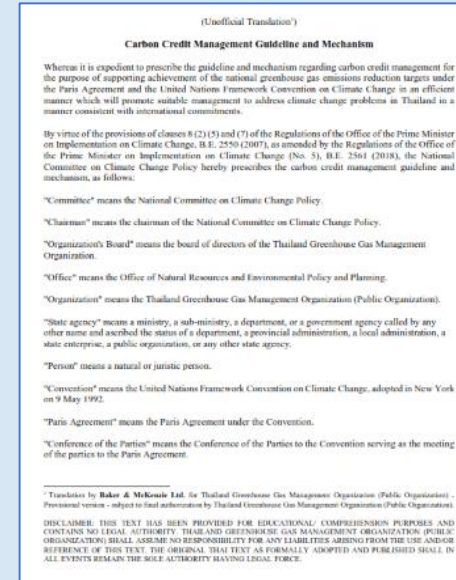
**Extension of
MoC**

4 Nov 2016

Adoption of A6.2 Guidance

- ITMOs
- Corresponding adjustment
- Reporting to UNFCCC

13 Nov 2021



Carbon Credit Management Guideline and Mechanism

16 Mar 2022



**New MoC*
Signing Ceremony**

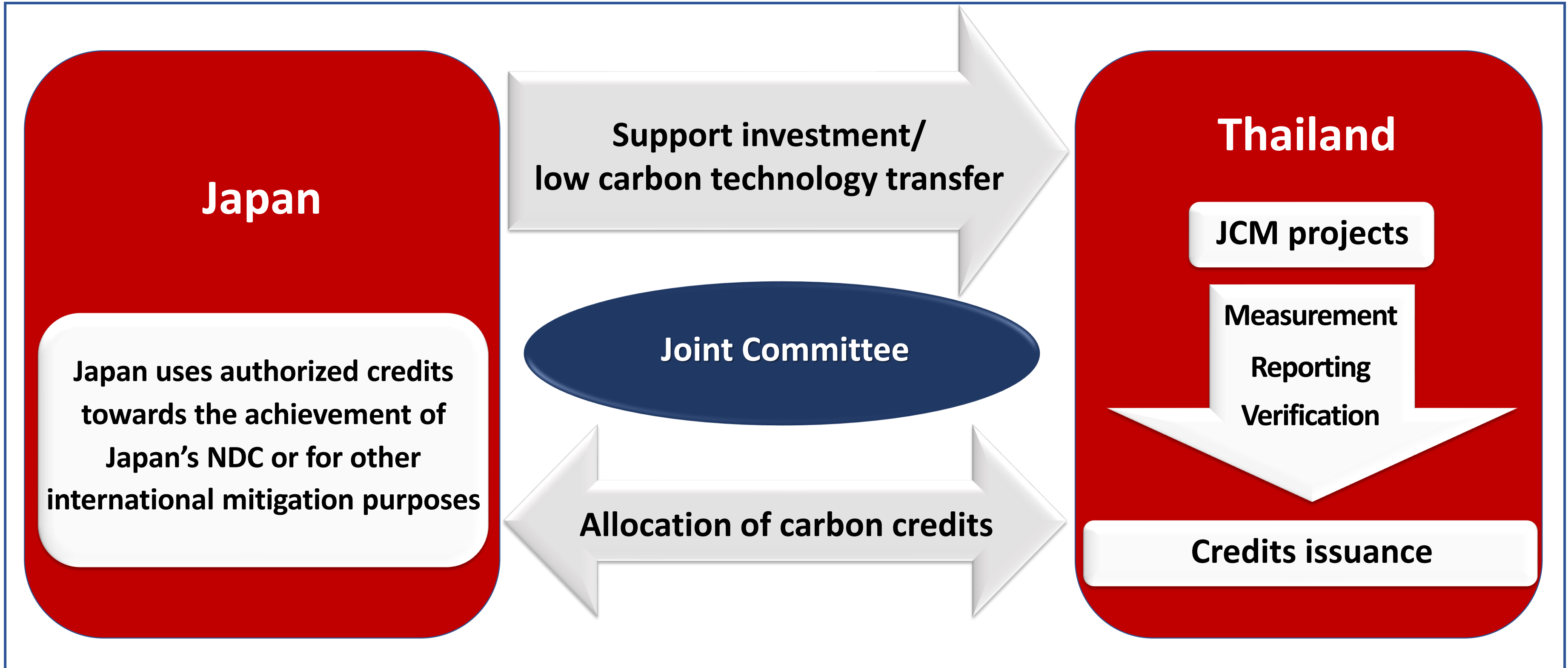
8 Jul 2024

MoC: Memorandum of Cooperation on JCM Source: <https://ghgreduction.tgo.or.th/th/download-jcm/73-2017-11-28-15-33-05.html?start=12>

A6.2: Article 6 paragraph 2 of the Paris Agreement Source: <https://unfccc.int/process/the-paris-agreement/cooperative-implementation>



