

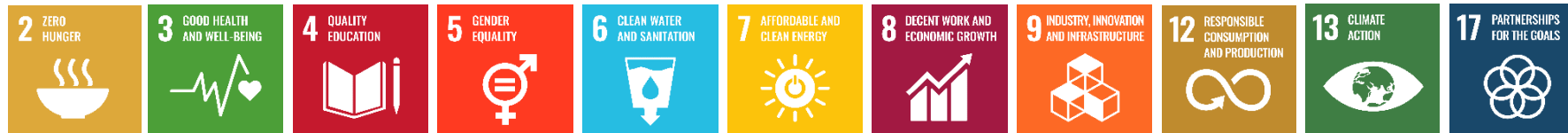
**“Financing Programme to Demonstrate Decarbonization
Technology for Realizing Co-Innovation”
and
“Pilot Project for Comprehensive Support throughout
the Whole Hydrogen Supply Chain Abroad”**

September 27, 2021

**Global Environment Centre Foundation
(GEC)**



Japan (MOEJ) promotes the JCM Financing Schemes for the transition to a decarbonized society in developing countries.



< JCM Financing Schemes >

- 1. Financing Programme for JCM Model Projects**
- ✓ 2. Financing Programme to Demonstrate Decarbonization Technology for Realizing Co-Innovation**
- ✓ 3. Pilot Project for Comprehensive Support throughout the Whole Hydrogen Supply Chain Abroad**

Budget for projects starting from FY 2021 is about JPY 8.8 billion (approx. USD 88 million) in total by FY2023 (USD1 = JPY100)

“Financing Programme to Demonstrate Decarbonization Technology for Realizing Co-Innovation”

Purposes and Characteristics

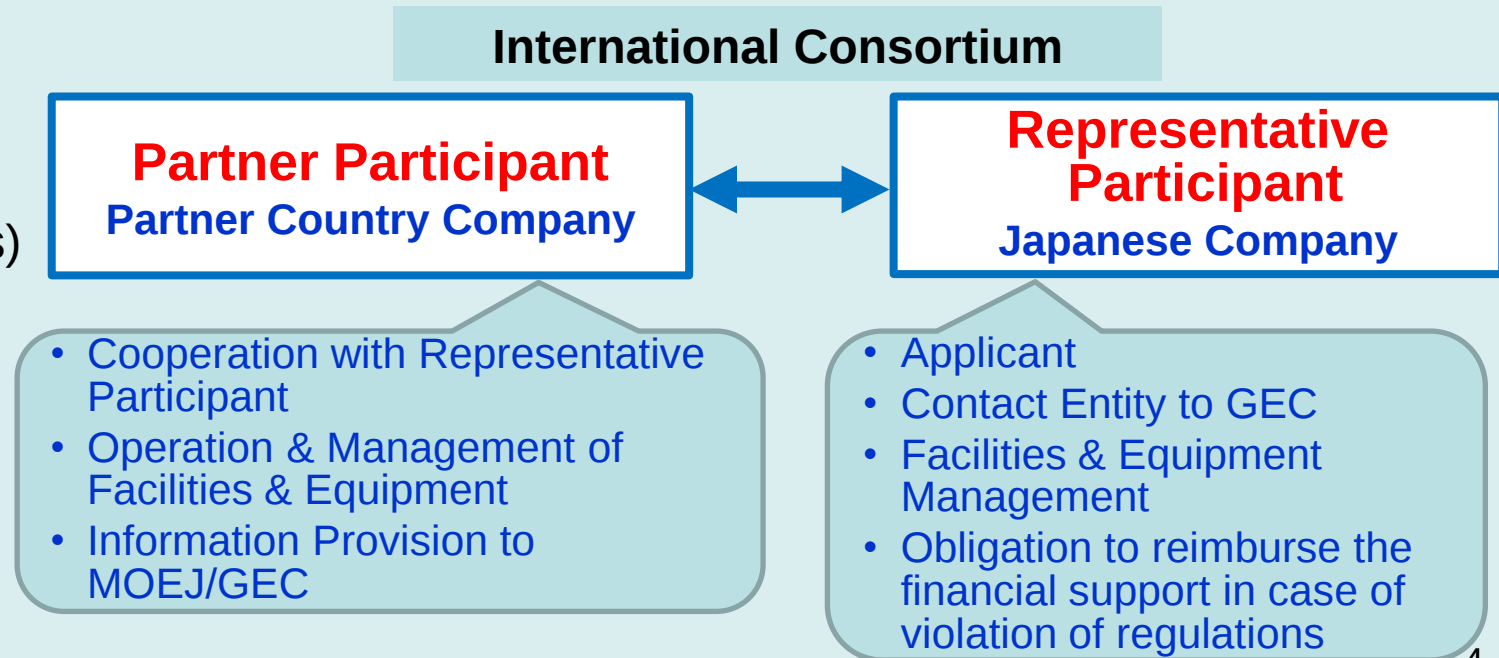
This financing programme aims to;

