

Overview of Joint Crediting Mechanism (JCM) and JCM Financing Programme

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Overseas Environmental Cooperation Center, Japan (OECC)

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About OECC



The **Overseas Environmental Cooperation Center, Japan (OECC)** was established in 1990 by strong support of the Ministry of the Environment, Japan and has been active as Japan's core organization in driving overseas environmental development cooperation. We play the role of connecting developing countries with the Japanese government, local governments, businesses and stakeholder.

Comprehensive Consultation from Upstream Policy to Downstream On-Site Projects



Climate Change

- UN Negotiations
- Mitigation
- Adaptation
- Innovative Technologies
- International Training



Environmental Management

- DSS and Atmosphere
- Chemicals Management
- Mercury Control



Biodiversity

- Genetic Resources
- Mangrove Conservation
- International Negotiations



Integrated Approach

- JPRSI
- Environmental Week
- Intergovernmental Meetings
- Support for JICA
- Co-Benefit Approach

Role of OECC to promote the JCM



Since around 2013 – the early days of JCM – the OECC has been promoting JCM and supporting the development of projects commissioned by the Ministry of the Environment, Japan (MOEJ).

1. Collection and Dissemination of Information on market mechanism and the JCM
2. Support for JCM Project Formation
3. Support for Validation and Verification of JCM project



炭素市場エクスプレス
CARBON MARKETS EXPRESS



Side Event at UNFCCC COP



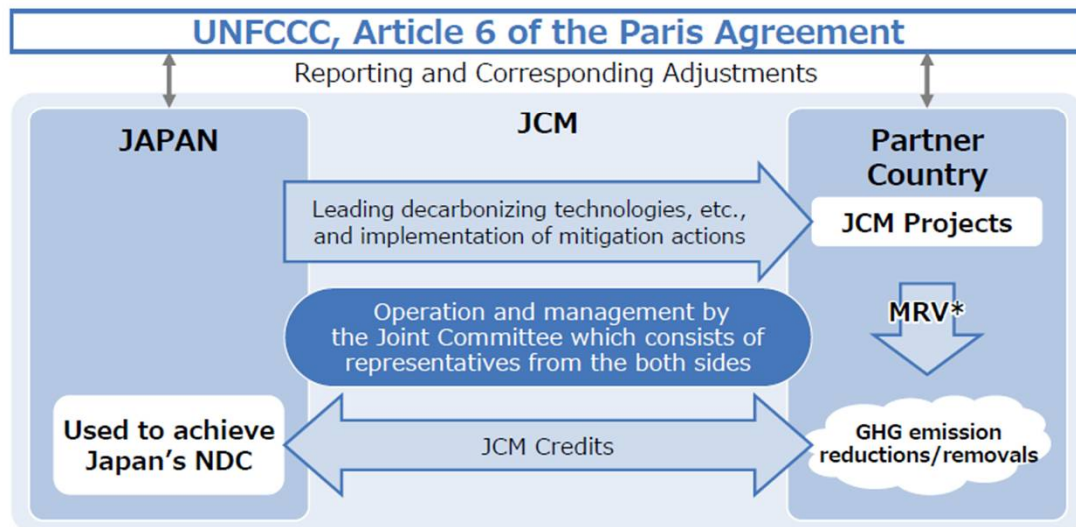
Survey of JCM project

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- 1. Overview of the JCM**
- 2. JCM Financing Programme for JCM Model Projects**
- 3. Examples of JCM Model Projects**

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

NDCs of Japan and Kazakhstan



Kazakhstan's NDC

GHG Emission Reduction Target

Unconditional target: Reduction of GHG emissions by **15% by the end of 2030** relative to 1990 base year.

Conditional target: Reduction of GHG emissions by **25% by the end of 2030** relative to 1990 base year, subject to significant additional international investments and significant grant assistance; access to an international technology transfer mechanism; co-financing and participation in international research projects, development of promising low-carbon technologies and initiatives to build local expertise.

Intention to use Article 6 of the Paris Agreement

The Republic of Kazakhstan plans to reduce greenhouse gas emissions at the national level but retains the opportunity to participate in the mechanisms of Article 6 of the Paris Agreement through various international mechanisms, including through the linking of emissions trading systems.

