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

By Dr. Puttipar Rotkittikhun

Director of Carbon Credit Certification Office

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

Royal Thai Embassy
Tokyo

No. 25801/3078

The Royal Thai Embassy presents its compliments to the Ministry of Foreign Affairs and, with reference to the Ministry's Note No. 4503/ECG-C dated 27 December 2016, accepting the proposal on the modification of paragraph 11 of the Draft Revised Bilateral Cooperation on the Joint Crediting Mechanism for the Low Carbon Growth Partnership, has the honour to inform the latter that Thailand has agreed to extending the said cooperation until 31 December 2030. The final revised Bilateral Cooperation on the Joint Crediting Mechanism for the Low Carbon Growth between the Kingdom of Thailand and Japan is enclosed herewith for the Ministry's kind perusal.

The Royal Thai Embassy avails itself of this opportunity to renew to the Ministry of Foreign Affairs the assurances of its highest consideration.

Climate Change Division,
International Cooperation Bureau,
Ministry of Foreign Affairs,
TOKYO.

Extension of MoC

4 Nov 2016

Adoption of A6.2 Guidance

- **ITMOs**
- **Corresponding adjustment**
- **Reporting to UNFCCC**

13 Nov 2021

(Unofficial Translation)

Carbon Credit Management Guideline and Mechanism

Whereas it is expedient to prescribe the guideline and mechanism regarding carbon credit management for the purpose of supporting achievement of the national greenhouse gas emissions reduction targets under the Paris Agreement and the United Nations Framework Convention on Climate Change in an efficient manner which will promote suitable management to address climate change problems in Thailand in a manner consistent with international commitments;

By virtue of the provisions of clauses 8 (2) (5) and (7) of the Regulations of the Office of the Prime Minister on Implementation on Climate Change, B.E. 2550 (2007), as amended by the Regulations of the Office of the Prime Minister on Implementation on Climate Change (No. 5), B.E. 2561 (2018), the National Committee on Climate Change Policy hereby prescribes the carbon credit management guideline and mechanism, as follows;

"Committee" means the National Committee on Climate Change Policy.

"Chairman" means the chairman of the National Committee on Climate Change Policy.

"Organization's Board" means the board of directors of the Thailand Greenhouse Gas Management Organization.

"Office" means the Office of Natural Resources and Environmental Policy and Planning.

"Organization" means the Thailand Greenhouse Gas Management Organization (Public Organization).

"State agency" means a ministry, a sub-ministry, a department, or a government agency called by any other name and ascribed the status of a department, a provincial administration, a local administration, a state enterprise, a public organization, or any other state agency.

"Person" means a natural or juristic person.

"Convention" means the United Nations Framework Convention on Climate Change, adopted in New York on 9 May 1992.

"Paris Agreement" means the Paris Agreement under the Convention.

"Conference of the Parties" means the Conference of the Parties to the Convention serving as the meeting of the parties to the Paris Agreement.

Translation by **Baker & McKenzie Ltd.** for Thailand Greenhouse Gas Management Organization (Public Organization) , Provisional version – subject to final authorization by Thailand Greenhouse Gas Management Organization (Public Organization)

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Carbon Credit Management Guideline and Mechanism