Joint Crediting Mechanism: JCM





Current Status of JCM in Thailand

JCM



Thailand - Japan



Signed on 19 Nov 2023

	JCM Model Project	Registered project	Issued project
Number of Project	48	11	5
GHG reduction	244,978 tCO₂eq/year	58,096 tCO₂eq/year	4,032 tCO₂eq

49) F-gas Recovery and Destruction Project

50) Power Grid Utilizing Online Voltage-var (Q) Optimal Control (OPENVQ) with ICT

As of November 30, 2024



Approved JCM Methodologies

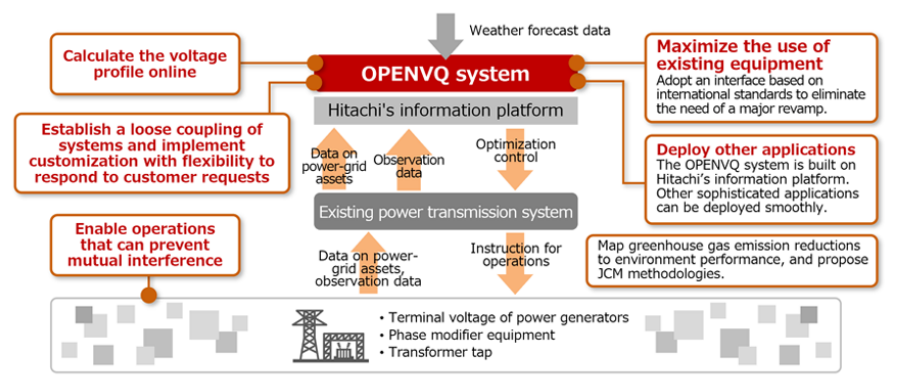
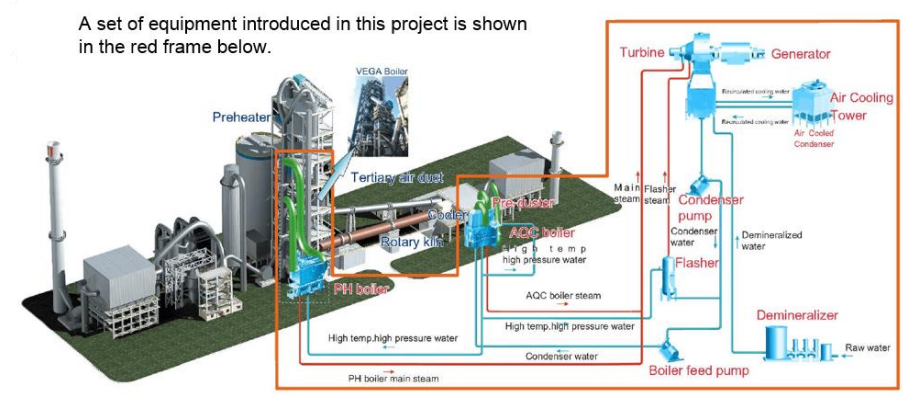


Centrifugal Chiller
MHI ETI-50

- Refrigerant: R-134a
- Cooling capacity: 460 USRT
- To replace one of two existing air conditioning turbo freezers, one will be utilized for backup
- COP will increase from 5.43 to 6.22

Heat Recovery Heat-pump
TOSHIBA CAONS (HWC-WH6702V)

- Hot water supply (Temperature range: 50-85 degrees Celsius)
- Heat capacity; 60kW, Cool capacity; 42.3kW
- Saving energy by the hot and cold water supply simultaneously, then total COP has been achieved 5.7



Energy Industries: 2

1. solar energy
2. natural gas cogeneration

Energy Demand: 13

1. LED
2. electrolyzer
3. fridge
- 4-6. chiller (centrifugal (2), screw (1))
7. refrigerator
8. evaporator
9. boiler
10. heat pump
11. ventilation
12. loom
13. compressor

