METI
Ministry of Economy, Trade and Industry

# The Recent development of the Joint Crediting Mechanism (JCM)

December 19th, 2024

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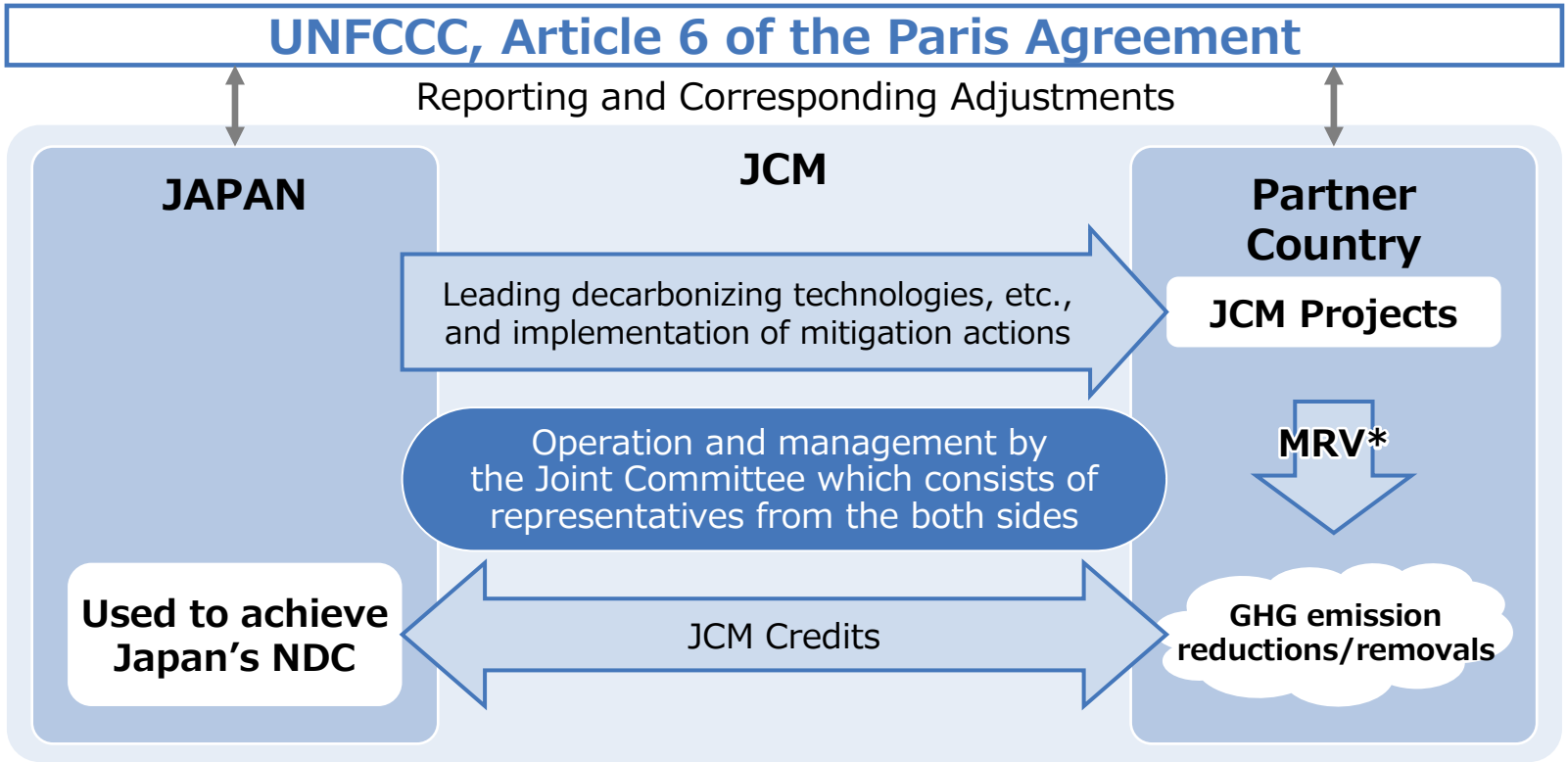
# Basic Concept of the JCM



