

Financing Programme for JCM Model Projects and JCM Global Match

26 September 2024

Global Environment Centre Foundation (GEC)



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• JCM Model Projects Overview

2

• Project Trend

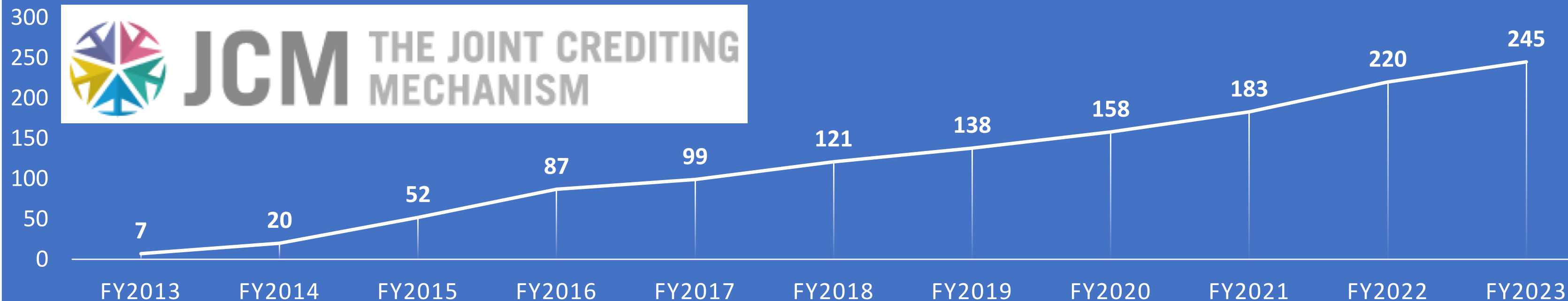
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• JCM Global Match

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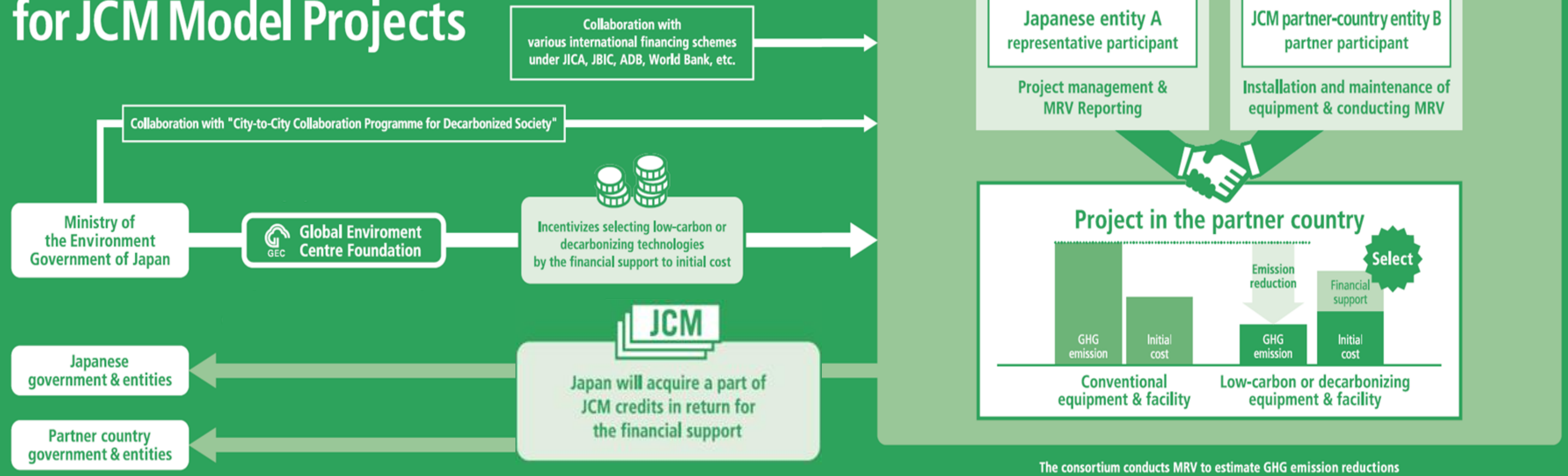
• Conclusion

NUMBER OF SELECTED JCM PROJECTS BY MOEJ



 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)	 Tunisia Aug. 26, 2022 (Tunis)	 Azerbaijan Sept. 5, 2022 (Baku)	 Moldova Sept. 6, 2022 (Chisinau)	 Georgia Sept. 13, 2022 (Tbilisi)
 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)	 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)
 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)	 Kyrgyz Republic July. 6, 2023 (Bishkek)	 Kazakhstan Oct. 30, 2023 (Astana)	 Ukraine Feb. 19, 2024 (Tokyo)	

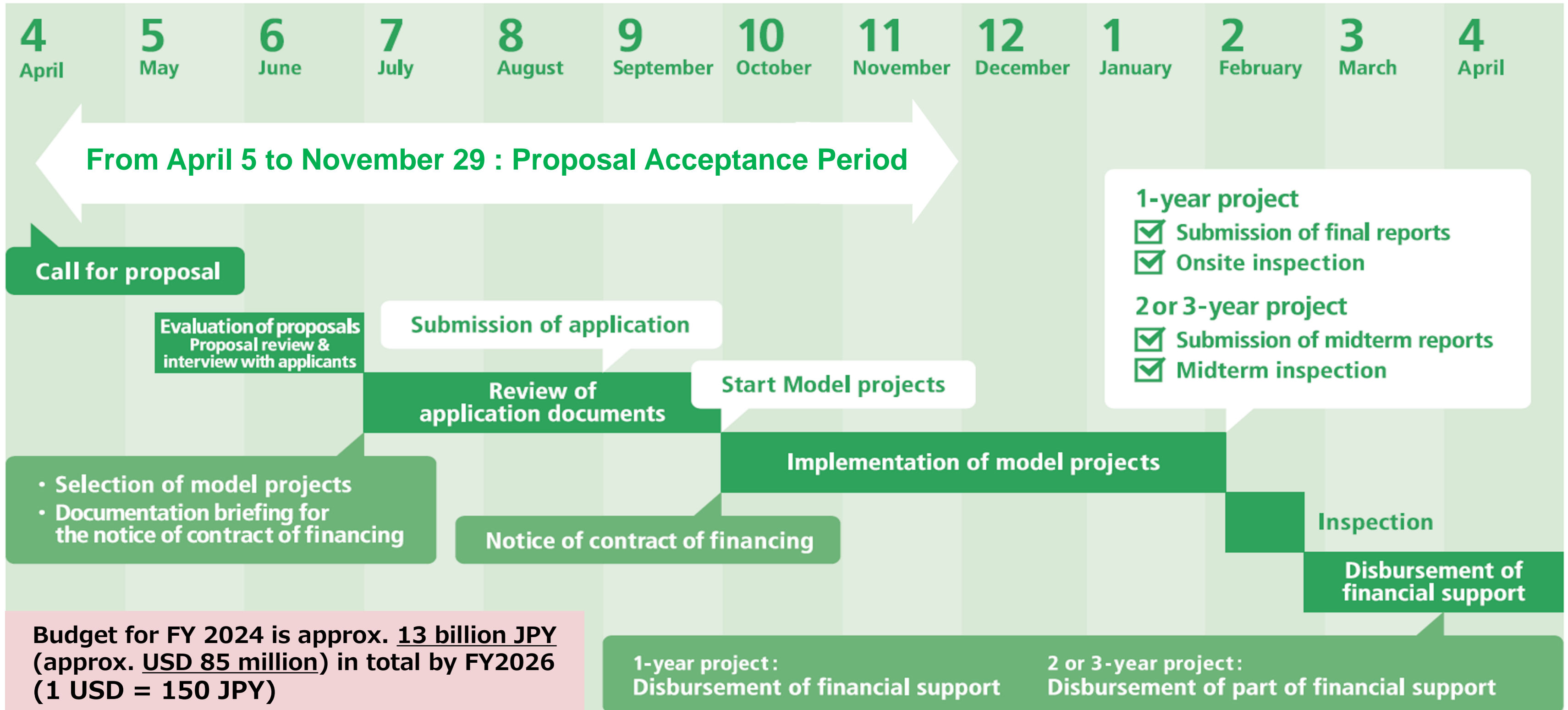
Financing Programme for JCM Model Projects