16 Mar 2022

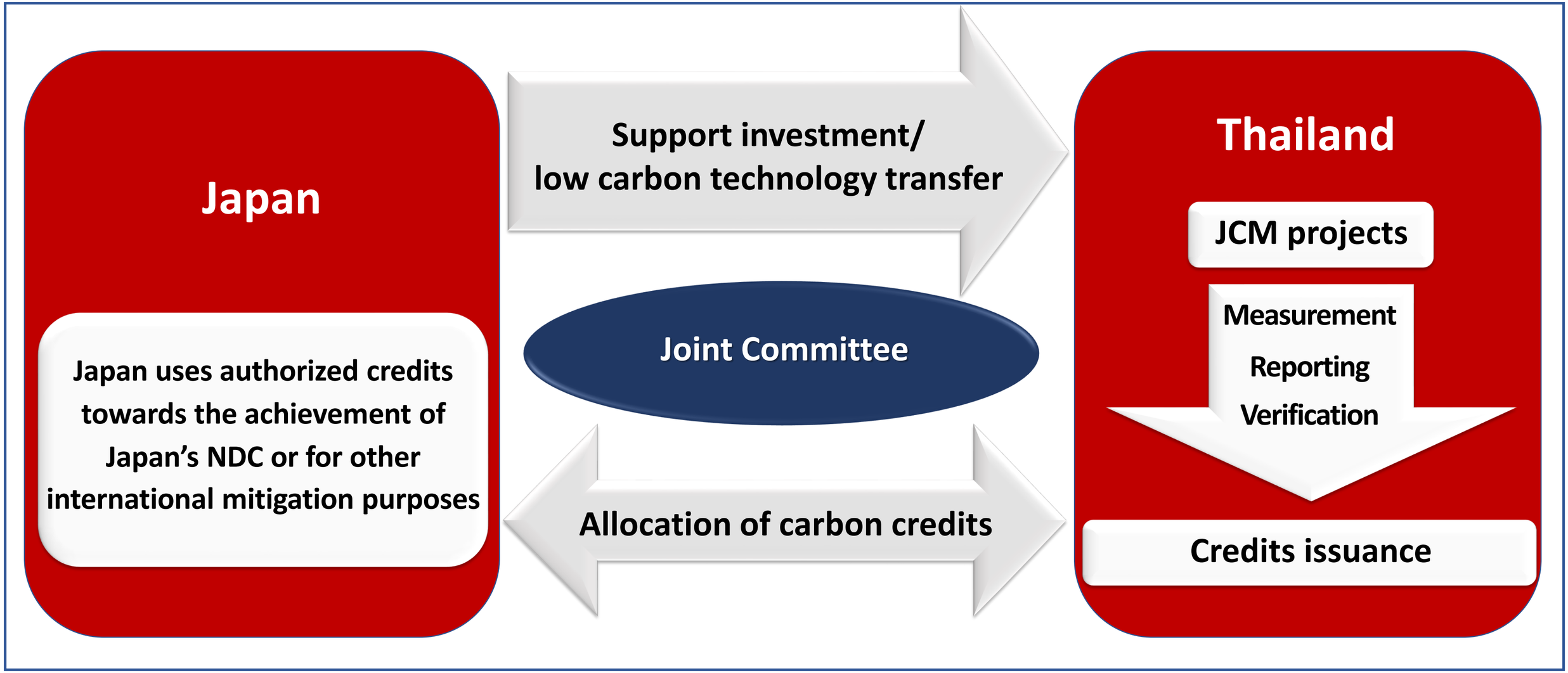
New MoC* Signing Ceremony

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



NDC: Nationally determined contributions (NDCs) Source: https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs

Current Status of JCM in Thailand

JCM Thailand - Japan

Signed on 19 Nov 2023

	JCM Model Project	Registered project	project
Number of Project	48	11	5
GHG reduction	244,978 tCO_2eq/year	58,096 tCO_2eq/year	4,032 tCO_2eq

49) F-gas Recovery and Destruction Project

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

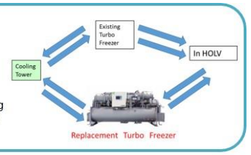
As of November 30, 2024

4

Approved JCM Methodologies

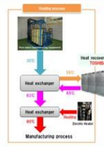
Centrifugal Chiller
MHI ETI-50

- 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

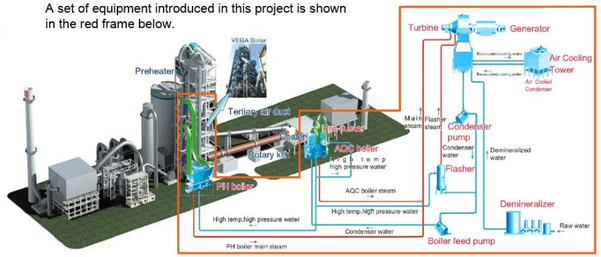


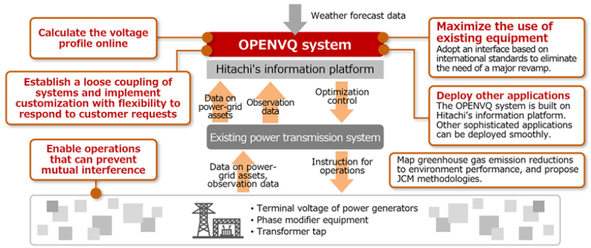
Heat Recovery Heat-pump
TOSHIBA CAONS (HWC-WH6702V)

- 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



A set of equipment introduced in this project is shown in the red frame below.