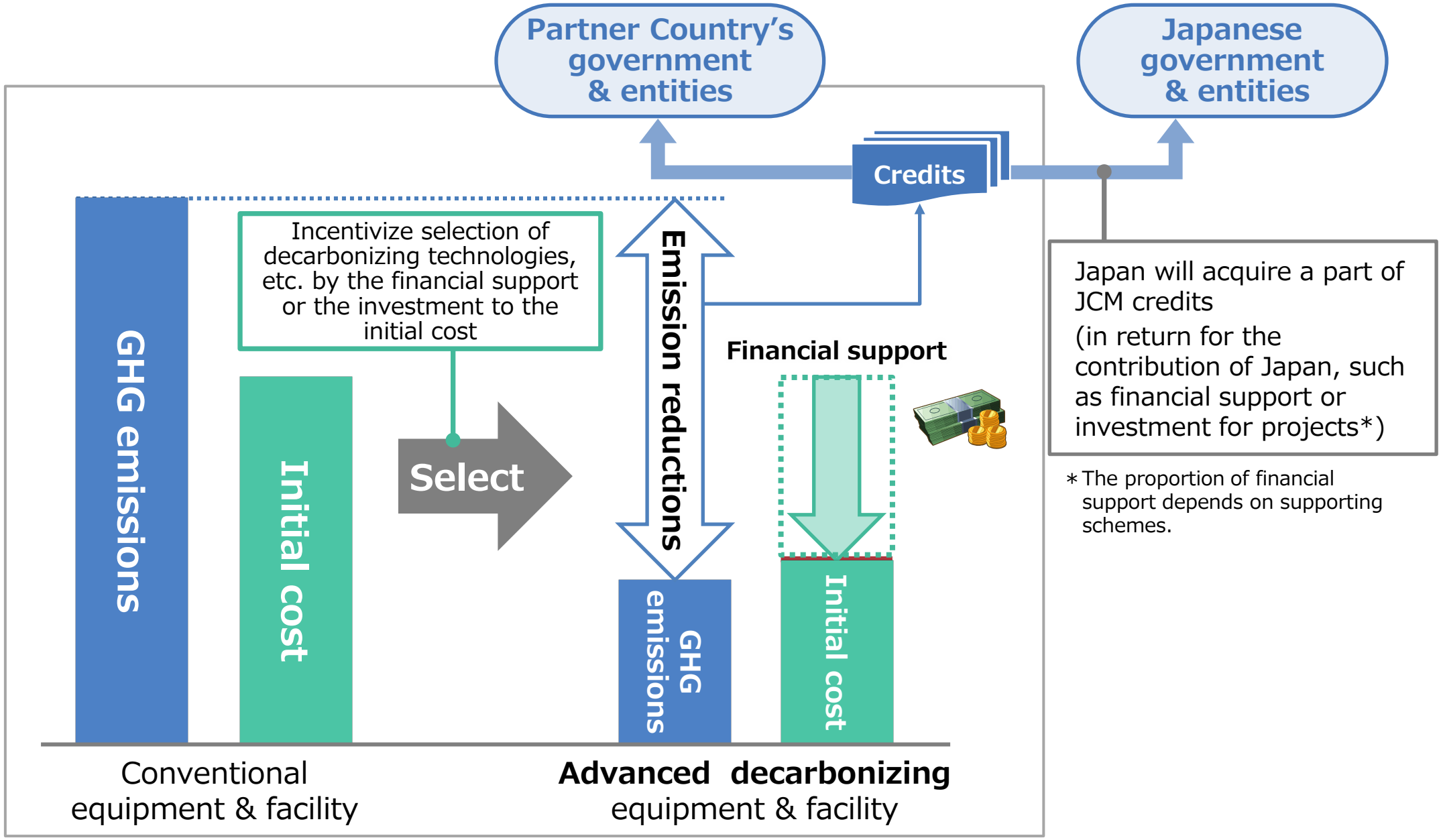
- Facilitate diffusion of leading decarbonizing technologies and infrastructure, etc., through investment by Japanese entities, thereby contributing to GHG emission reductions or removals and sustainable development in partner countries.
- Contribute to the achievement of both countries' NDCs while ensuring the avoidance of double counting through corresponding adjustments.
- Implement the JCM consistent with the guidance on cooperative approaches, referred to in Article 6, paragraph 2 of the Paris Agreement.




*measurement, reporting and verification

# Contribution from Japan (example)





# Japan's Nationally Determined Contribution (NDC)



**(Decided on October 22, 2021)**

## Japan's NDC

Japan aims to reduce its greenhouse gas emissions **by 46 percent in fiscal year 2030 from its fiscal year 2013 levels,** setting an ambitious target which is aligned with the long-term goal of achieving net-zero by 2050. Furthermore, Japan will continue strenuous efforts in its challenge to meet the lofty goal of cutting its emission by 50 percent.

## Description about the JCM

### Japan's Greenhouse Gas Emission Reduction Target

- Japan aims to contribute to **international emission reductions and removals at the level of a cumulative total of approximately 100 million t-CO2 by fiscal year 2030** through public-private collaborations. Japan will appropriately count the acquired credits to achieve its NDC.