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.

JCM Model Projects Schedule in FY2024



Development Step

Matching with a Japanese Partner



Development of proposal and submission to GEC



Share PIN with Partner country and approve the project

※PIN: Project Idea Note



Announcement of preliminary selection result



Development of application documents for contract of finance and submission to GEC



Conclusion of the contract of finance

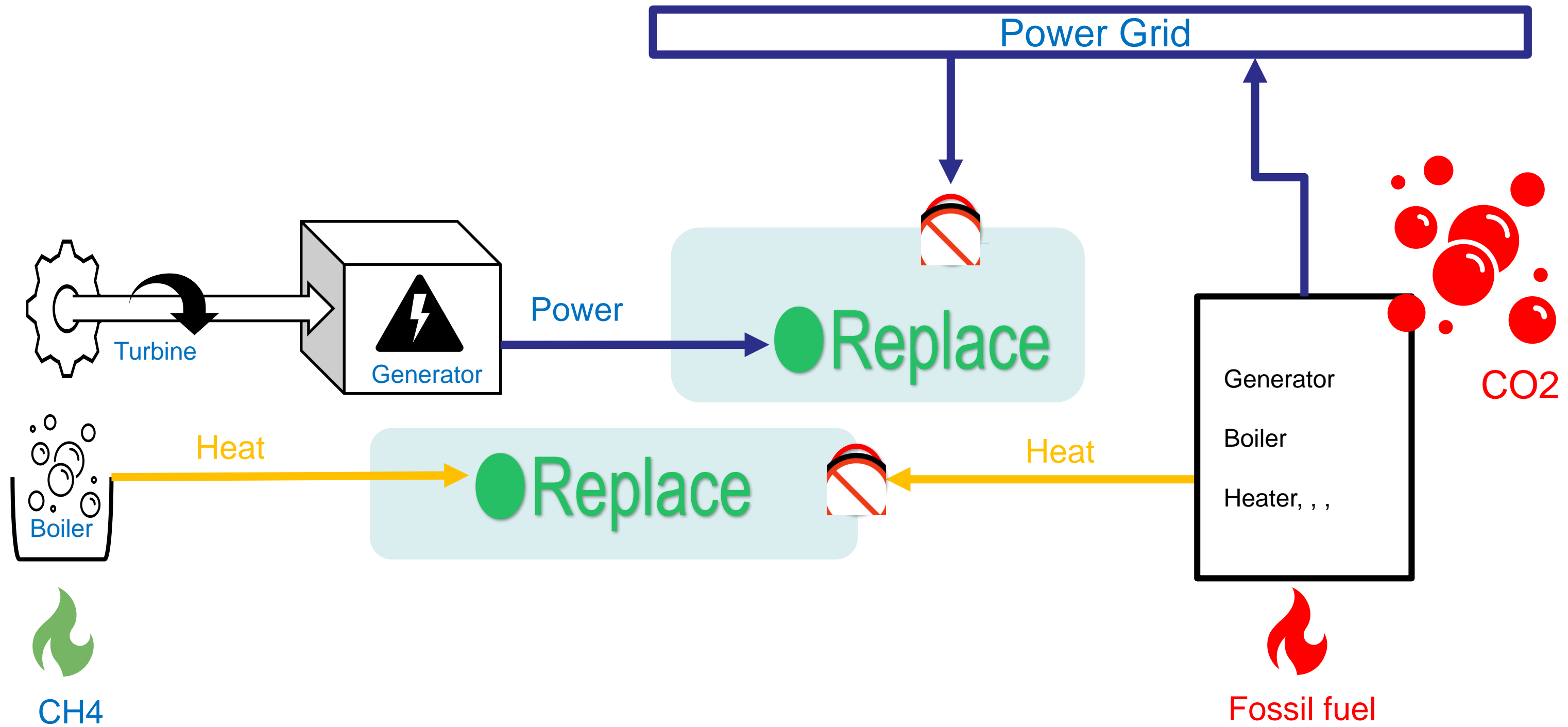


Starting the JCM Model Project

What kind of projects are supported by Financing Programme?

⇒ Excerpt from Guidelines for Submitting Proposals
[\(tentative\)2024 Guidelines for Submitting Proposals.pdf \(gec.jp\)](#)

- (a) Projects that reduce energy-related CO2 emissions with leading decarbonizing technologies in the partner countries or developing countries, with which Japan has signed, and that are expected to contribute to achieving Japan's NDC through the JCM;
- (b) Projects contribute to realization of SDGs (Sustainable Development Goals). The installation and operation of the facilities/equipment shall comply with the relevant laws and regulations of the partner country and international practices and guidelines regarding the environmental and human rights protection.
- (c) Reduction of GHG emissions achieved by the projects can be quantitatively calculated and verified.



What is the criteria of cost-effectiveness?

JPY4,000/tCO₂equivalent

$$= \frac{\text{Amount of financial support[JPY]}}{\text{Emission reductions of GHG [tCO}_2\text{equivalent/y]} \times \text{legal durable years[y]}}$$

※ Legal durable years of the facilities is stipulated by the Japanese law, and are dependent on the industry classification.