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

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

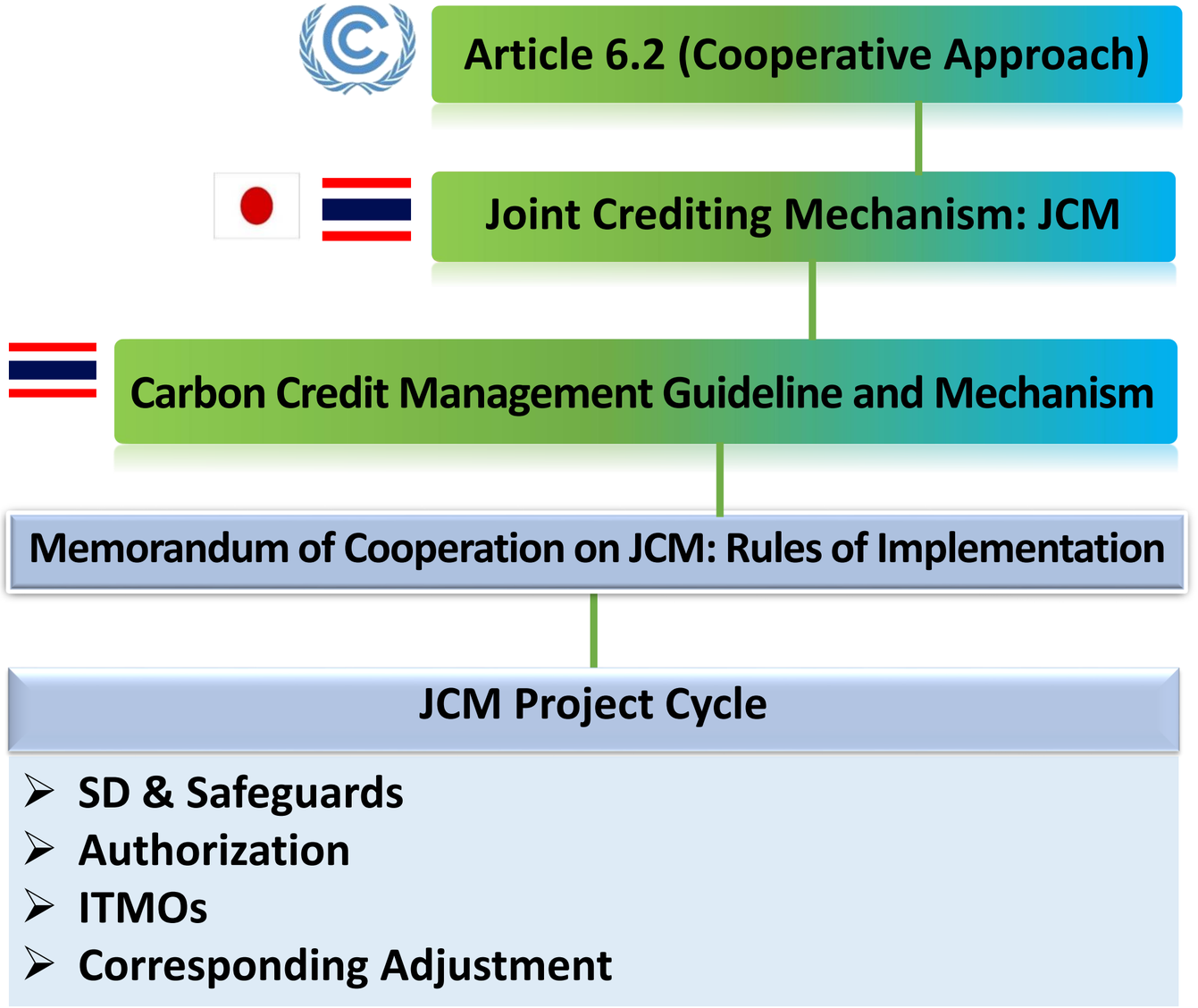
Arrangements for Aligning the JCM Implementation in Thailand with Article 6

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

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

JC approves planned projects

JCM Project Registration

PPs submit documents to Government of Japan and TGO for registration

PPs open an account in the Thai registry

Government of Japan approves registration

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 registers the project under Premium T-VER