Japan's NDC

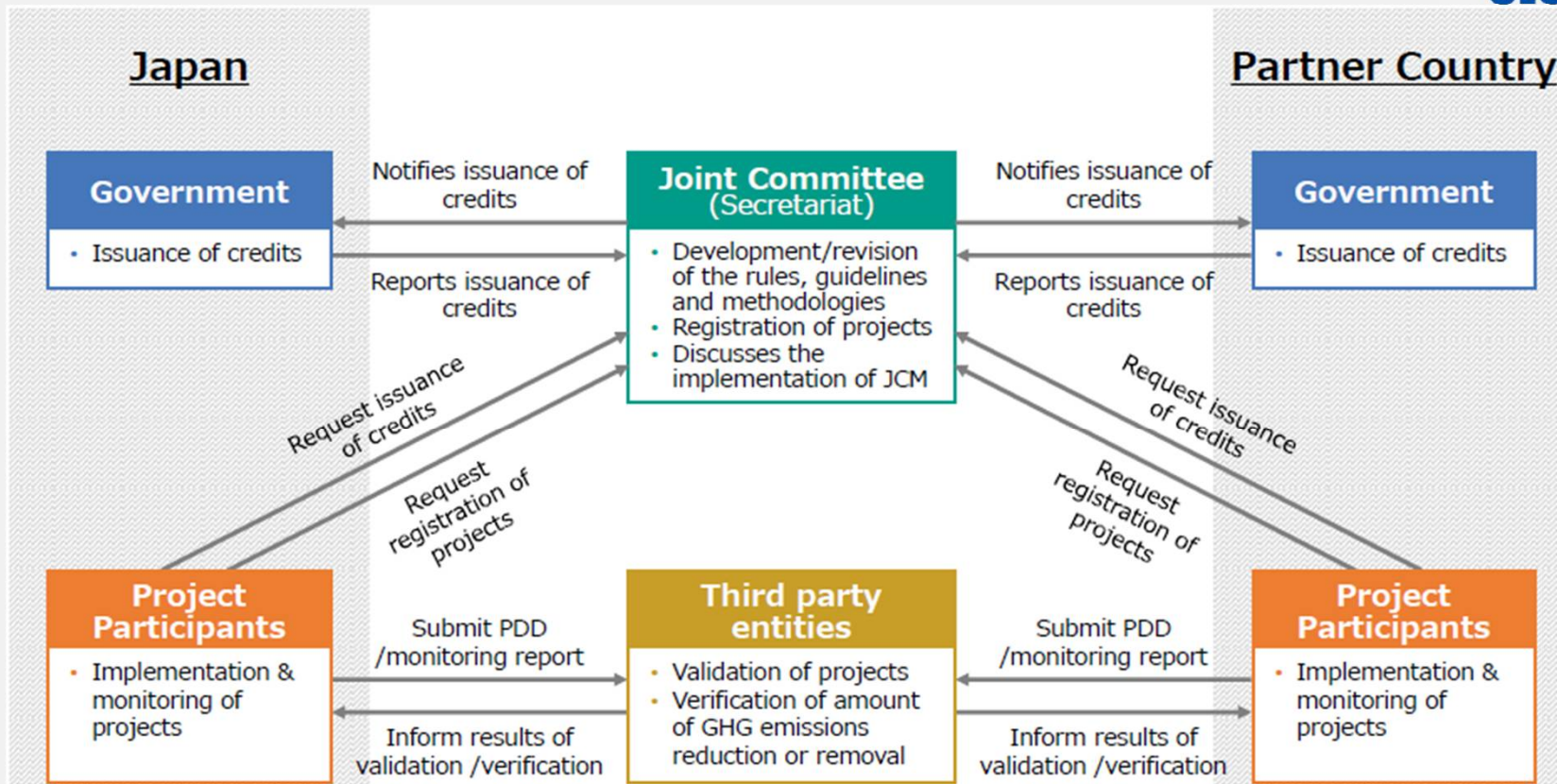
GHG Emission Reduction Target

Japan aims to reduce its greenhouse gas emissions by **46 % 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%**.