JPY3,000/tCO₂equivalent

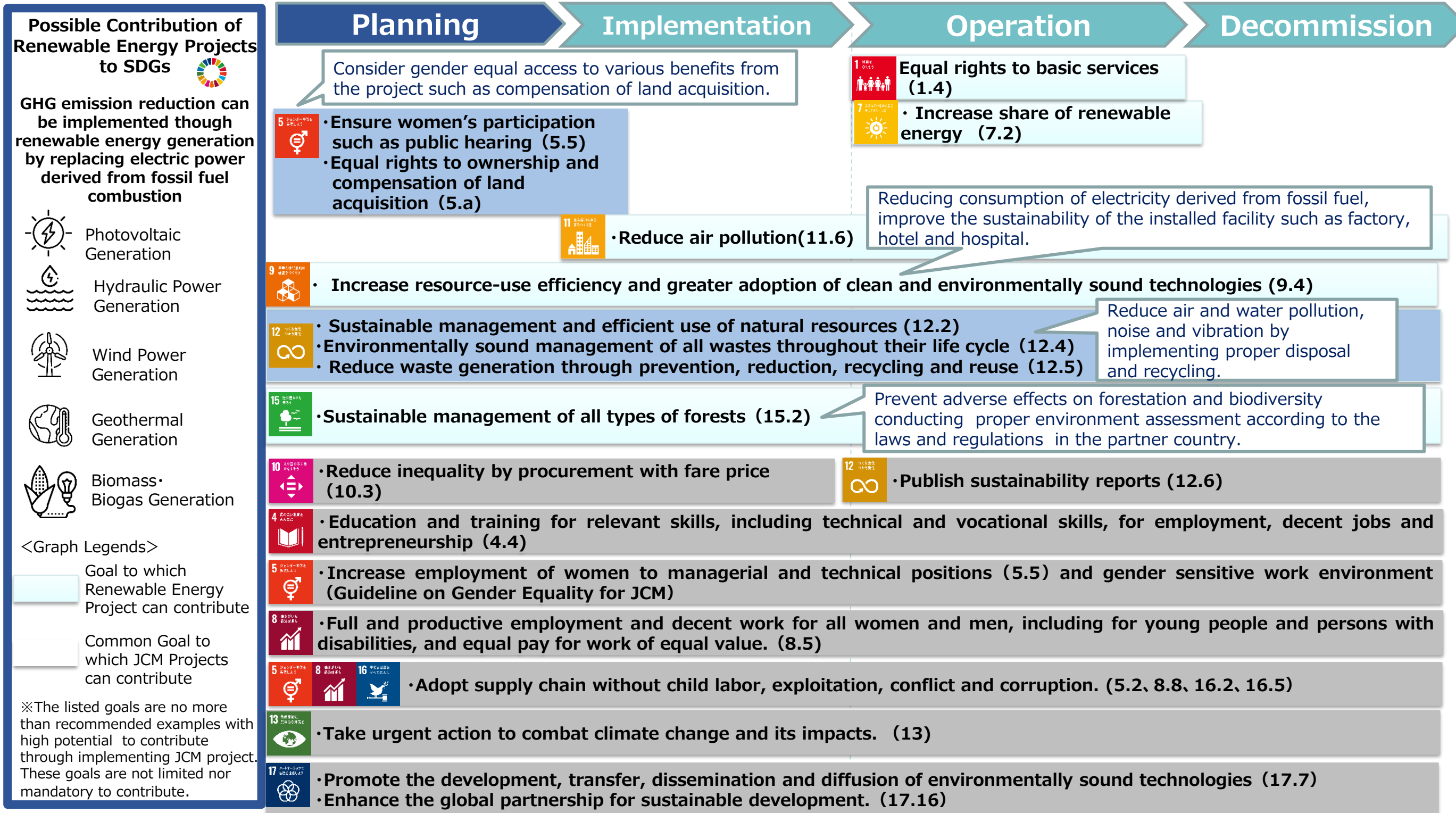
In case the number of similar technological Projects in each country is 5 to 9.