JCM Credits Issuance

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

Government of Japan considers and approves the issuance of the credits

DCCE considers and approves fulfillment of authorization

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

International transfer

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

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

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

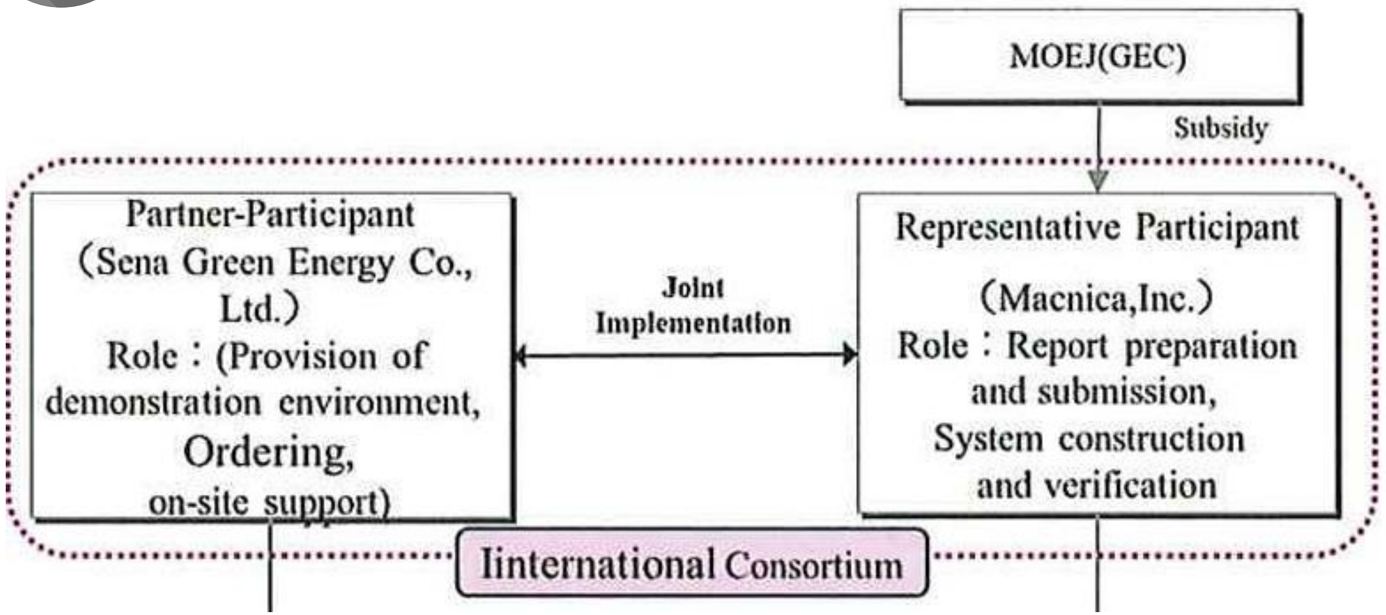
PPs – Project Participants
JC – Joint Committee

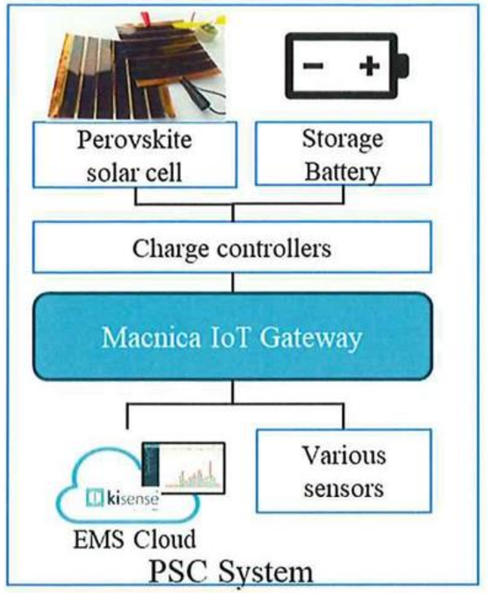
LoA - Letter of Authorization
PIN - Project Idea Note
ITMOs - Internationally Transferred Mitigation Outcomes
DCCE - Department of Climate Change and Environment
TGO - Thailand Greenhouse Gas Management Organization
T-VER – Thailand Voluntary Emission Reduction Program