Description about the JCM

Japan aims to contribute to international emission reductions and removals at the level of a cumulative total of approximately **100 million tCO₂ by fiscal year 2030** through public private collaborations.

Scheme of the JCM

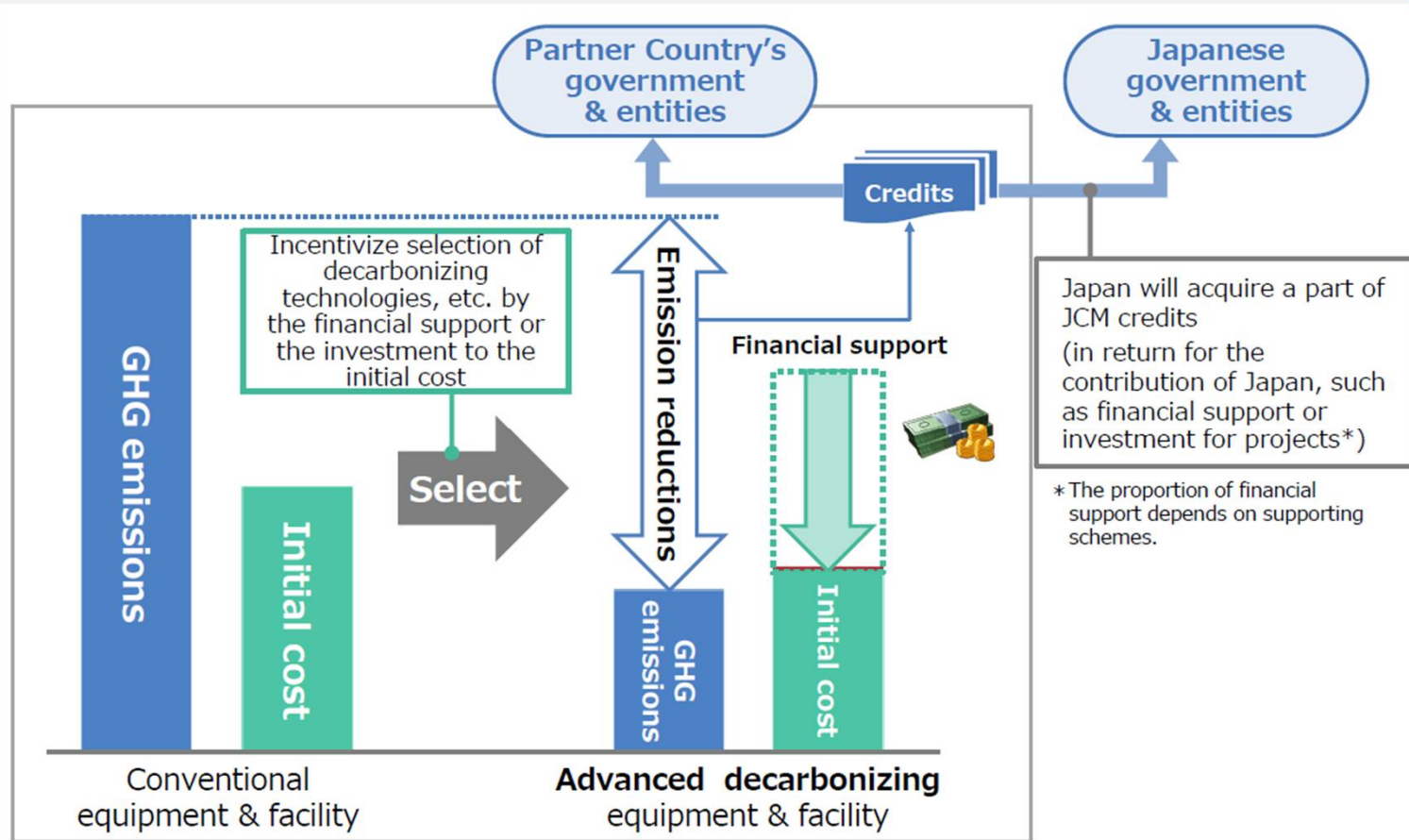


JCM Partner Countries



					
Mongolia	Bangladesh	Ethiopia	Kenya	Maldives	Vietnam
					