Energy Demand and Manufacturing Industries: 1

Power generation by waste heat recovery in cement industry

Energy Distribution: 1

Voltage-var(Q) Optimal Control for power grid

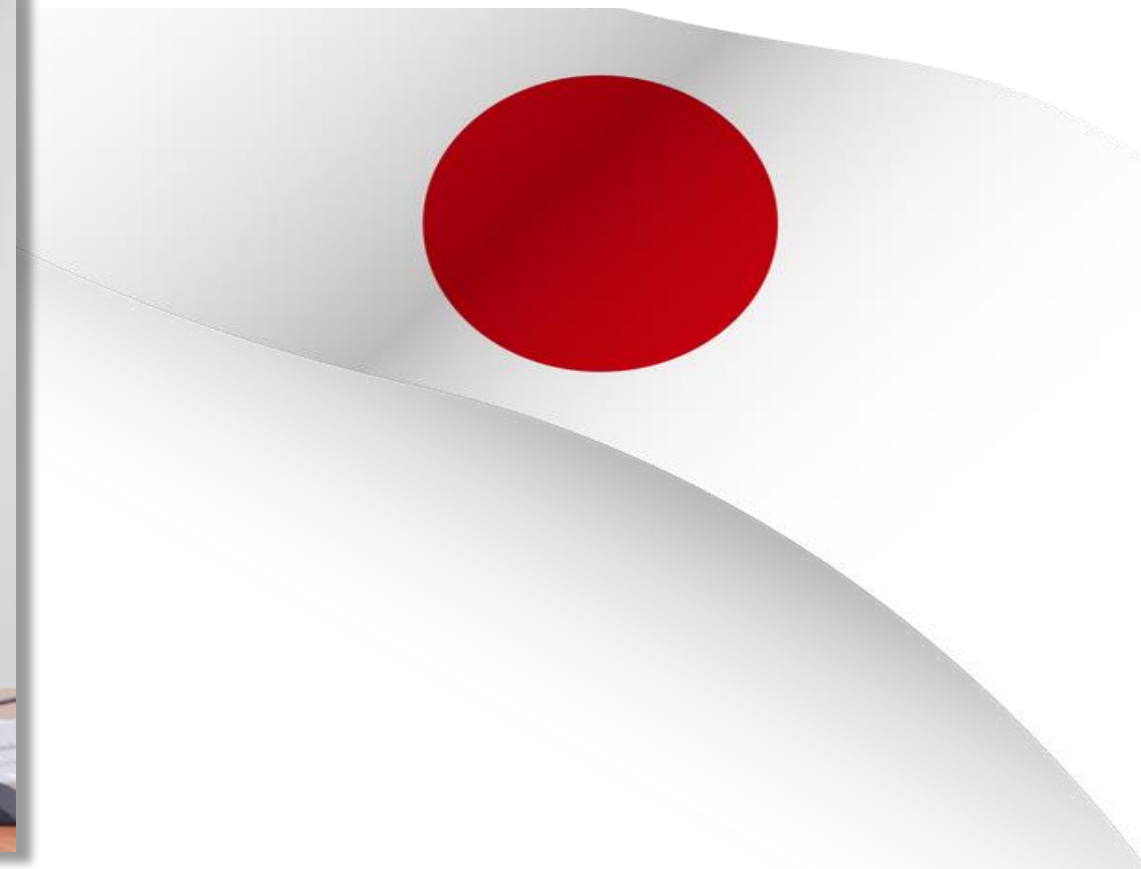
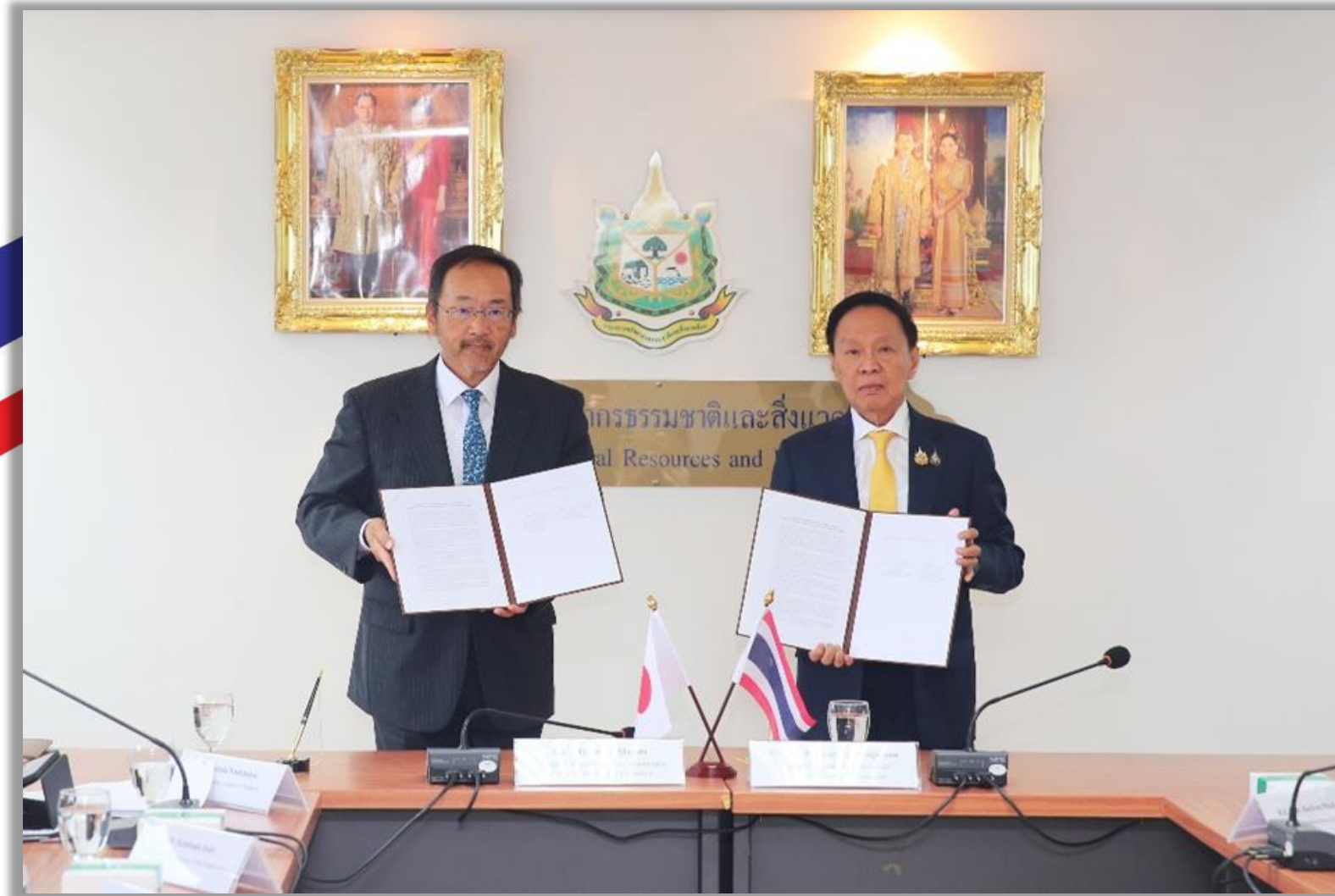
- Terminal voltage of power generators
- Phase modifier equipment
- Transformer tap