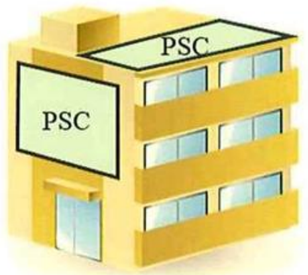
Responsibilities of Project Participants and Benefits from the Development of JCM Project

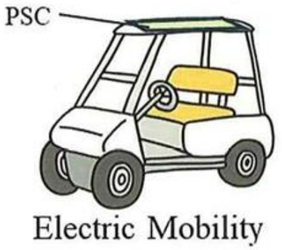
Thai project participant	Japanese project participant
- Receive subsidy for implementation of the project - Implement the project and measure GHG emission reduction	- Forward subsidy from the Japanese government/entity to Thai project participant or provide funding for the project - Report and Request of credit issuance

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

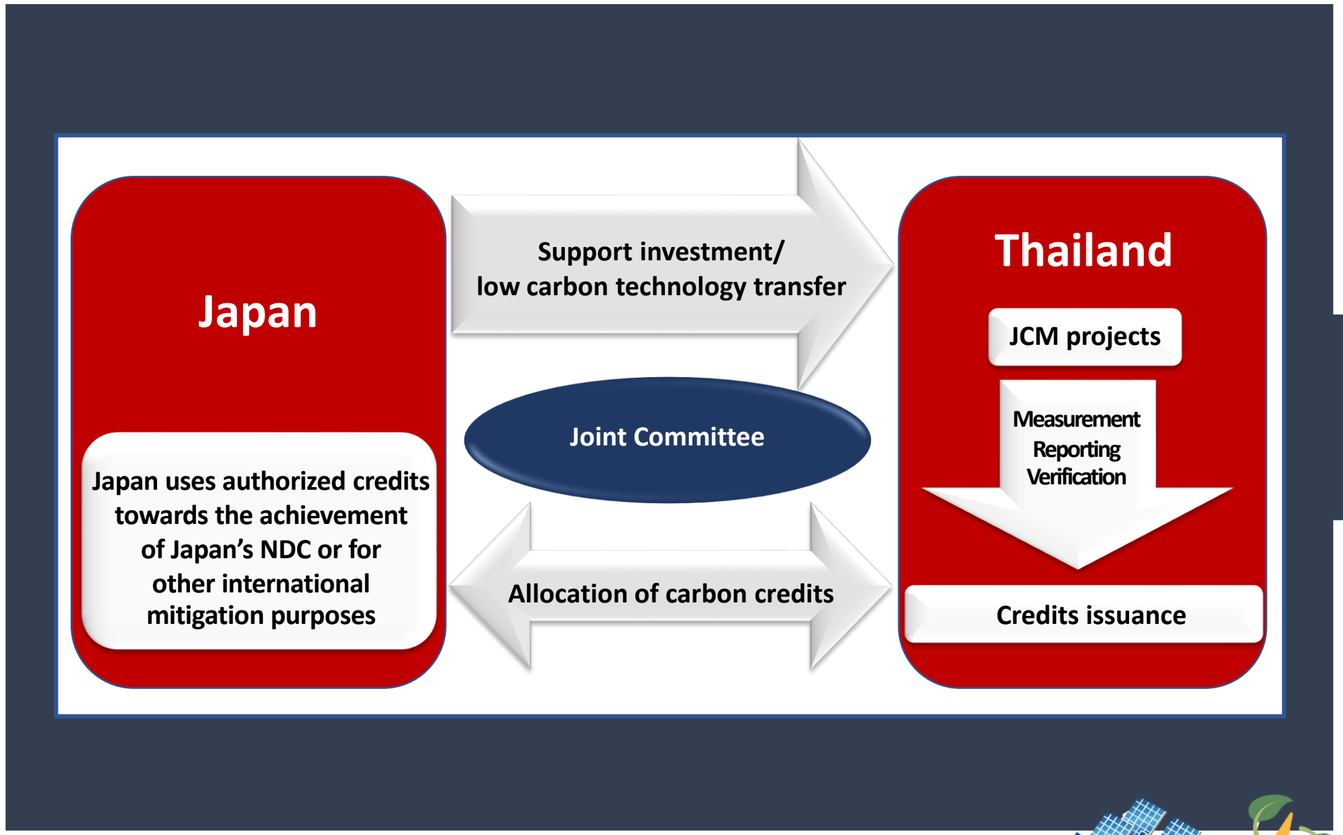








Additional Benefit for Thai Project Participants from the Development of JCM Projects