Lao PDR	Indonesia	Costa Rica	Palau	Cambodia	Mexico
					
Saudi Arabia	Chile	Myanmar	Thailand	Philippines	Senegal
					
Tunisia	Azerbaijan	Moldova	Georgia	Sri Lanka	Uzbekistan
					
Papua New Guinea	United Arab Emirates	Kyrgyz	Kazakhstan	Ukraine	

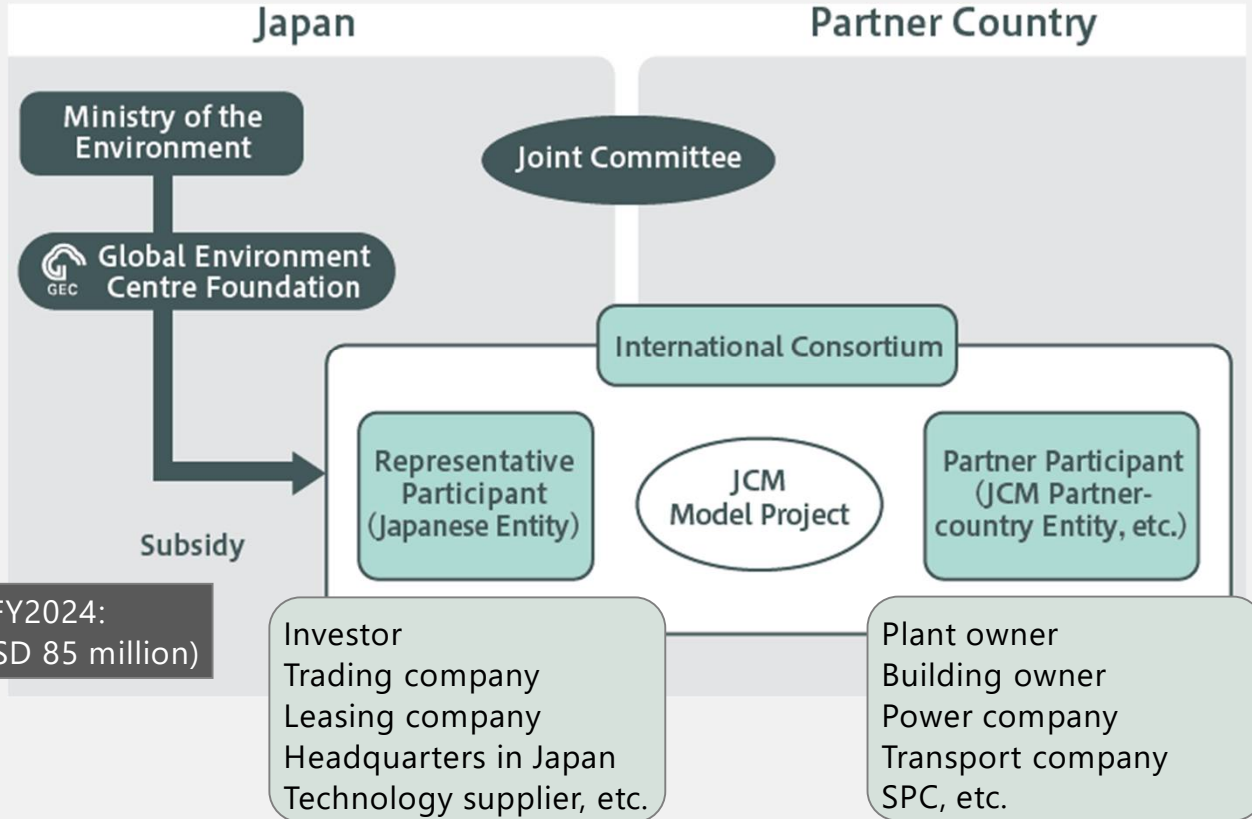
Contribution from Japan and allocation of JCM credits