<https://www.jcm.go.jp/th-jp/methodologies/approved>



Signing Ceremony MoC of the Joint Crediting Mechanism



Signing Ceremony Memorandum of Cooperation on the Joint Crediting Mechanism
between the Government of the Kingdom of Thailand and the Government of Japan
on July 8, 2024

By Deputy Prime Minister and Minister of Natural Resources and Environment, Pol. Gen. Phatcharavat Wongsuwan
and Ambassador Extraordinary and Plenipotentiary of Japan to the Kingdom of Thailand, H.E. Mr. Otaka Masato



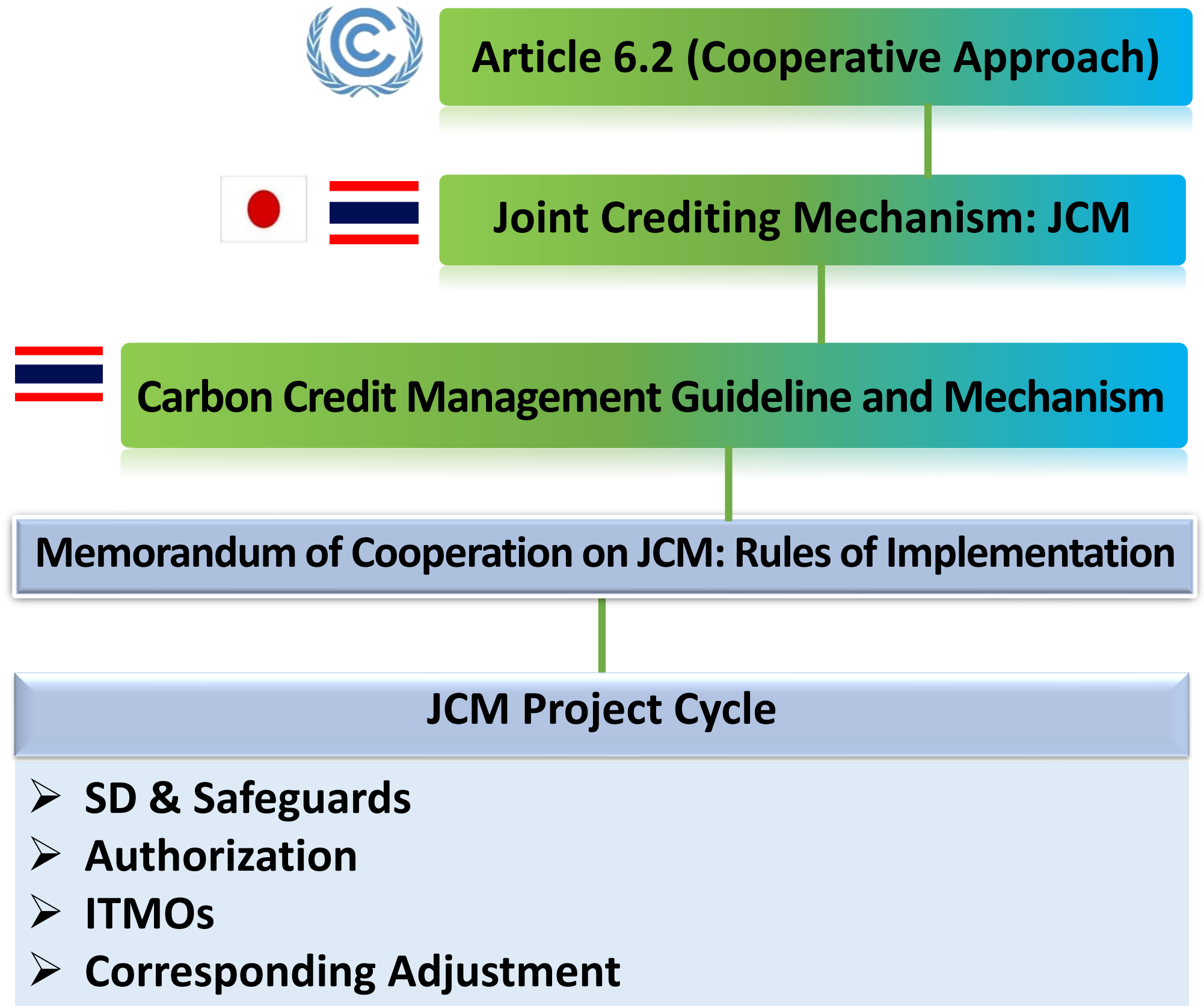
Arrangements for Aligning the JCM Implementation in Thailand with Article 6