- Contribute to creating a decarbonized society through renovation and dissemination of high quality decarbonization technologies.
- Create innovation beneficial for both Japan and partner countries through collaboration (co-innovation).
- Contribute to fulfill the aim of a greenhouse gas reduction in Japan through the Joint Crediting Mechanism (JCM) .
- Bring benefits to the technology developers in Japan as a result.

Participant Eligibility

- Japanese entities (e.g. private companies)

Participants must establish the International Consortium that consists of foreign entities, etc.



Implementation Period of Financing Programme

- Project implementation period shall be within 3 years.

(Application documents for the Contract of Finance must be submitted in the first fiscal year.)

Ratio of Financial Support

- Small and medium-sized enterprises: 2/3
(Definition in the law of Japan)
- Participants who do not fall into the above classification
 - Project cost at time of the application exceeds ¥100,000,000 per fiscal year: 1/2
 - Project cost at time of the application does not exceed ¥100,000,000 per fiscal year: 1/3

- This financing programme is intended for renovation and demonstration of decarbonizing technologies that reduce energy-related CO2 emissions.
- Desirable projects are those that aim to systematize or package multiple technologies.

Eligible Technologies are contributing to;

- The reduction of energy-related CO2 emissions through waste management in partner countries.
- The reduction of CO2 emissions from the transport, household, or business sectors and others in partner countries.
- The promotion of renewable energy using solar power generation, wind power generation, geothermal power generation or hydroelectric power generation in partner countries.
- Transformation of social systems of partner countries into decarbonizing ones.
- The reduction of energy-related CO2 emissions the above cases.

- The financing programme covers the costs below.
- **Costs directly required to implement the project.**

Cost of ;

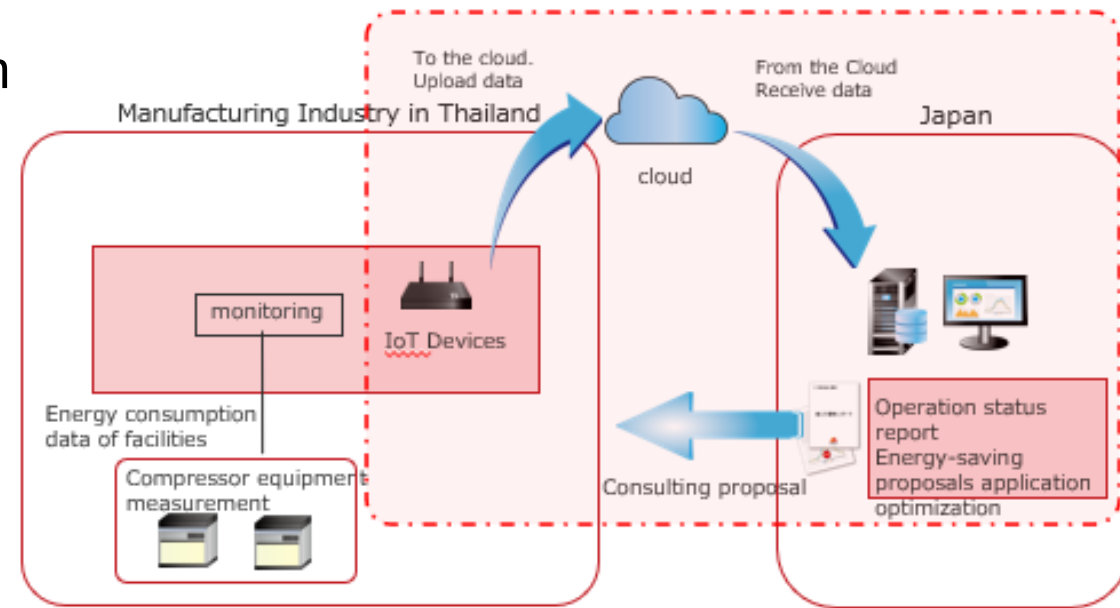
- Machinery and equipment
- Erection and installation
- Ancillary work
- Survey and test
- Facilities/instruments (including monitoring system)
- Administrative work