### Information to facilitate clarity, transparency and understanding

- Japan will establish and implement the Joint Crediting Mechanism (JCM) in order to quantitatively evaluate contributions of Japan to greenhouse gas emission reductions and removals which are achieved through the diffusion of, among others, leading decarbonizing technologies, products, systems, services and infrastructures as well as through the implementation of measures in developing countries and others, and in order to use such contributions to achieve Japan's NDC. By doing so, through public-private collaborations, Japan aims to secure accumulated emission reductions and removals at the level of approximately 100 million t-CO2 by fiscal year 2030. Japan will appropriately count the acquired credits to achieve its NDC.
- With regards to the JCM which Japan has initiated to establish, Japan secures environmental integrity and the avoidance of double-counting in line with the international rules including the Paris Agreement. Also, based on its experience in the JCM, Japan intends to lead international discussions, thereby contributing to the development of appropriate international rules for the use of market mechanism.

# JCM Partner Countries（29 countries）



Mongolia
Jan. 8, 2013 （Ulaanbaatar）

Bangladesh
Mar. 19, 2013 (Dhaka)

Ethiopia
May. 27, 2013 (Addis Ababa)

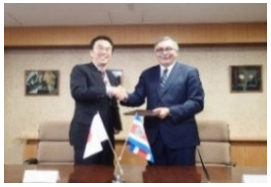
Kenya
Jun. 12, 2013 (Nairobi)

Maldives
Jun. 29, 2013 (Okinawa)

Viet Nam
Jul. 2, 2013 (Hanoi)

Lao PDR
Aug. 7, 2013 (Vientiane)

Indonesia
Aug. 26, 2013 (Jakarta)



Costa Rica
Dec. 9, 2013 (Tokyo)

Palau
Jan. 13, 2014 (Ngerulmud)

Cambodia
Apr. 11, 2014 (Phnom Penh)

Mexico
Jul. 25, 2014 (Mexico City)

Saudi Arabia
May. 13, 2015

Chile
May. 26, 2015 (Santiago)

Myanmar
Sep. 16, 2015 (Nay Pyi Taw)

Thailand
Nov. 19, 2015 (Tokyo)

Philippines
Jan. 12, 2017 (Manila)

Senegal
Aug. 25, 2022 (Dakar)

Tunisia
Aug. 26, 2022 (Tunis)

Azerbaijan
Sept. 5, 2022 (Baku)

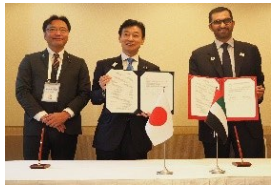
Moldova
Sept. 6, 2022 (Chisinau)

Georgia
Sept. 13, 2022 (Tbilisi)

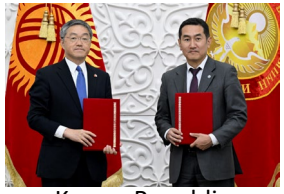
Sri Lanka
Oct. 10, 2022 (Colombo)

Uzbekistan
Oct. 25, 2022 (Tashkent)


Papua New Guinea
Nov. 18, 2022 (Sharm-el-Sheikh)



United Arab Emirates
April. 16, 2023 (Sapporo)