Japan's support for the JCM partner countries

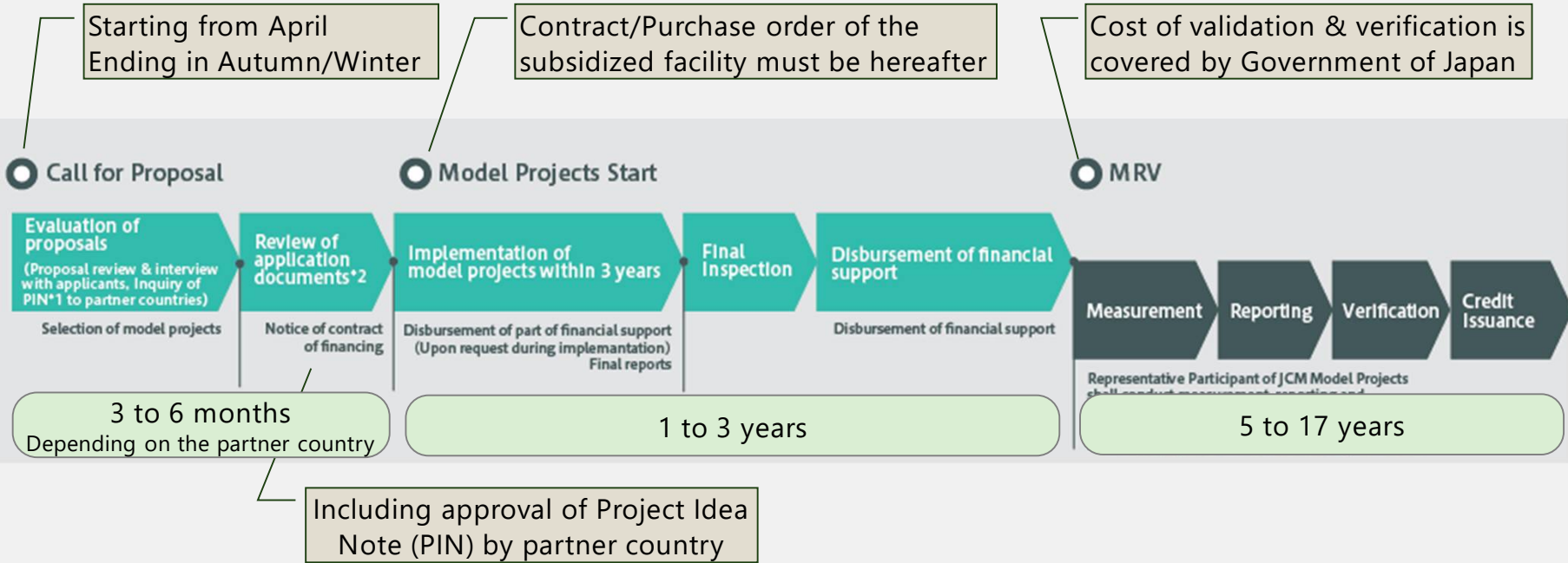
Ministry	Programme	Type	Focus sector
Ministry of the Environment	Finance Programme for JCM Model Projects	Subsidy	Energy-related
	Finance Programme for F-gas Recovery and Destruction Model Projects	Subsidy	F-gas
	Japan Fund for the JCM (JFJCM) by ADB	Grant	Mainly energy-related
	JCM support programme by UNIDO	Grant, technical cooperation	Mainly energy-related
	Demonstration Programme for Application of New Decarbonizing Technology	Subsidy	Energy-related
	Project development/capacity building/MRV support	Technical cooperation	-
Ministry of Economy, Trade and Industry	JCM Feasibility Study	Technical cooperation	Energy-related
	JCM Demonstration Programme	Government-commissioned	Energy-related
Ministry of Agriculture, Forestry and Fisheries	Development of MRV for JCM projects in Agriculture by ADB	Technical cooperation	Agriculture (AWD)
	Field studies for JCM REDD+	Government-commissioned	Forestry

Financing Programme for JCM Model Projects



Total budget of FY2024:
13 billion JPY (USD 85 million)

Steps and Timeline of JCM Model Projects



Representative participant (in Japan) & Partner participant (in Kazakhstan) cooperate to proceed with the above steps

Project types

Energy Efficiency



Boiler & Chiller & Solar Power (Thailand)
The Kansai Electric Power Co., Inc.