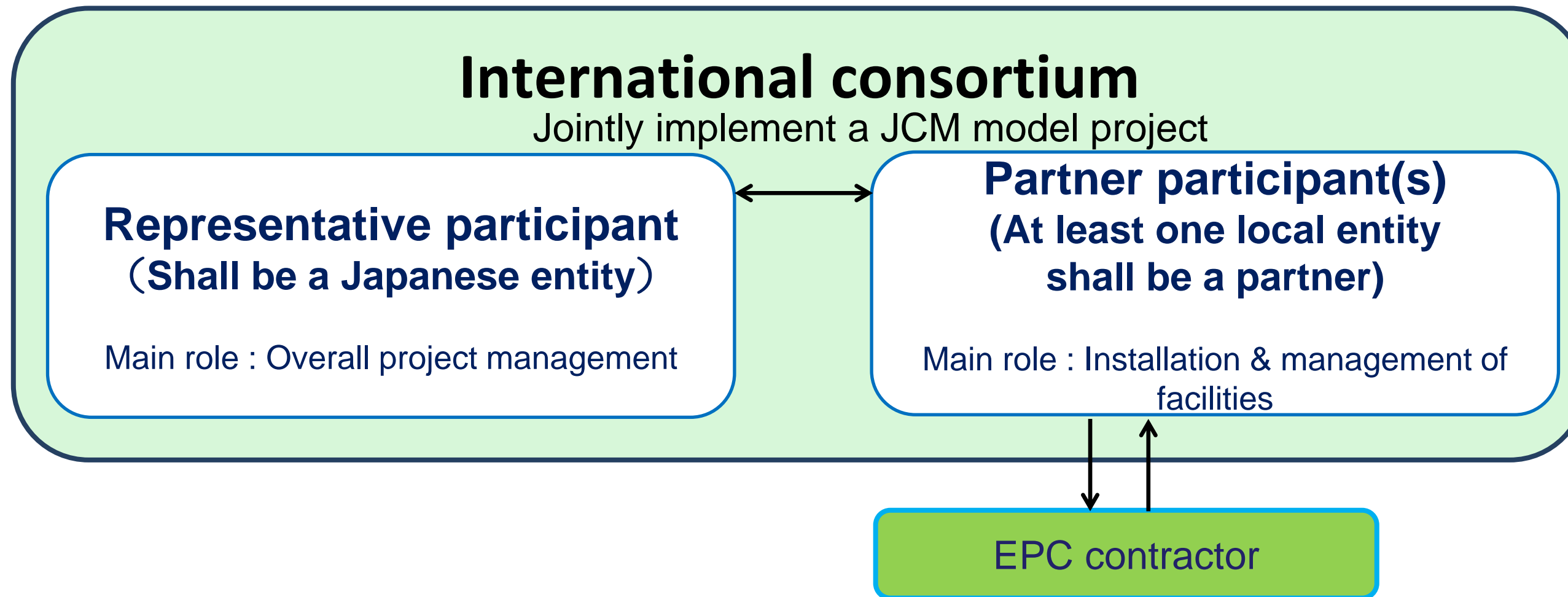
JPY2,500/tCO₂equivalent

Solar power project

JPY500/tCO₂equivalent

Hydropower project





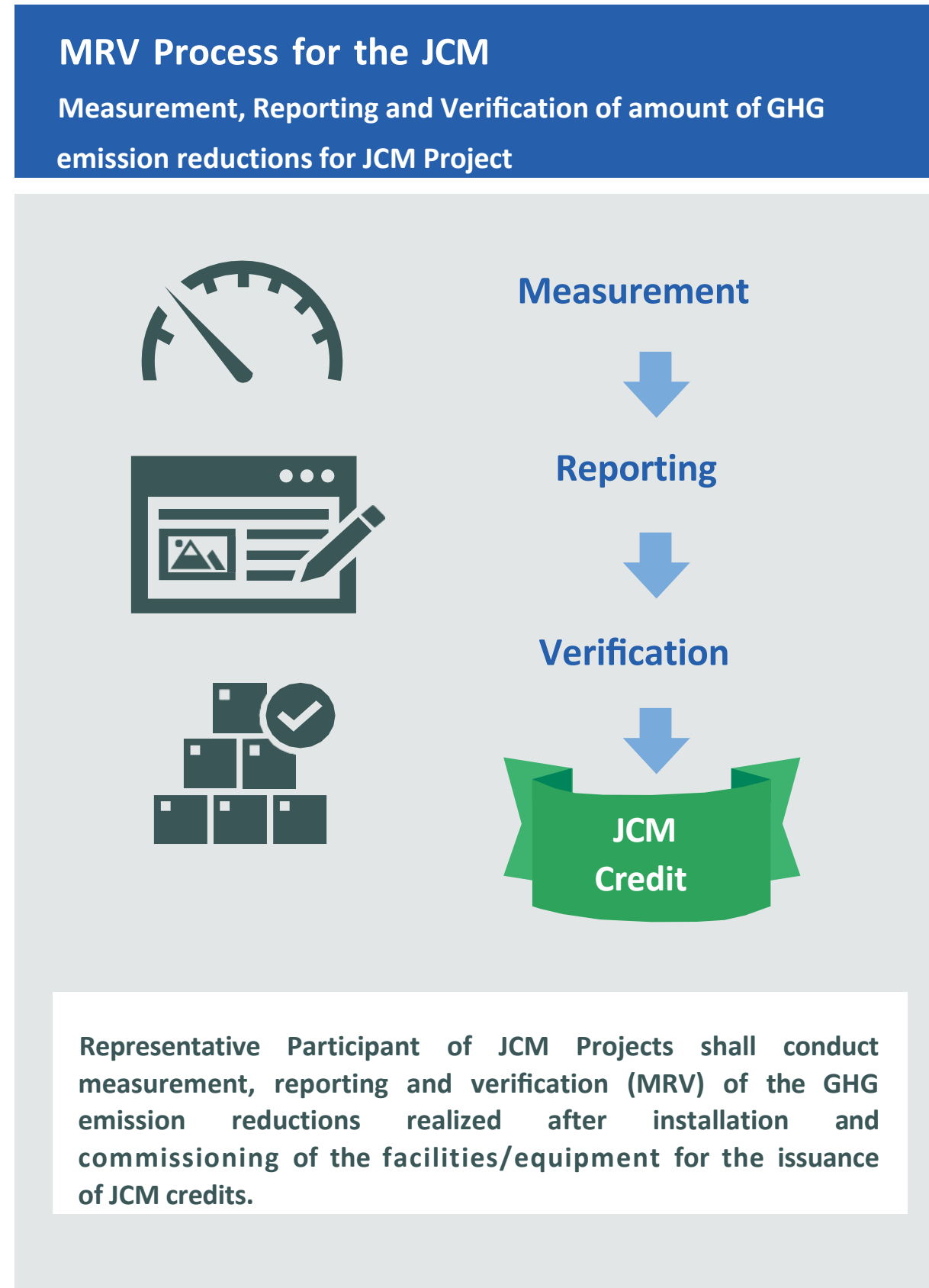
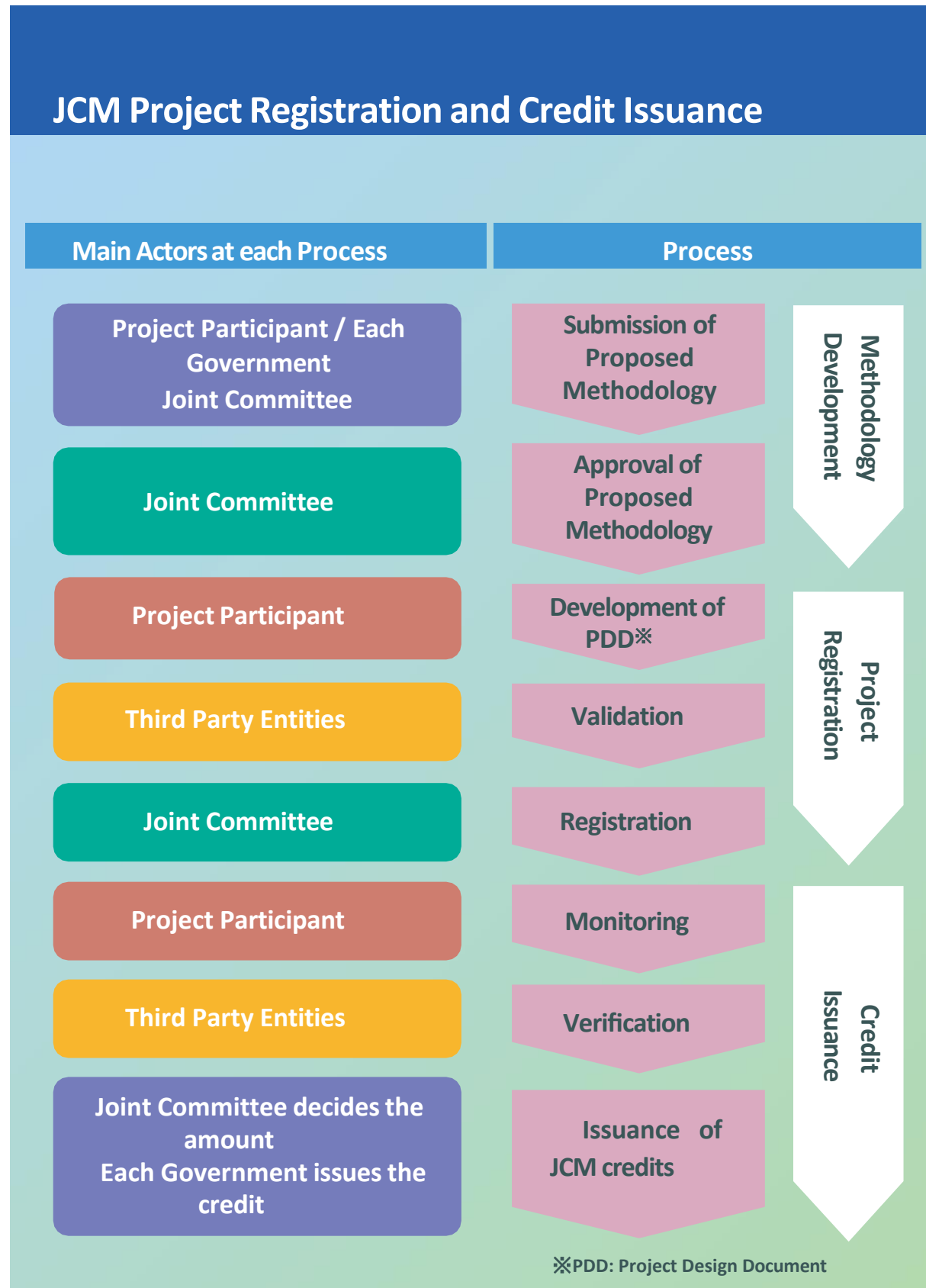
➤ Consortium must include both an owner and user of facility installed by the model project.