Development of compressor optimized operations service utilizing IoT and launch of demonstration project in Kingdom of Thailand

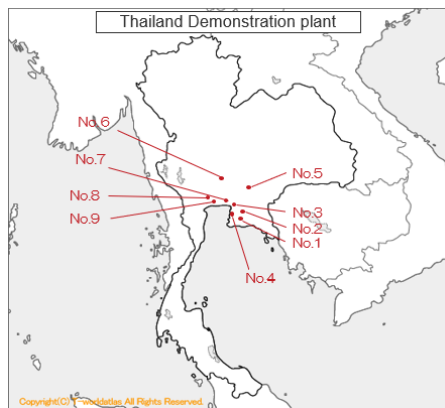
Representative Participant:
Chubu Electric Power Miraiz Company, Inc.

Outline of renovation and demonstration

- This project is the renovation and demonstration evaluation of devices necessary to develop an IoT-based compressor optimization operation service in Thailand, which has a proven track record in Japan.
- The aim of not only saving energy and reducing CO2 emissions by proposing operational optimization, but also improving the energy-saving capabilities of facility managers.



Outline of partner country / region



Demonstration sites:

9 business sites (automotive parts industry, etc.)

- Select sites in the vicinity of Bangkok for the demonstration.
- In order to test the communication environment, the demonstration sites will be selected as far away as possible.

Development of energy-saving Submerged Mechanical Aerator/Agitator for Wastewater Treatment System in ASEAN

Representative Participant:
HANSHIN ENGINEERING CO., LTD.

Outline of renovation and demonstration

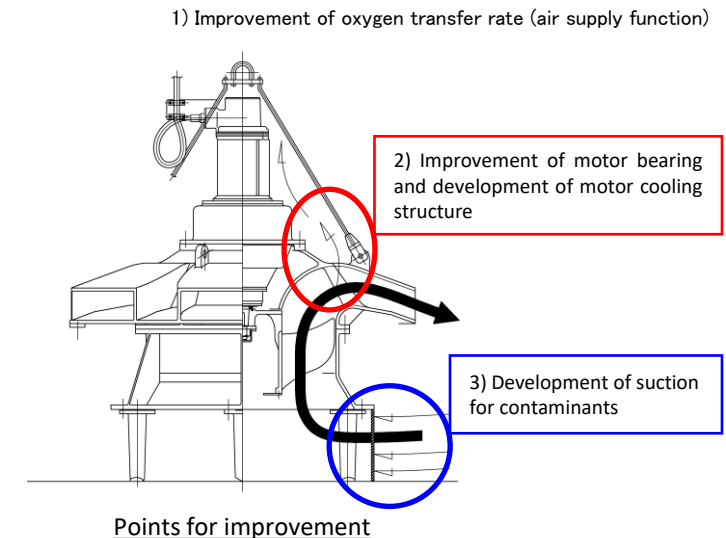
In ASEAN countries, along with the increase in treatment facilities for organic wastewater, the energy consumption of aeration and agitation equipment required for biological purification treatment is also increasing.

This project aims to;

- Improve submerged mechanical aeration and agitation equipment "Aquarator", which has high purification capacity with energy saving and CO2 reduction.
- Diffuse this equipment in ASEAN areas such as Thailand, utilize the technique that we developed.



Aquarator



Outline of partner country / region



Map data ©2017 Google

- Water supply coverage ratio in this region is 81.9%. In contrast, sewerage coverage is only 9.6%.
- While general aeration equipment needs a large amount of air, the aeration and agitation capacity is low, and not enough purification performance.