Thermal Oil Heater System (Indonesia)
Fumakilla Limited



Chiller & LED Lighting (Vietnam)
Tokyu Corporation



Once-through Boiler (Indonesia)
DIC Corporation

Energy Efficiency



Chiller & Air Conditioner & Solar Power (Indonesia)
Yuko Keiso Co., Ltd.



LED Lighting (Vietnam)
Endo Lighting Corporation

Effective Use of Energy



Waste Heat Recovery (Myanmar)
Global Engineering Co., Ltd.



Gas Co-generation System & Chiller (Thailand)
The Kansai Electric Power Co., Inc.

Renewable Energy



Rice Husk Power Generation (Chile)
Aslan Gateway Corporation



Mini Hydro Power Plant (Indonesia)
NX JAPAN Co., Ltd.



Binary Geothermal Power Generation (Philippines)
Mitsubishi Heavy Industries, Ltd.



Solar Power (Thailand)
Shizen Energy Inc.

Renewable Energy



Mini Hydro Power Plant (Philippines)
Toyota Tsusho Corporation

Waste Handling and Disposal



Power Generation with Methane Gas Recovery System (Mexico)
NTT Data Institute of Management Consulting, Inc.



Waste to Energy Plant (Vietnam)
JFE Engineering Corporation

Transportation



CNG-Diesel Hybrid Public Bus (Indonesia)
Hokusan Co., Ltd.

Examples of JCM Model Projects

Case Examples of JCM Model Project

Renewable Energy

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[Key points and tips]

- ✓ Captive power plant (self-consumption)
- ✓ Self-sustaining procurement of biomass
- ✓ Methane emission reduction can be included, if appropriately quantified.

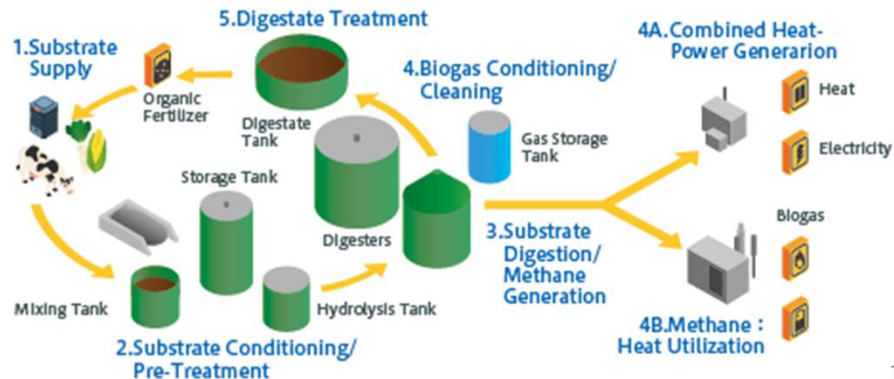
OECC supported

- 1) Project Coordination
- 2) Methodology development
- 3) Application to JCM Model Project

Biogas Power Generation and Fuel Conversion Project in Pineapple Canneries

Country	Philippines
Representative	Itochu Corporation
Partners	Met Power Venture Partners Holdings Inc., Surallah Biogas Ventures Corporation

In this project, biogas derived from pineapple residue is utilized as fuel for gas engines and boilers to generate power and steam at the two pineapple canning factories (Surallah and Polomolok) of Dole Philippines, Inc. This project aims to produce renewable energy by utilizing the pineapple waste and contributes to reducing greenhouse gases emissions as well as lowering electricity cost of the factories.



Examples of JCM Model Projects

Case Examples of
JCM Model Project

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● Energy Efficiency



[Key points and tips]

- ✓ Demand side energy saving
- ✓ Combination of multiple facilities
- ✓ Need to identify reference GHG emission (GHG emission without the project)

e.g. Energy efficiency (COP) of conventional chiller in Kazakhstan

Introduction of High Efficiency Chiller and High Efficiency LED Lighting with Dimming Function to Shopping Center

Country	Vietnam
Representative	Tokyu Corporation.
Partner	BECAMEX TOKYU Co., Ltd.