Categorization by applied technology type and Support

Maximum Percentage of Financial Support

Number of selected project(s) using a similar technology in each country	Percentage of financial support
0	Up to 50%
1 to 3	Up to 40%
4 to 7	Up to 30%
8 to 9	Up to 20%
More than 10	Not applicable

Sector	Technology	Mongolia	Bangladesh	Kenya	Maldives	Vietnam	Lao PDR	Indonesia	Costa Rica	Palau	Cambodia	Mexico	Saudi Arabia	Chile	Myanmar	Thailand	Philippines	Tunisia	Sri Lanka	
		MN	BD	KE	MV	VN	LA	ID	CR	PW	KH	MX	SA	CL	MM	TH	PH	TN	LK	
1. Energy Efficiency	Air Conditioning System					4		2								1				7
	Chiller		2			5		5	1		1					5				19
	Refrigerator							1							2	4				7
	Absorption Chiller Using Waste Swirling Induction Type Air-Fridge and Freezer Showcase							2									2			4
	Boiler	2				2		4				1			2	3				14
	Heat Medium Boiler							1												1
	Double Bundle-type Heat Pump					1		1									1			3
	Water Heater Using Waste								1											1
	Waste Heat Recovery System														2	1				3
	Heat Exchanger																1			1
	Transformer					4	2													6
	LED Lighting							2									1			3
	LED Lighting with Dimming					2		1			1									4
	Pump					1														1
	Air Compressor					1											1			2
	Aeration System							1												1
	Regenerative Burners							1												1
	Gas Fired Baking Furnace					1														1
	Induction Furnace								1								1			1
	Gas Fired Melting Furnace								1											1
	Air Conditioning Control					1											1			2
	Frequency Inverter for Pump					1					1									2
	Loom		1					2									1			4
	Old Corrugated Cartons							1												1
	Battery Case Forming Device					1														1
	Electrolyzer in Chlorine													1			1			2
	Wire Stranding Machines					1														1
Autoclave							2												2	
Multi-effect Distillation System											1								1	
Injection Modling Machine								1											1	
2. Renewable Energy	Solar Power Plant	5	1	4	1	17	3	9	1	5	3	2	2	12	1	24	11	2	1	104
	Solar Power Plant with Battery							1						1						2
	Small Hydropower Plant					1		10										2		13
	Wind Power Plant					1														1
	Geothermal Power (Binary)														1	1				3
	Geothermal Power (Flush)																			1
	Biomass Power Plant					3		1												6
	Biogas Power Plant																			1
	Biomas boiler					2											1			3
	Biogas boiler															1		1		2
	Biomass Co-generation					1											1			2
3. Effective Use of Energy	Power Generation by Waste							1							1	2	1		5	
	Gas Co-generation							2								4			6	
4. Waste Handling and Disposal	Battery													1					1	
	Waste-to-Energy Plant					1									1				2	
5. Transportation	Power Generation by Methane										1								1	
	Digital Tachograph System					1													1	
	CNG-Diesel Hybrid Bus							1											1	
	Reefer Container					1													1	
Total	Number of technology : 51	7	4	4	1	53	5	54	3	5	6	5	3	15	11	58	20	2	1	257



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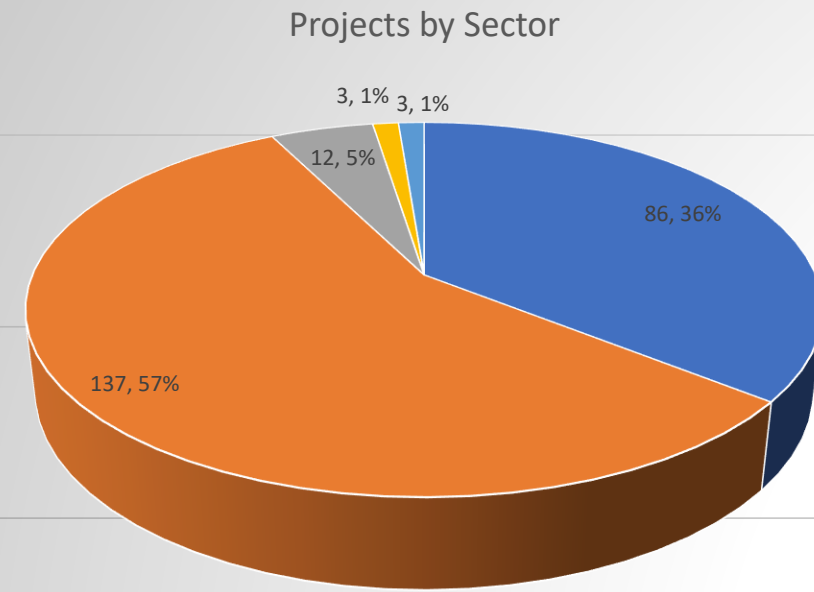
• JCM Global Match