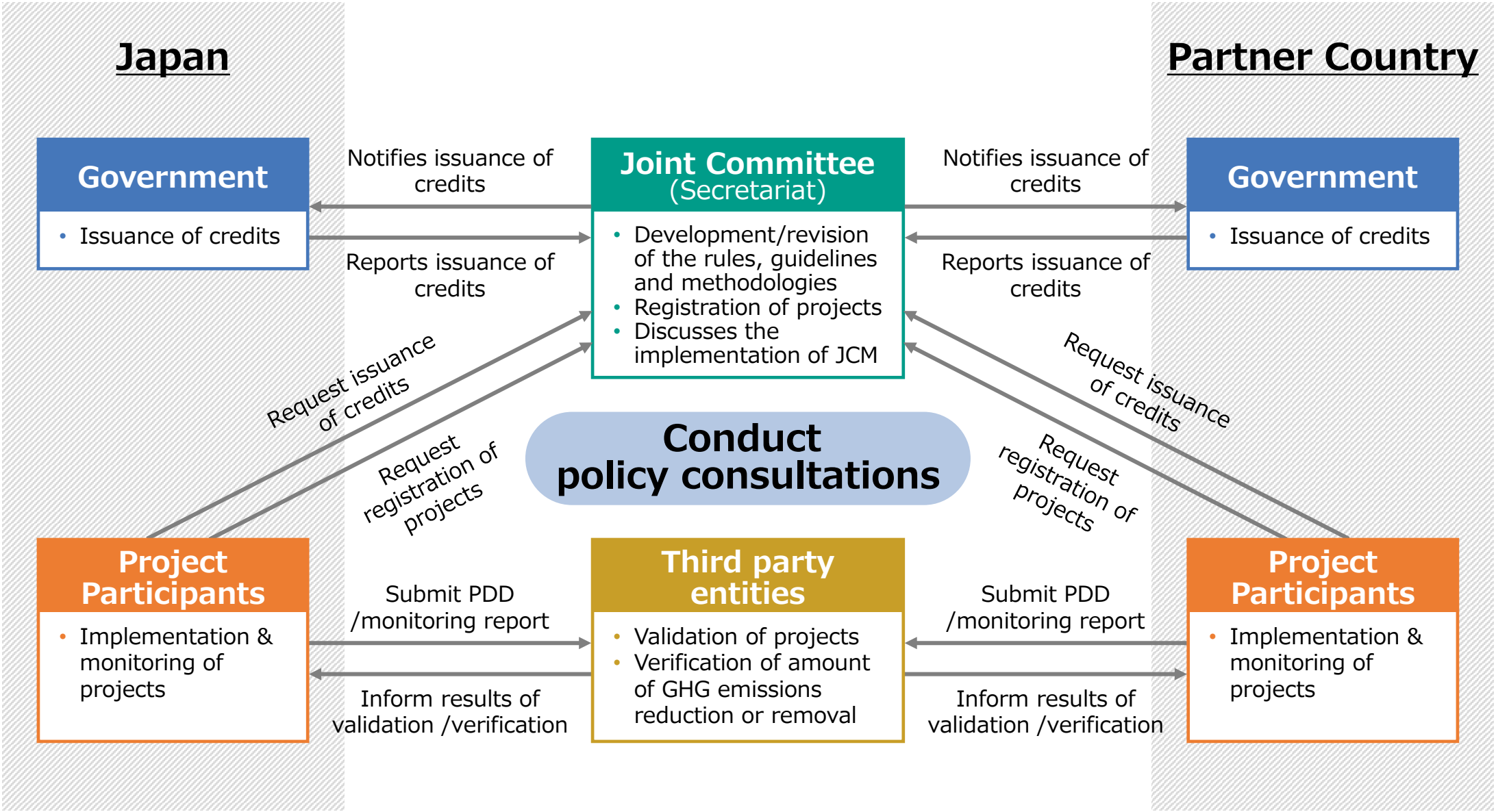
Kyrgyz Republic
July. 6, 2023 (Bishkek)

Kazakhstan
Oct. 30, 2023 (Astana)

Ukraine
Feb. 19, 2024 (Tokyo)

# Scheme of the JCM





# Project Cycle of the JCM




<Terminology>

- **PIN (Project Idea Note)**: A document used to explain the outline of the project to the partner country and confirm whether there is an objection.
- **PDD (Project Design Document)**: A document that includes monitoring methods and estimated emission reductions. Required for project registration.