Memorandum of Cooperation on the Joint Crediting Mechanism between the Government of the Kingdom of Thailand and the Government of Japan (MoC)

6. Both governments mutually recognize that part of credits issued from emission reductions and removals achieved by a project in line with Attachments 1 and 2, may be used towards the achievement of Japan's nationally determined contribution and the rest of the said credits may contribute to the achievement of the Thailand's nationally determined contribution, while ensuring that double counting is avoided on the basis of corresponding adjustments, consistent with the guidance.

7. Each government authorizes the credits issued in the JCM registry of Japan for use towards the achievement of Japan's nationally determined contribution as internationally transferred mitigation outcomes, consistent with the guidance.

<https://www.jcm.go.jp/th-jp/information/516>





Project Development Process: JCM Track under Premium T-VER

JCM Planned Project

JCM Project Registration

JCM Credits Issuance

International transfer

Japanese ministry/
PPs submit PIN of
a planned project to JC

PPs submit documents to
Government of Japan and TGO
for registration

PPs submit documents
to Government of Japan
and TGO for credit issuance

TGO cancels the credits in the
special account for the JCM in
the Thai registry and notifies
the Government of Japan

JC approves
planned projects

PPs open an account
in the Thai registry

Government of Japan
considers and approves
the issuance of the credits

Government of Japan issues
the corresponding amount of
credits in a holding account(s)
of the JCM registry of Japan

Government of Japan
approves registration

DCCE considers and approves
fulfillment of authorization

Government of Japan provides
authorization for the credits,
completing the first
international transfer (ITMOs)

PPs submit an authorization
request to DCCE/DCCE considers
and provides authorization for
the credits to be generated
from the JCM project

TGO approves and issues
credits in special account
and holding account (Thai PP)

**TGO approves and registers
the project under Premium T-VER**

LoA - Letter of Authorization

PIN - Project Idea Note

ITMOs - Internationally Transferred Mitigation Outcomes

DCCE - Department of Climate Change and Environment

TGO - Thailand Greenhouse Gas Management Organization

T-VER - Thailand Voluntary Emission Reduction Program

PPs – Project Participants

JC – Joint Committee



Responsibilities of Project Participants and Benefits from the Development of JCM Project