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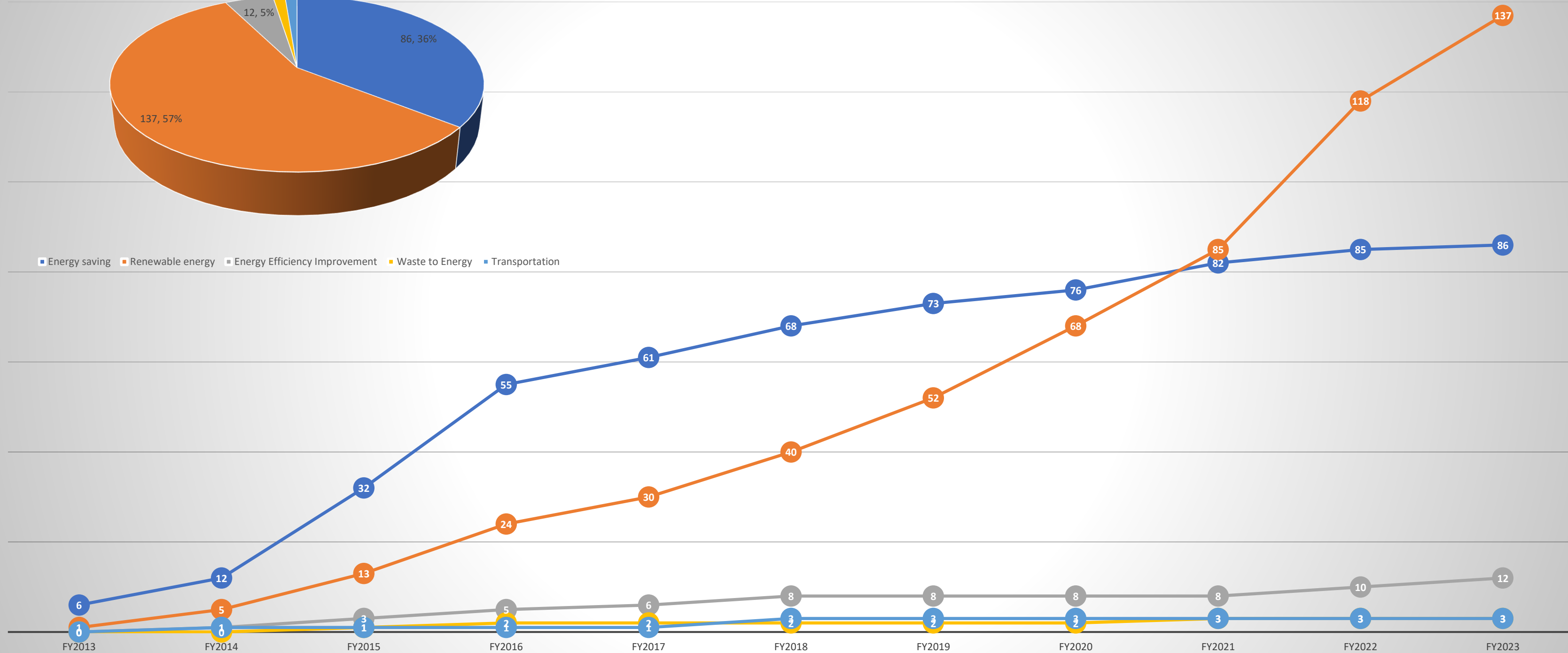
• Conclusion

Partner Country	Representative Participant	Project Name	Sector	Estimated GHG Reduction (tCO ₂ /year)
Mexico	BOT Lease Co., Ltd.	Introduction of 0.5MW Rooftop Solar Power System to Automotive Parts Factory (JCM Eco Lease Scheme)	Renewable Energy	392
Philippines	Global Engineering Co., Ltd.	Introduction of 6MW Power Generation System by Waste Heat Recovery for Cement Plant	Effective Use of Energy	21,244
Philippines	Kyuden International Corporation	27MW Solar Power Project in Dagohoy, Bohol Island	Renewable Energy	20,564
Philippines	Tokyo Century Corporation	Introduction of 1.2MW Rooftop Solar Power System to Electronic Equipment Assembly Factory (JCM Eco Lease Scheme)	Renewable Energy	697
Indonesia	AURA Green Energy Co.,Ltd	12MW Biomass Power Plant Project in Aceh Province, Sumatera	Renewable Energy	33,573
Indonesia	AGC Inc.	Improvement of Combustion Method and Furnace Shapes in Flat Glass Production Melting Furnace	Energy Efficiency Improvement	5,747
Indonesia	Alamport Inc.	Introduction of 3MW Rooftop Solar Power System to Paper Factory in Java Island	Renewable Energy	2,182
Chile	Farmland Co., Ltd.	26.3MW Solar Power and 48MWh Storage Battery Project Utilizing Farmland in the Metropolitan Area and O'Higgins Region	Renewable Energy	20,197
Chile	Sojitz Corporation	Introduction of 196MWh BESS in Huatacondo PV Plant in Tarapaca Region	Effective Use of Energy	17,975
Philippines	Kanematsu Corporation	11.3MW Mini Hydro Power Plant in Tumauini	Renewable Energy	29,342
Philippines	Kyuden International Corporation	10MW Solar Power Project in San Jose, Luzon Island	Renewable Energy	6,846
Philippines	Tokyo Century Corporation	7MW Solar Power Project in Collaboration with Power-supply Company	Renewable Energy	4,731
Sri Lanka	Shibata Corporation Co., Ltd.	13.5MW Solar Power Project in Kebithigollewa, North Central Province	Renewable Energy	6,511
Vietnam	eREX Co.,Ltd	50MW Biomass Power Project in Tuyen Quang Province	Renewable Energy	83,118
Vietnam	eREX Co.,Ltd	50MW Biomass Power Project in Yen Bai Province	Renewable Energy	81,802
Vietnam	DAIICHI JITSUGYO CO., LTD.	Introduction of Biomass Co-generation System to Food Factory in Bien Hoa, Dong Nai Province	Renewable Energy	24,967
Vietnam	The Kansai Electric Power Company, Incorporated	Energy Supply Project by 15MW Rooftop Solar Power System to Factories	Renewable Energy	5,192
Vietnam	Marubeni Corporation	Introduction of 4.1MW Rooftop Solar Power System to Medical Equipment, Food, and Automobile Parts Factories	Renewable Energy	1,463
Vietnam	Tokyo Century Corporation	Introduction of 1.9MW Rooftop Solar Power System to Textile and Chemical Products Factories	Renewable Energy	739
Vietnam	The Kansai Electric Power Company, Incorporated	Energy Supply Project by 1.25MW Rooftop Solar Power System to Plastics Factory	Renewable Energy	393
Tunisia	Eurus Energy Holdings Corporation	50MW Solar Power Project in Tozeur Region	Renewable Energy	48,157
Tunisia	Eurus Energy Holdings Corporation	50MW Solar Power Project in Sidi Bouzid Region	Renewable Energy	47,101

Projects by Sector



■ Energy saving
 ■ Renewable energy
 ■ Energy Efficiency Improvement
 ■ Waste to Energy
 ■ Transportation



● Energy saving
 ● Renewable energy
 ● Energy Efficiency Improvement
 ● Waste to Energy
 ● Transportation

Improvement of Combustion Method and Furnace Shapes in Flat Glass Production Melting Furnace
 PP (Japan): AGC Inc.
 PP (Indonesia): PT ASAHIMAS FLAT GLASS Tbk

Outline of GHG Mitigation Activity

In a flat glass production process, a large amount of fossil fuel is consumed mainly in the melting process of raw materials. Therefore, improvement in this energy efficiency greatly contributes to reduction of greenhouse gas (GHG) emissions.