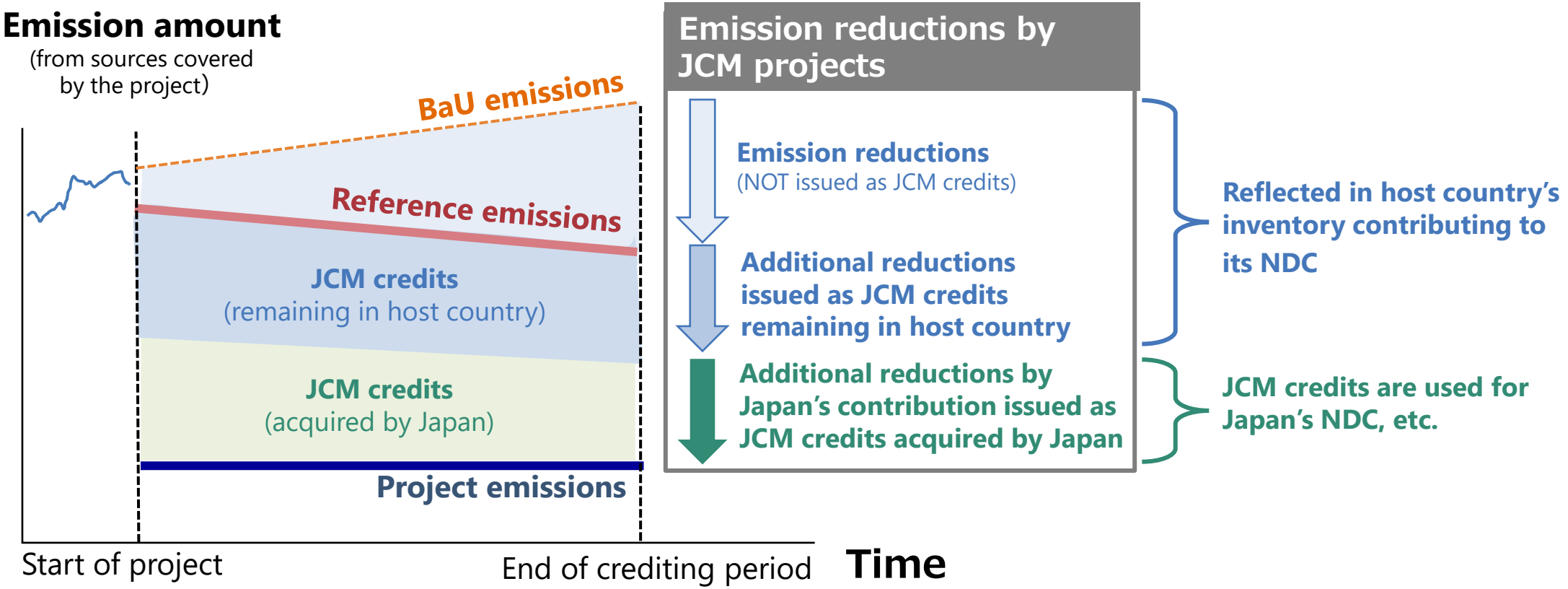
<Note>

For the latest information on JCM rules and guidelines, including the PIN procedures adopted with each Partner Country, please refer to each partner country page on the JCM website.

# Evaluation & crediting of emission reductions under the JCM



- JCM projects' emission reductions is reductions between BaU and project emissions including emission reductions between BaU and reference emissions that is NOT issued as JCM credits but reflected in host country's inventory contributing to its NDC.
- Emission reductions to be credited are defined as the difference between reference emissions and project emissions. The reference emissions are established taking into account its latest NDC.
- Additional reductions issued as JCM credits remaining in the host country will be reflected in host country's inventory contributing to the achievement of the host country's NDC.
- JCM credits acquired by Japan and used for Japan's NDC are calculated based on Japan's contribution to JCM projects, such as financial, technological and operational contribution.



# METI's support for the JCM partner countries



- METI supports the introduction of **advanced decarbonizing technologies though Demonstration Projects** which contribute to the decarbonization of the JCM partner countries.
- The project cost burdened by Japanese side is **100% supported by Japanese government (METI/NEDO).**

## Examples of past projects

Optimization in petroleum refining plant, Yokogawa Electric Corp. Indonesia

Energy-saving of mobile communications base transceiver stations, KDDI Corp. Indonesia

Total: 11 projects in 6 countries (As of July 2023)

## JCM Feasibility Study by METI

**Scope:**

- Consider basic elements of the demonstration (technology, project site, stakeholders, etc.)
- Establish the basis of JCM methodology for quantification of the GHG emission reduction
- Study the possibility of dissemination of the introduced technology
- Project cost: 15 million JPY (approx.116 thousand USD) per study

**Project period:** Up to 1 year

Assumed technical areas: Energy efficiency with IoT, EMS, Renewable energy, CCS/CCUS, Hydrogen/Ammonia, etc.

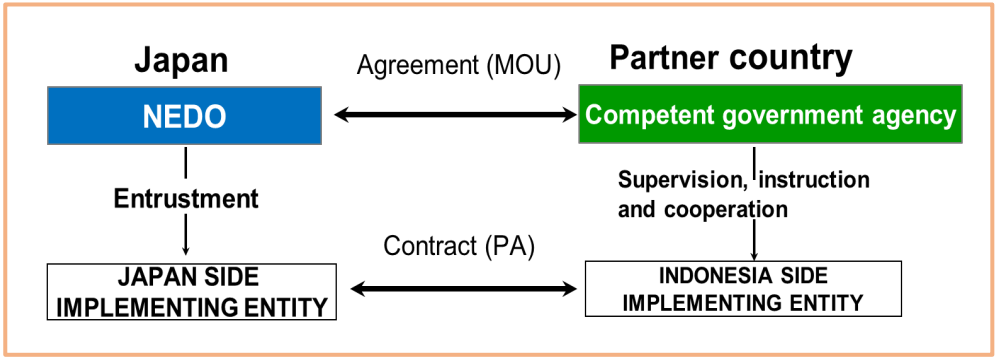
## JCM Demonstration Program by NEDO (*)

**Scope:**

Demonstrate and verify the effectiveness of advanced decarbonizing technology:

- Introduction of relevant facilities and systems, and conduct demonstration
- Quantification of GHG emission reduction effectiveness
- JCM procedure toward issuance of JCM credits
- Budget for FY 2024: 7 million JPY (approx. 4.7 million USD)

**Project period**: Pre-demonstration stage: up to 1 year
Demonstration stage: up to 3 year
Follow-Up Project stage: up to 2 year




* NEDO = New Energy and Industrial Technology Development Organization

# Feasibility Studies and Detailed/Secondary Feasibility Study (FY 2023)



**Moldova:**
- Bio-gasification using ethanol distillation residues in the Republic of Moldova（SDG Impact Japan Inc.）

**Uzbekistan:**
- Introduction of solar power generation and storage batteries, and boiler fuel conversion in public hospitals in Uzbekistan （Hanwa Co., Ltd.）

**United Arab Emirates:**
- Project to reduce GHG emissions in the United Arab Emirates (Emirate of Abu Dhabi) by introducing electric, hydrogen, and other low-carbon emission vehicles for public transportation mobility and by introducing a system for monitoring and improving the efficiency of operations (SMOC)（Zenmov Inc）

**Thailand:**
- Utilization of highly efficient dyeing technology in textile dyeing process (Asahi Kasei Corp.)
- Feasibility study for JCM project implementation of biomass boiler utilization with private sector funding (Tepia Corporation Japan)
- ★Feasibility Study for Demonstration of Fuel Cell (FC) Truck Technology for Low-Carbon Medium- and Long-Distance Overland Freight Transport (Toyota Tsusho Corporation)

**Mongolia:**
- Switching fuel for heating boilers to biochar in Ulaanbaatar (PEAR Carbon Offset Initiative, Ltd.)

**Lao PDR:**
- Decarbonization of steam by systemization of hydrogen generators and hydrogen boilers in Lao PDR（Hitachi Zosen Corporation）

**Vietnam:**
- Integrated energy management and data platform in industrial parks（Sojitz Corporation）
- Feasibility Study on JCM Credit Creation Through Fuel Conversion in Vietnam(erex Co., Ltd.)
- ★Demonstration Project on Wastewater Heat Recovery and Geothermal Heat Utilization Technology (Asano Taiseikiso Engineering Co., Ltd.)

**Brazil:**
- Conversion of production process of caustic soda and chlorine in Federative Republic of Brazil （AGC Inc.）

**Chile:**
- Chemical goods/synthetic fuel production using CO2 emitted from pulp mill as a raw material（Toyo Engineering Corporation）

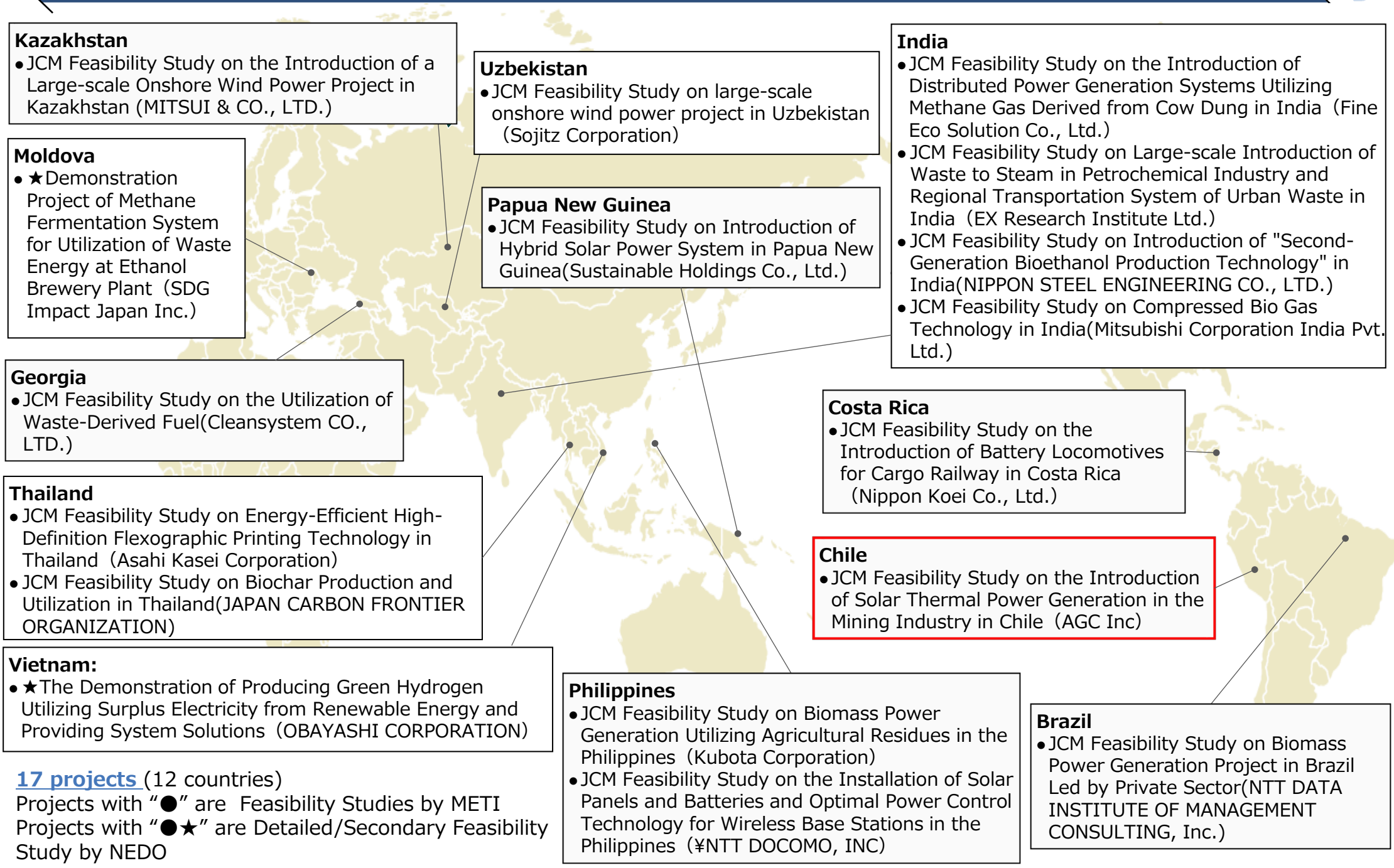
**Philippines:**
- Study on GHG emission reduction and economic feasibility by the introduction of combined distributed renewable energy resources into poultry cooperatives in the Philippines(J-POWER)