This project introduces “High Efficiency Chiller”, “High Efficiency LED Lighting with Dimming Function” and, “High Efficiency LED Lighting” to SORA gardens SC, a shopping center located in Binh Duong New City, the capital of Binh Duong Province. The project leads to reducing energy consumption and greenhouse gas (GHG) emissions as the chillers are high-efficient and equipped with Inverters, and LED lighting dim down 70% of light.



High Efficiency Chiller
3 units

High Efficiency LED Lighting
with Dimming Function:
592 units
High Efficiency LED Lighting
144 units



Examples of JCM Model Projects

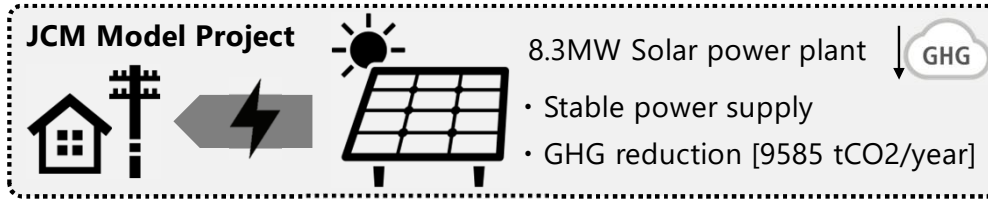
Introducing solar power plant in Monnarán Farm (Ulaanbaatar suburbs)

Revenue from electricity sales



Unstable revenue due to land freezing during winter

Stable revenue



Apr. – Oct.



Farming

Nov. – Mar.

Land freezing



Job creation for women

Employing many female workers in electricity sales department

Training & Education for women

Dispatching many female workers to agricultural training in Japan

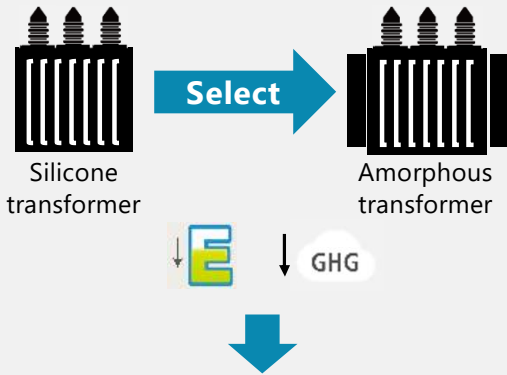
Transfer of agricultural tech.

Transferred advanced technology enabling longer farming period

Stable employment

Employment period of female workers were extended

Examples of JCM Model Projects



- More expensive than conventional product

JCM: Reducing initial investment cost



- Environmental performance was not considered in procurement process

Revising Procurement process



- Challenges for introducing new technology

Cooperation between Japan & Vietnam

Representative:

Yuko-Keiso Co., Ltd.

Partner:

Regional power authorities

Introduction of amorphous high-efficiency transformers in power distribution networks in Vietnam and Laos PDR.

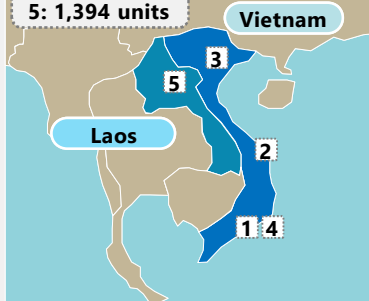
Power loss in Vietnam Electricity's systems has reduced from 7.24% in 2017 to **6.83% in 2018** and overachieved the target of 7.2%. *EVN news

Ensure the balanced capacity of power sources in each region: ensuring the reliability of electricity supply in each regional electricity system so as to **reduce losses of transmissions**, share the electricity yield and efficiently exploit hydropower plants in rainy and dry seasons.