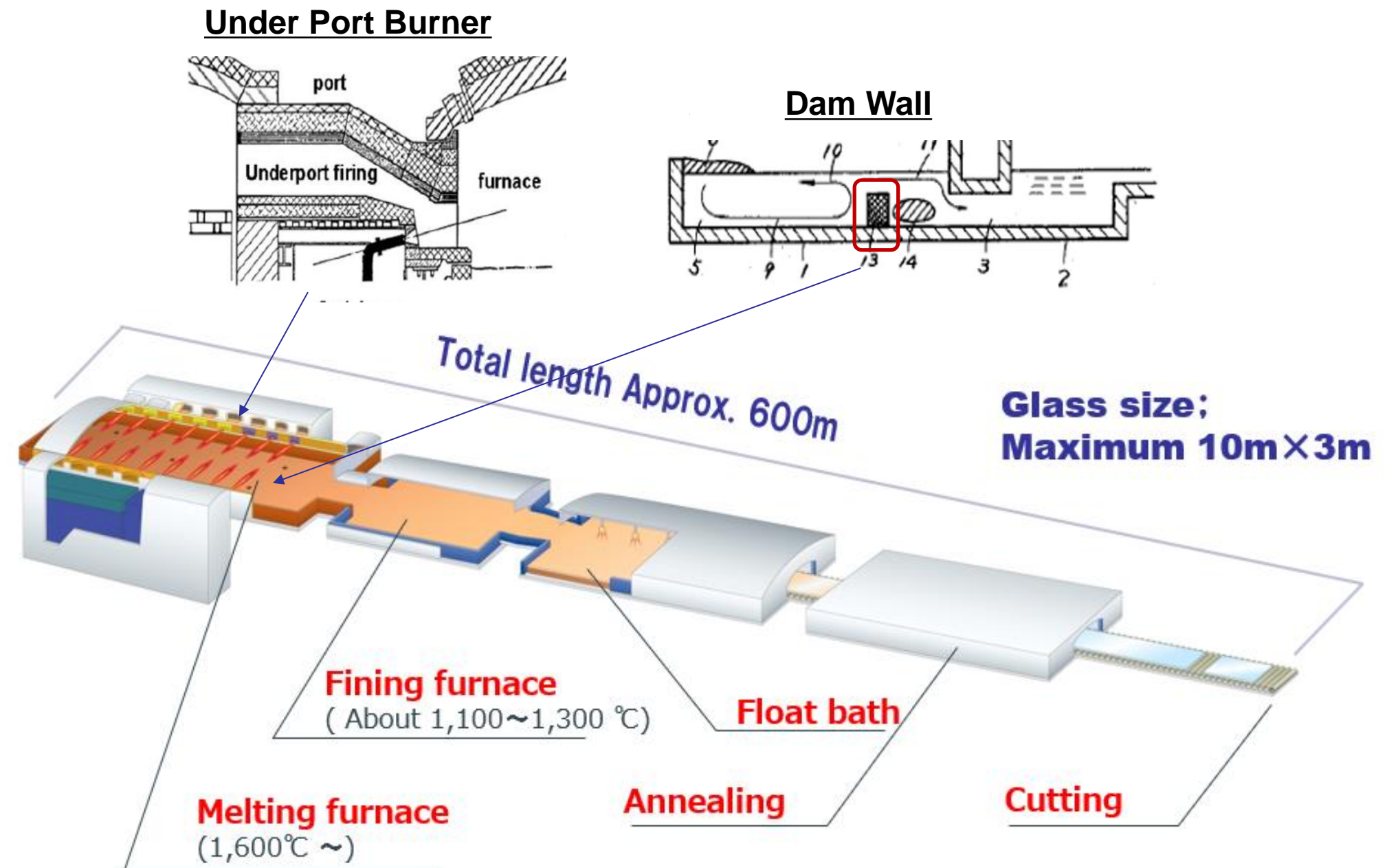
In this project, a furnace structure is improved to save energy consumption by the following two changes.