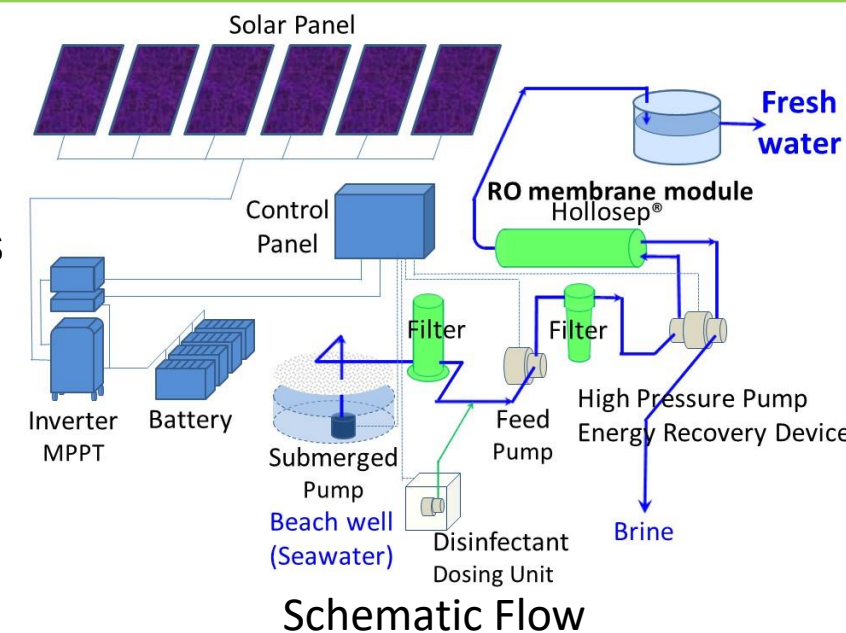
Developing and demonstration of small-scale Seawater desalination system operated by photovoltaic power

Representative Participant:
TOYOBO ENGINEERING CO., LTD.

Outline of renovation and demonstration

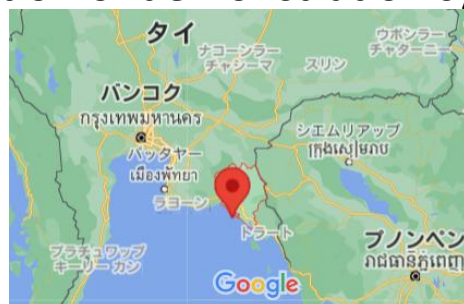
This project aims to;

- Develop and demonstrate the system operating a seawater desalination device by photovoltaic power generation.
- Supply safe and domestic water to island areas and coastal areas where without the electricity infrastructure, after demonstration.
- Contribute to reduction of CO2 emissions, as a result of using this low-carbon technology.
- Implement the renovation to reduce cost and facilitate system maintenance according to the sunshine conditions, seawater quality and local demand in Thailand.