**Indonesia:**
- Improvement of biodiesel yield from palm oil by utilizing AI（Kanematsu Corporation）
- The study of stock-based peatland water management technology for a stable supply of woody biomass(Sumitomo Forestry Co., Ltd.)
- ★Low carbon technology project by introducing plasma heating equipment in Indonesia (NIPPON STEEL ENGINEERING CO., LTD.)

Total as of 2023: **17 projects** (11 countries)
Projects with "●" are Feasibility Studies by METI
Projects with "●★" are Detailed/Secondary Feasibility Study by NEDO

# Feasibility Studies and Detailed/Secondary Feasibility Study (FY2024)





**Kazakhstan**
- JCM Feasibility Study on the Introduction of a Large-scale Onshore Wind Power Project in Kazakhstan (MITSUI & CO., LTD.)

**Uzbekistan**
- JCM Feasibility Study on large-scale onshore wind power project in Uzbekistan (Sojitz Corporation)

**India**
- JCM Feasibility Study on the Introduction of Distributed Power Generation Systems Utilizing Methane Gas Derived from Cow Dung in India (Fine Eco Solution Co., Ltd.)
- JCM Feasibility Study on Large-scale Introduction of Waste to Steam in Petrochemical Industry and Regional Transportation System of Urban Waste in India (EX Research Institute Ltd.)
- JCM Feasibility Study on Introduction of "Second-Generation Bioethanol Production Technology" in India(NIPPON STEEL ENGINEERING CO., LTD.)
- JCM Feasibility Study on Compressed Bio Gas Technology in India(Mitsubishi Corporation India Pvt. Ltd.)

**Moldova**
- ★Demonstration Project of Methane Fermentation System for Utilization of Waste Energy at Ethanol Brewery Plant (SDG Impact Japan Inc.)

**Papua New Guinea**
- JCM Feasibility Study on Introduction of Hybrid Solar Power System in Papua New Guinea(Sustainable Holdings Co., Ltd.)

**Georgia**
- JCM Feasibility Study on the Utilization of Waste-Derived Fuel(Cleansystem CO., LTD.)

**Costa Rica**
- JCM Feasibility Study on the Introduction of Battery Locomotives for Cargo Railway in Costa Rica (Nippon Koei Co., Ltd.)