Thai project participant

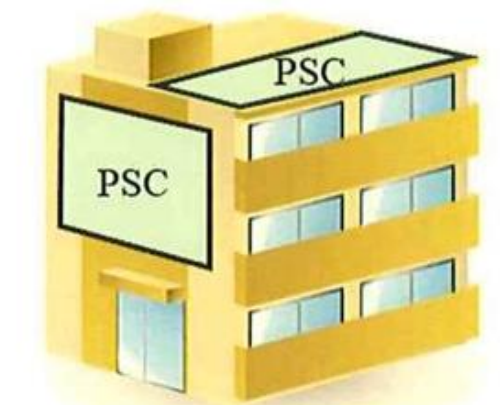
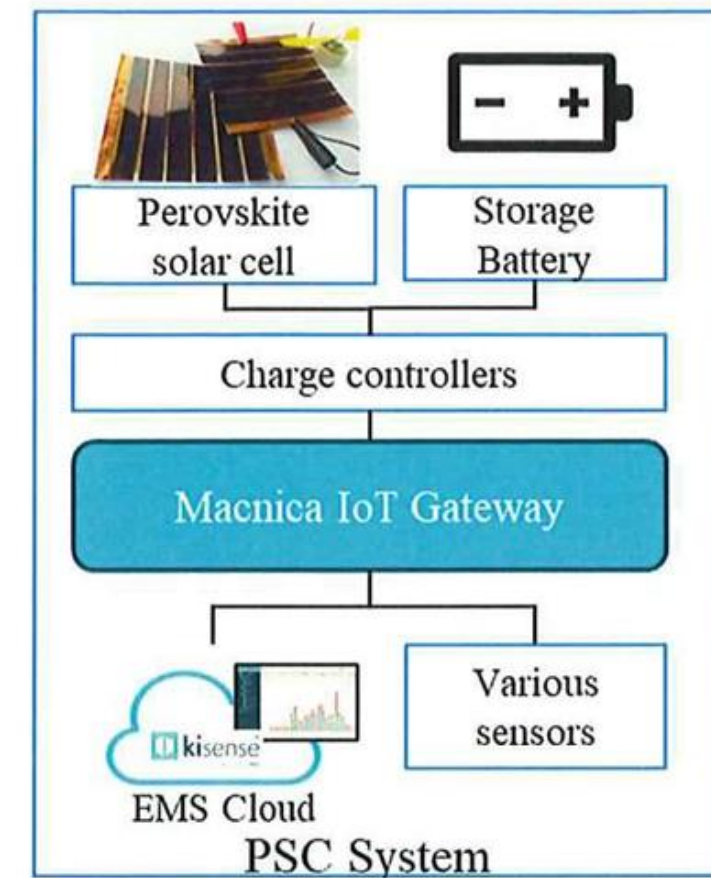
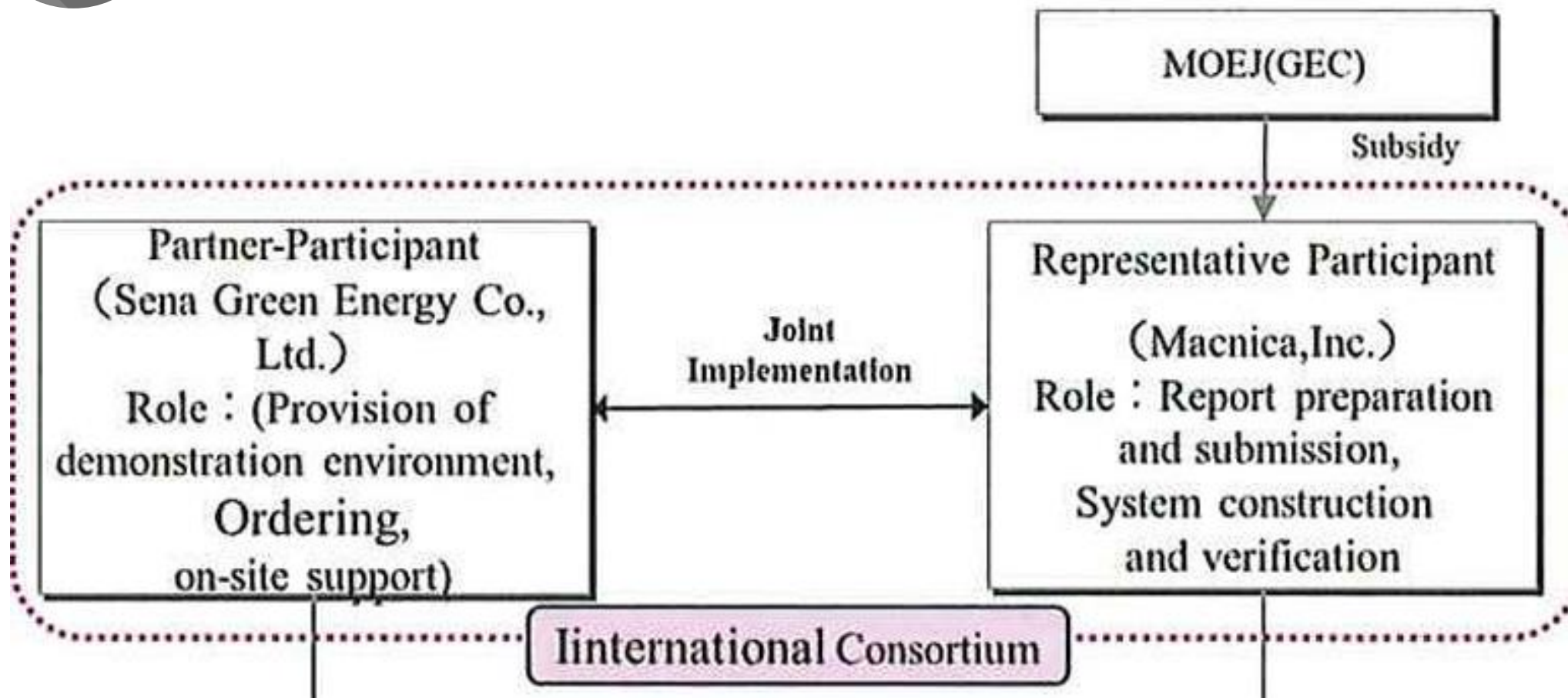
- Receive subsidy for implementation of the project
- Implement the project and measure GHG emission reduction

Japanese project participant

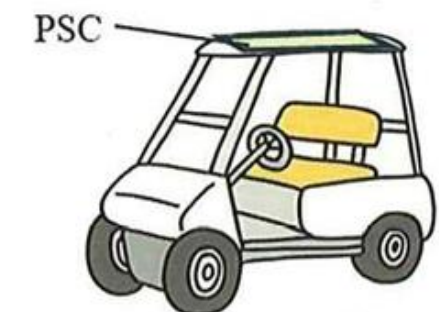
- Forward subsidy from the Japanese government/entity to Thai project participant or provide funding for the project
- Report and Request of credit issuance