Outline of partner country / region

Location of demonstration system

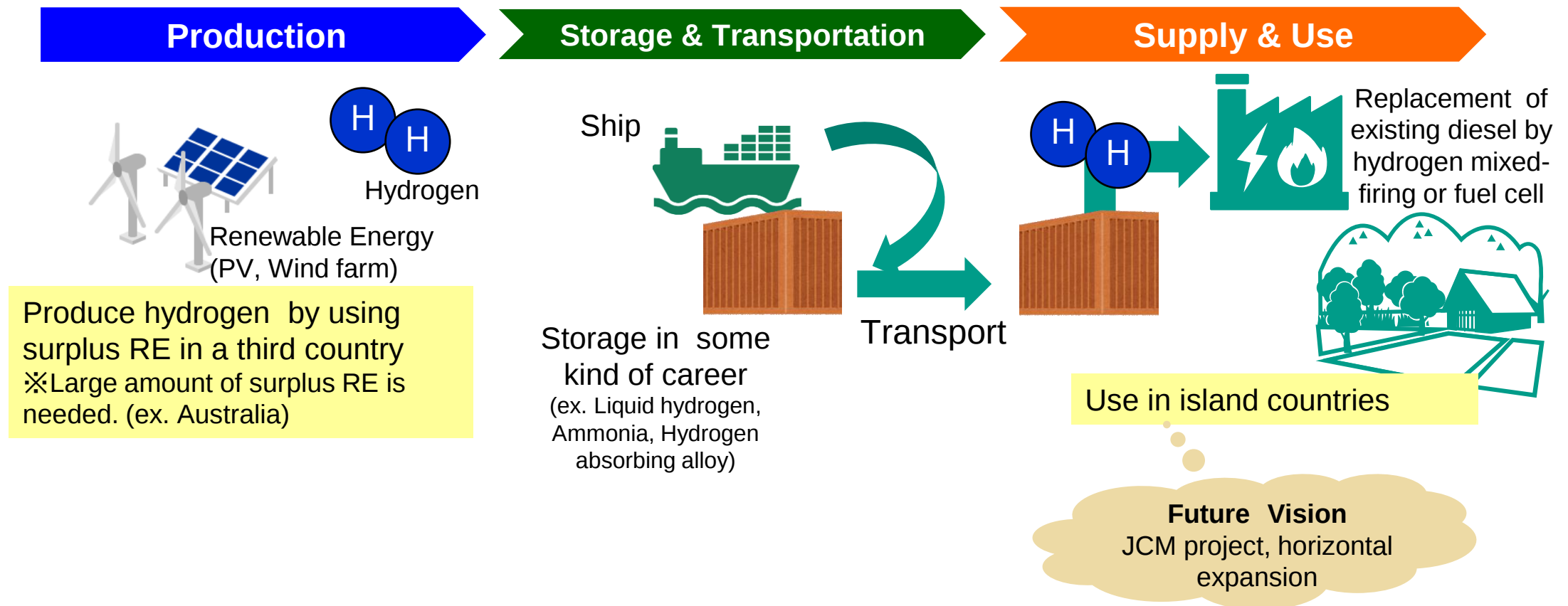


地図データ@2021Google

- There are many remote islands where are weak electricity infrastructure in Thailand and neighboring island countries.
- The residents of these areas secure domestic water by rainwater and transportation from the land and are in water shortage situation at all the time.
- A seawater desalination system is necessary in these areas, in order to obtain safe water.

“Pilot Project for Comprehensive Support throughout the Whole Hydrogen Supply Chain Abroad”

- Produce and storage renewable hydrogen in a third country where renewable energy is abundant, and transport to supply and use in island countries.
- Cultivate demand market by supplying renewable hydrogen to island countries, which will lead to JCM projects and help developing countries transition to a decarbonized society.



International Consortium

Partner Participants:

- Cooperation with Representative Participant
- Operation & Management of Facilities & Equipment
- Information Provision to MOEJ/GEC

Representative Participant:

- Applicant
- Contact Entity to GEC
- Facilities & Equipment Management
- Obligation to reimburse the financial support in case of violation of regulations

Representative Participant
Japanese Company

Partner Participant
Third Country Company
(ex. Australia)

Partner Participant
Partner Country Company
(ex. Island Country)

Production

Storage & Transportation

Supply & Use

- 1. Budget for projects starting from FY 2021:**
JPY 500 million (Approx. USD 5 million)
- 2. Ratio of Financial Support :**
50% of Costs Eligible for Financing
- 3. Costs Eligible for Financing :**
Costs directly required to implement the project
 - a. Machinery and equipment
 - b. Erection and installation
 - c. Ancillary work
 - d. Survey and test
 - e. Facilities/instruments (including monitoring system)
 - f. Administrative work

1. Implementation Period of the Project :

Within 3 fiscal years

2. Period of Financing Support :

1 fiscal year

3. Evaluation of financing support has 2 steps as follows. Applicants must submit 2 different types of application documents.

- **Evaluation of adoption:** When implementing a project that spans multiple fiscal years, the plan of the entire period should be described in the project implementation plan at the time of application.
- **Evaluation of contents:** Applicants selected for the financing support must submit application documents for the Contract of Finance each fiscal year.

ขอบคุณครับ
Thank you!

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