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

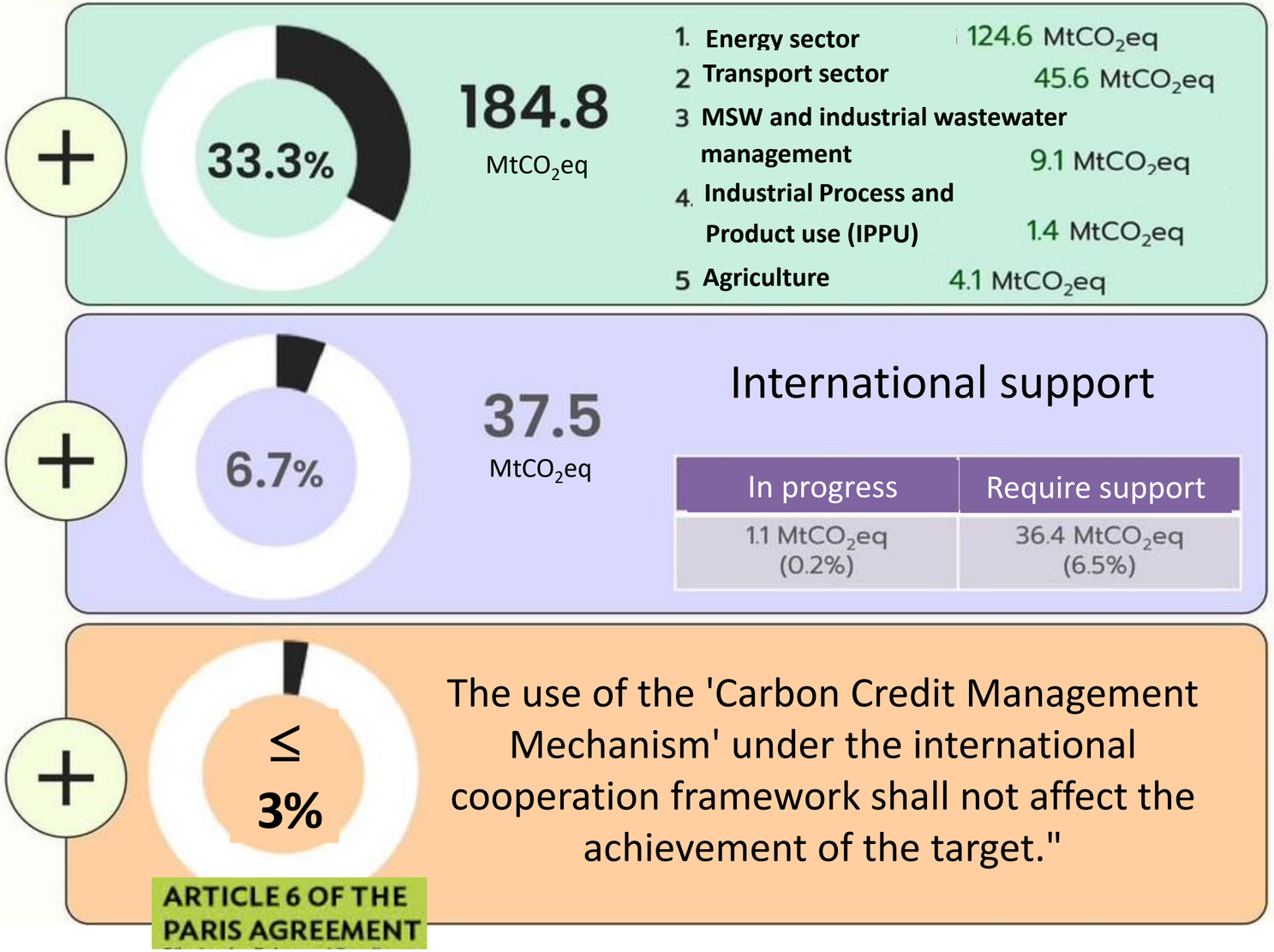
Contribution to the Implementation of Thailand's NDC

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).