Demonstration Project of Perovskite Solar Cell System with Battery Storage and Energy Management System



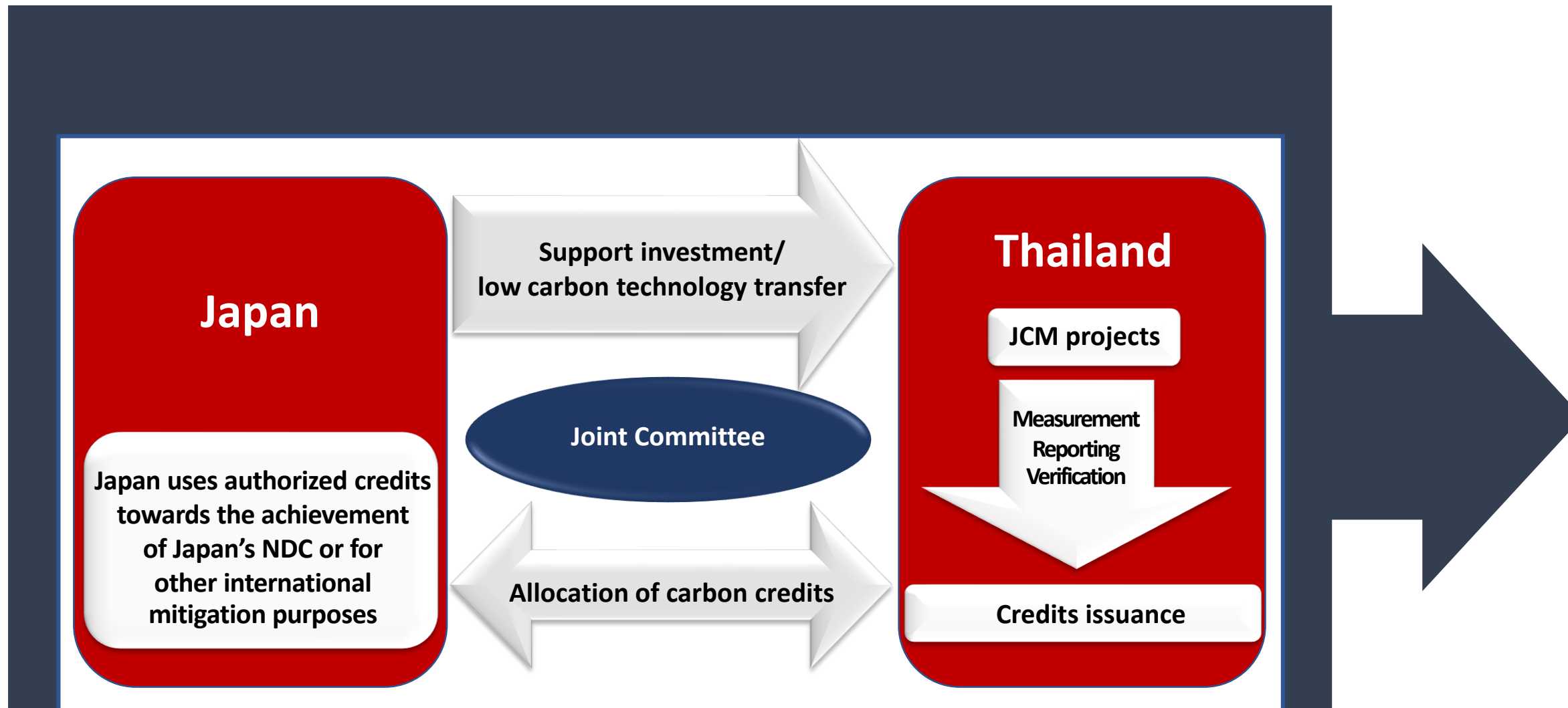
Condominium



Electric Mobility



Additional Benefit for Thai Project Participants from the Development of JCM Projects



Use of carbon credits in Thailand

- For offsetting carbon footprint of
- Organization
 - Product
 - Event
 - individual