*Revised National Power Development Master Plan for the 2011-2020 (2016)

Achievement (Since 2014)

- 1,618 units
- 4,843 units
- 4,965 units
- 2,145 units
- 1,394 units



JCM

South region



Whole Vietnam



Laos PDR



Introduction by private finance

OECC supported

- 1) Initial Project proposal
- 2) Project Coordination
- 3) Methodology development
- 4) Application to JCM Model Project

Costs Covered by Financial Support

Covered*

- Facilities/equipment (including monitoring equipment)
- Main construction work
- Ancillary work
- Machinery and appliances
- Surveying and testing
- Administrative work
- Other necessary costs approved by GEC

Costs directly contribute to
“Energy-related CO2 reductions”
are covered by the financial support.

NOT covered

- Removal of existing facilities/equipment (including miscellaneous expenses related to removal costs)
- Equipment and consumable supplies/materials for maintenance of the facilities/equipment installed by the model project, emergency facilities/equipment, safety equipment (such as fire extinguisher, sprinkler, PPE, etc.) and security equipment.
- Civil engineering work and building (excluding structures that directly contribute to energy-related CO2 emission reductions)
- Cost related to a simple restoration of function, such as restoring the function to the state at the time of installation by updating existing facilities/equipment
- Spare parts (excluding those used for testing and commissioning)
- On-site inspections and writing reports that are submitted to GEC as part of the model project
- Forward exchange contract and remittance charge
- Cost related to land acquisition

Period of Measurement, Reporting and Verification (MRV)



Project period (MRV period) is decided by the Japanese law which defines legal durable years of facilities.

〈Examples〉		
Category of technology	Purpose of business usage	Legal durable years
Solar power generation facilities	Electric power sales	17 years
	Internal consumption at car manufacturing factories	9 years
	Internal consumption from rooftop equipment on warehouses	12 years
Boilers	Cooking oil production	10 years
	Rubber products production	9 years
	Hot water supply for hotels	17 years
Absorption chillers	Supply of chilled water in chemical factories	8 years
	Air conditioning in shopping malls	15 years

Percentage of Financial Support

Number of previously selected project(s) using a similar technology in each partner country	None (0)	Up to 3 (1-3)	Up to 7 (4-7)	Up to 9 (8-9)	10 or more
Percentage of financial support	Up to 50%	Up to 40%	Up to 30%	Up to 20%	Not Applicable

Plus, project needs to meet "Cost-effectiveness of GHG Emission Reductions [JPY/tCO₂]"
= Amount of financial support ÷ Total GHG emission reduction

For general project: JPY4,000/tCO₂eq or lower

For solar power project: JPY2,500/tCO₂eq or lower, etc.

For example, the first on-grid solar power project (selling electricity) to reduce 10,000tCO₂/year in Kazakhstan,

- ✓ Maximum percentage of financial support: Up to 50%
- ✓ Project period (Period of MRV) : 17 years
- ✓ Total GHG emission reductions: 10,000 tCO₂ × 17 years = 170,000 tCO₂
- ✓ Maximum amount of financial support: 170,000 tCO₂ × JPY 2,500 = JPY 425 million (≐ USD 2.8 million)

Private-Sector JCM Project

Background

- To achieve the Japan's target of 100 million tCO₂ emission reduction/removal by 2030, 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.
- "Guidance on the development of Private-Sector JCM" was published in March 2023.

[Basic requirements]

- ✓ Certain amount of JCM credits are allocated to Japanese entity and can be used in Japan.
- ✓ Percentage of allocation is decided considering "contribution" by Japanese private sector.
- ✓ Project Idea Note (PIN) shall be submitted to the Partner country to confirm no objection on the proposed project. (JCM Model Project also requires PIN submission through the application.)

[Key points]

- ✓ "Contribution" by Japanese private-sector is expected to be financial contribution or other contributions (e.g. NDC, SDGs, stable energy supply.)
- ✓ If there is no existing JCM methodology applicable to the project, project participants need to develop it by themselves.
- ✓ Since non-energy related projects (e.g. Forestry, Agriculture) are not covered by most of JCM financing support programmes, Private-sector JCM would be an option.

Thank you for your kind attention!

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