Target: Reduce GHG emission 40% from BAU in 2030



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)

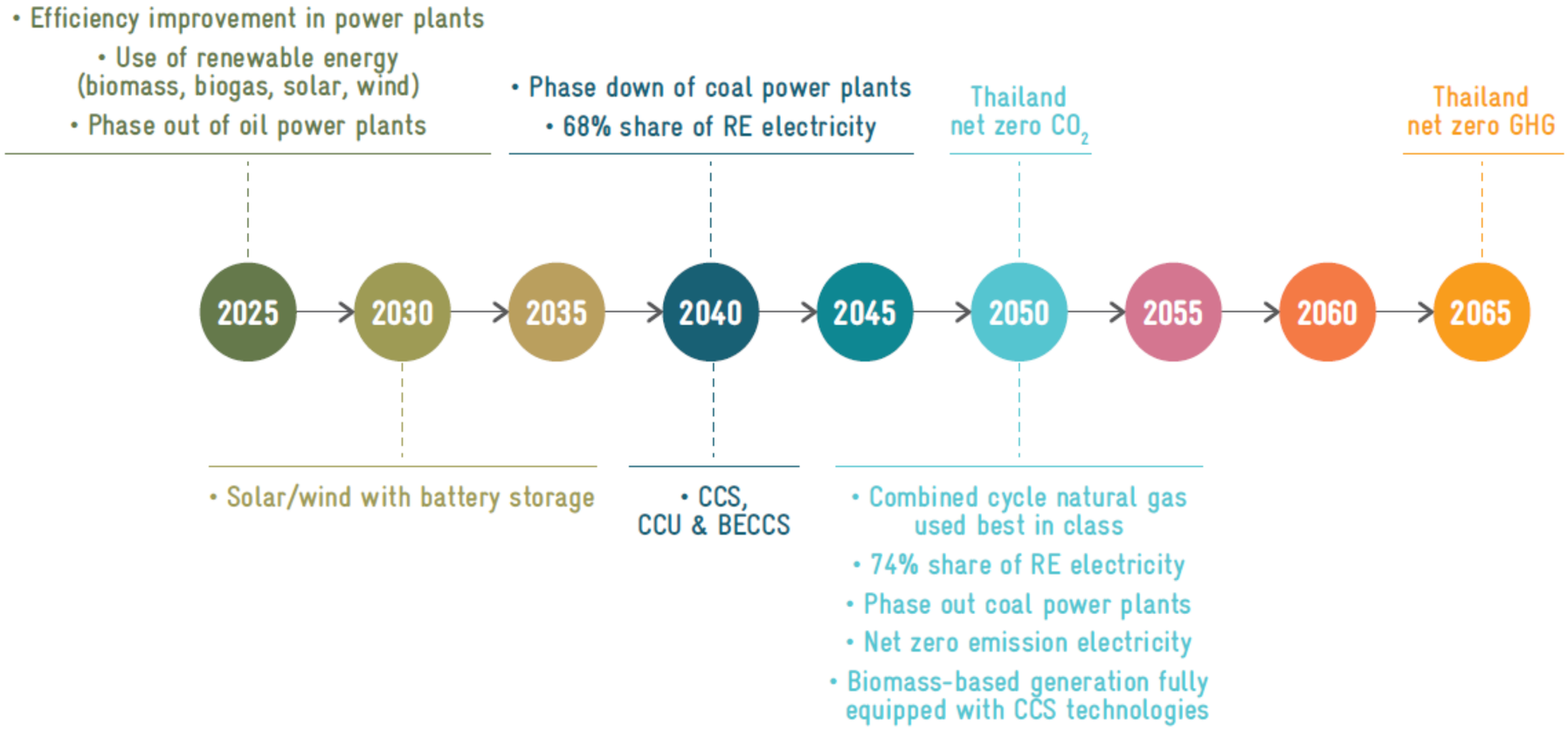


Figure 4-4 Net zero GHG emission timeline for Thailand’s power generation

Contributions to sustainable development goals in Thailand

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

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

<u>Industry, Innovation and Infrastructure</u>:
Promote use of advanced low carbon technologies

<u>Responsible consumption and production</u>:
Facilitate green electricity generation and use in the residential sector

<u>Partnerships for the Goal</u>:
Enhance international partnerships to drive sustainable development efforts

Thank You

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