**Thailand**
- JCM Feasibility Study on Energy-Efficient High-Definition Flexographic Printing Technology in Thailand (Asahi Kasei Corporation)
- JCM Feasibility Study on Biochar Production and Utilization in Thailand(JAPAN CARBON FRONTIER ORGANIZATION)

**Chile**
- JCM Feasibility Study on the Introduction of Solar Thermal Power Generation in the Mining Industry in Chile (AGC Inc)

**Vietnam:**
- ★The Demonstration of Producing Green Hydrogen Utilizing Surplus Electricity from Renewable Energy and Providing System Solutions (OBAYASHI CORPORATION)

**Philippines**
- JCM Feasibility Study on Biomass Power Generation Utilizing Agricultural Residues in the Philippines (Kubota Corporation)
- JCM Feasibility Study on the Installation of Solar Panels and Batteries and Optimal Power Control Technology for Wireless Base Stations in the Philippines (¥NTT DOCOMO, INC)

**Brazil**
- JCM Feasibility Study on Biomass Power Generation Project in Brazil Led by Private Sector(NTT DATA INSTITUTE OF MANAGEMENT CONSULTING, Inc.)

17 projects (12 countries)
Projects with "●" are Feasibility Studies by METI
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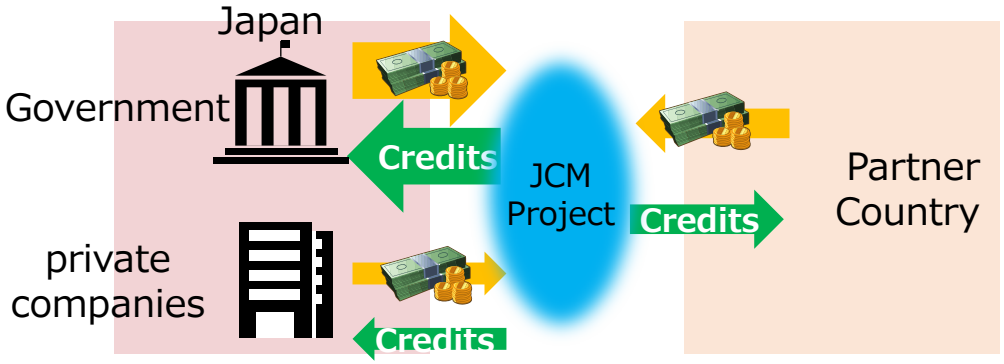
# Private-Sector JCM projects

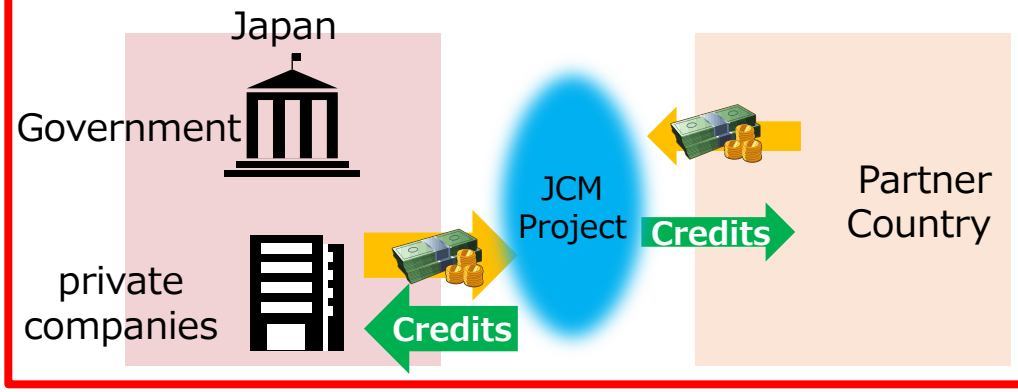


- **There is a need to promote the formation of JCM projects invested and implemented by private companies without any governmental financial supports for the purpose of obtaining JCM credits (private sector JCM)**, in light of the growing interest in the use of JCM credits for private-sector companies' own purposes.
- **Formulated "Guidance on the development of Private-Sector JCM"** in March 2023
- In the guidance, the following two processes were introduced:
  - **Making an advance inquiry to the partner countries on the "Project Idea Note (PIN)"** which includes the project contents and credit allocation plan
  - Confirming whether **there are any objections on the PIN at the Joint Committee** prior to the implementation of a JCM project.

**<JCM projects with Japanese governmental support>**




**<Private-Sector JCM projects>**



# Potential use of JCM credits



- **JCM credits acquired by companies through private JCM can be utilized for the purpose of carbon offsetting.**
  1) **The domestic calculation, reporting, and publication system (SHK system)**
  2) **Use for the achievement of companies' voluntary targets in the GX League**
  3) **Carbon offsetting**
- **In the GX League, participating companies are supposed to be engaged in emission trading in the Carbon Credit Market under Tokyo Stock Exchange, Inc in order to achieve their targets. Through trading JCM credits in the Carbon Credit Market, pricing and monetization of the JCM credits will be expected.**