Expected Demand Growth

Climate Action
Leading Organization

Disclosure
One-Report



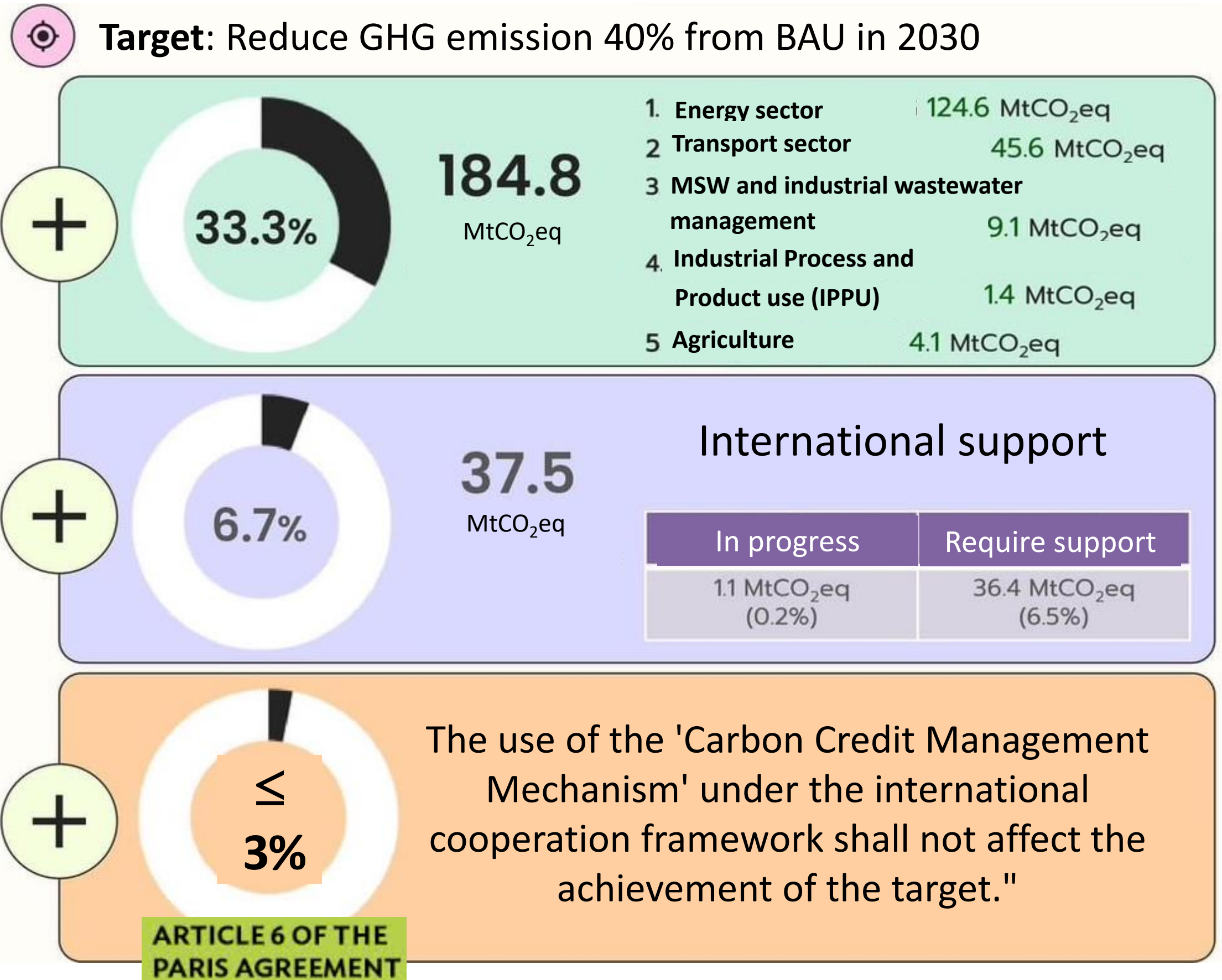


Contribution to the Implementation of Thailand's NDC

The Cabinet approved the National Greenhouse Gas Mitigation Action Plan for 2021–2030 on December 11, 2024

Vision:

Thailand has achieved its greenhouse gas reduction target for 2030 under the Paris Agreement, as communicated to the United Nations Framework Convention on Climate Change (UNFCCC).





Contribution to the Implementation of Thailand's NDC and LT-LEDS

Supports greenhouse gas reduction in order to achieve the goals of the Nationally Determined Contributions (NDC) and Thailand's Long-Term Low Greenhouse Gas Emission Development Strategy (LT-LEDS)



- Efficiency improvement in power plants
 - Use of renewable energy (biomass, biogas, solar, wind)
 - Phase out of oil power plants

- Phase down of coal power plants
 - 68% share of RE electricity

Thailand net zero CO₂

Thailand net zero GHG



- Solar/wind with battery storage

- CCS, CCU & BECCS

- Combined cycle natural gas used best in class
- 74% share of RE electricity
- Phase out coal power plants
- Net zero emission electricity
- Biomass-based generation fully equipped with CCS technologies

Figure 4-4 Net zero GHG emission timeline for Thailand's power generation



SUSTAINABLE DEVELOPMENT GOALS



Demonstration Project of Perovskite Solar Cell System with Battery Storage and Energy Management System



Affordable and Clean Energy:
Enable the adoption of green electricity generation and use, energy storage and energy management system for residential use



Industry, Innovation and Infrastructure:
Promote use of advanced low carbon technologies



Responsible consumption and production:
Facilitate green electricity generation and use in the residential sector



Partnerships for the Goal:
Enhance international partnerships to drive sustainable development efforts



Thank You



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www.tgo.or.th



ghgreduction.tgo.or.th



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