A. Change in combustion method:

Through port burner \Rightarrow Under port burner

B. Change in the melting tank floor structure:

Flat structure \Rightarrow Dam wall structure



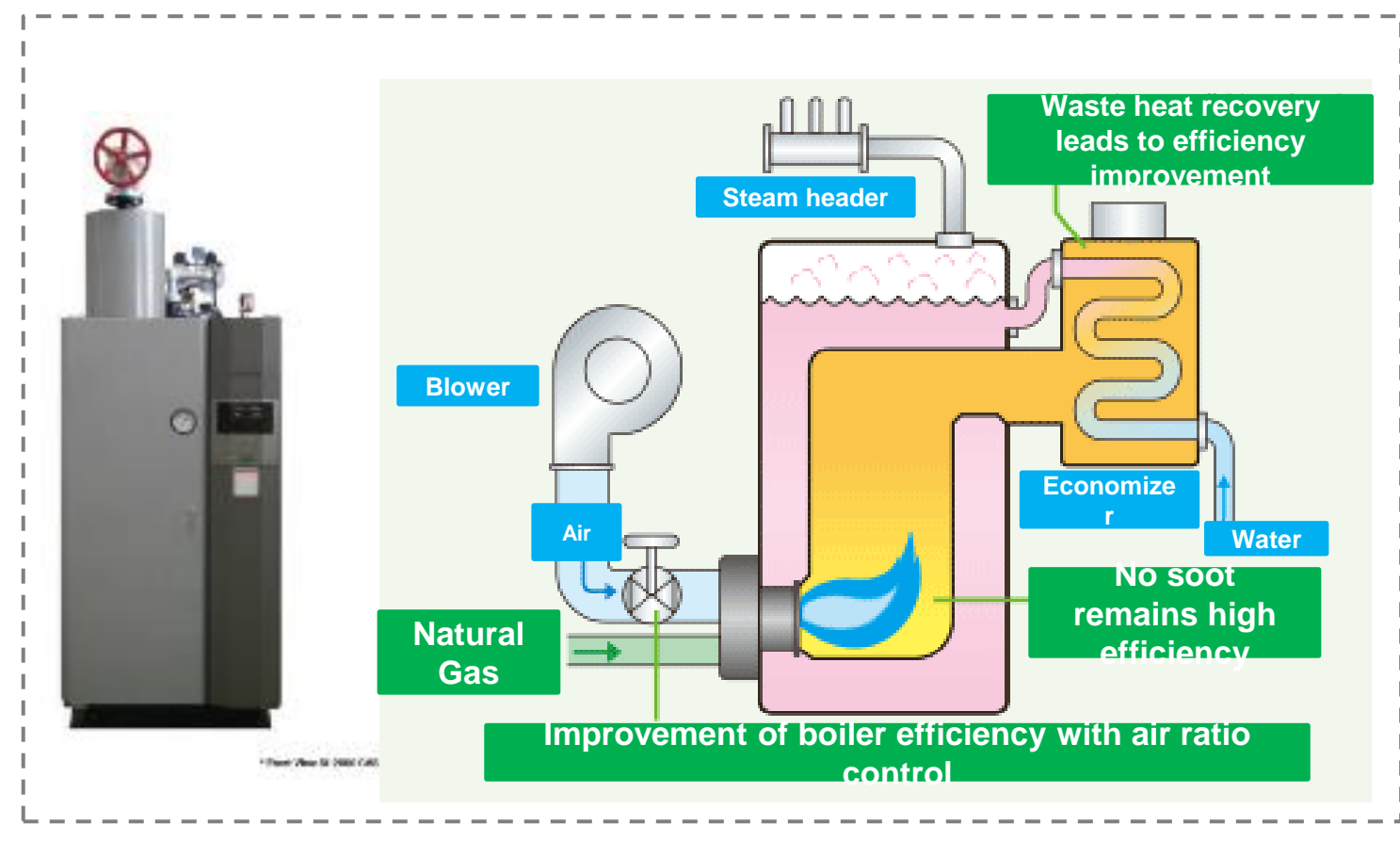
Introduction of High-efficiency Once-through Boiler System to Chemical Factory

PP (Japan): DIC Corporation

PP (Indonesia): PT. DIC GRAPHICS

Outline of GHG Mitigation Activity

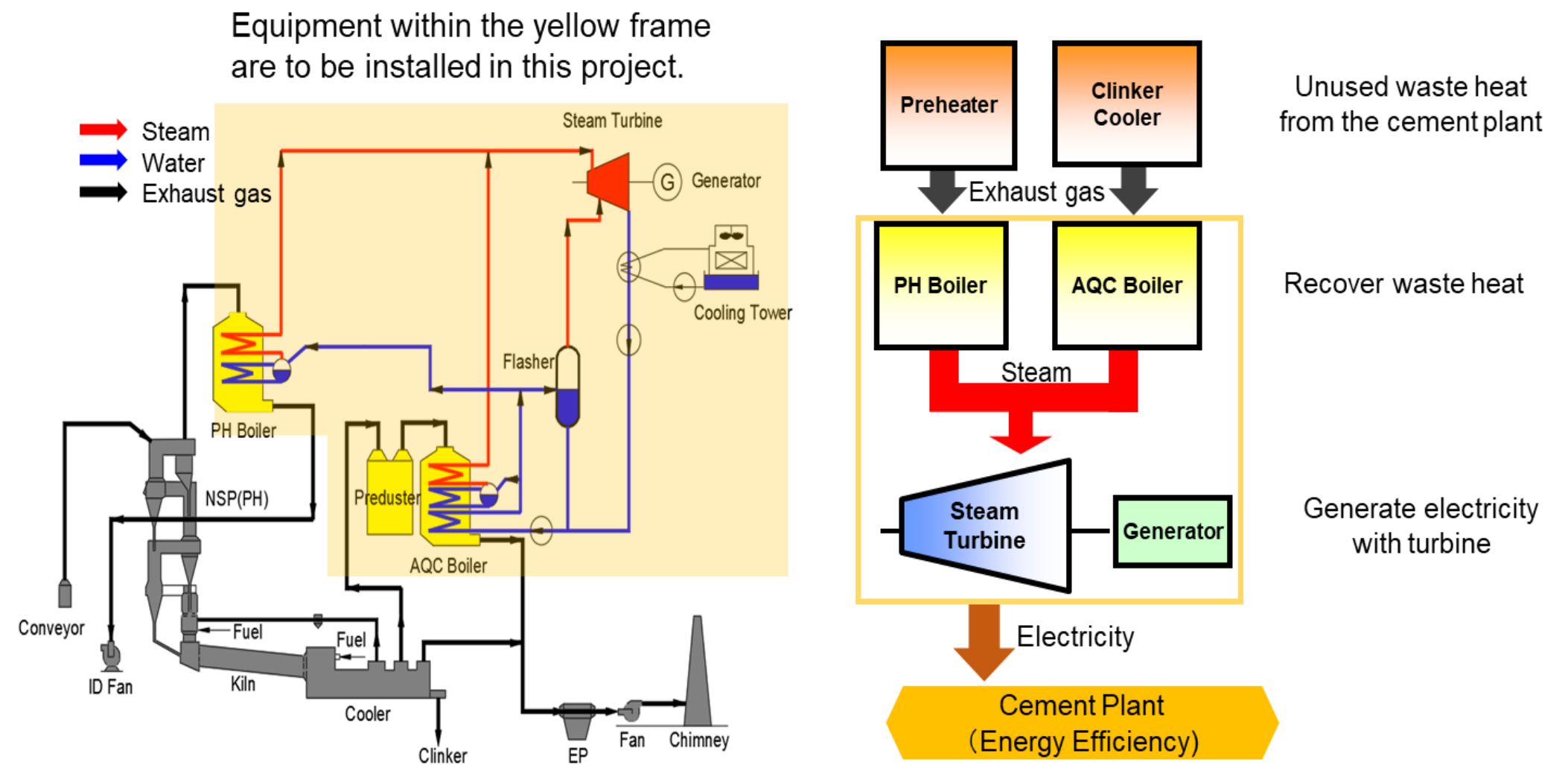
This project reduces energy consumption and greenhouse gas (GHG) emissions by installing natural gas-fired high-efficiency once-through boiler system in the factory where coal-fired boiler mainly has been used.



Introduction of 6MW Power Generation System by Waste Heat Recovery for Cement Plant PP (Japan): GLOBAL ENGINEERING Co., Ltd. PP (Philippines): REPUBLIC CEMENT & BUILDING MATERIALS, INC.

Outline of GHG Mitigation Activity

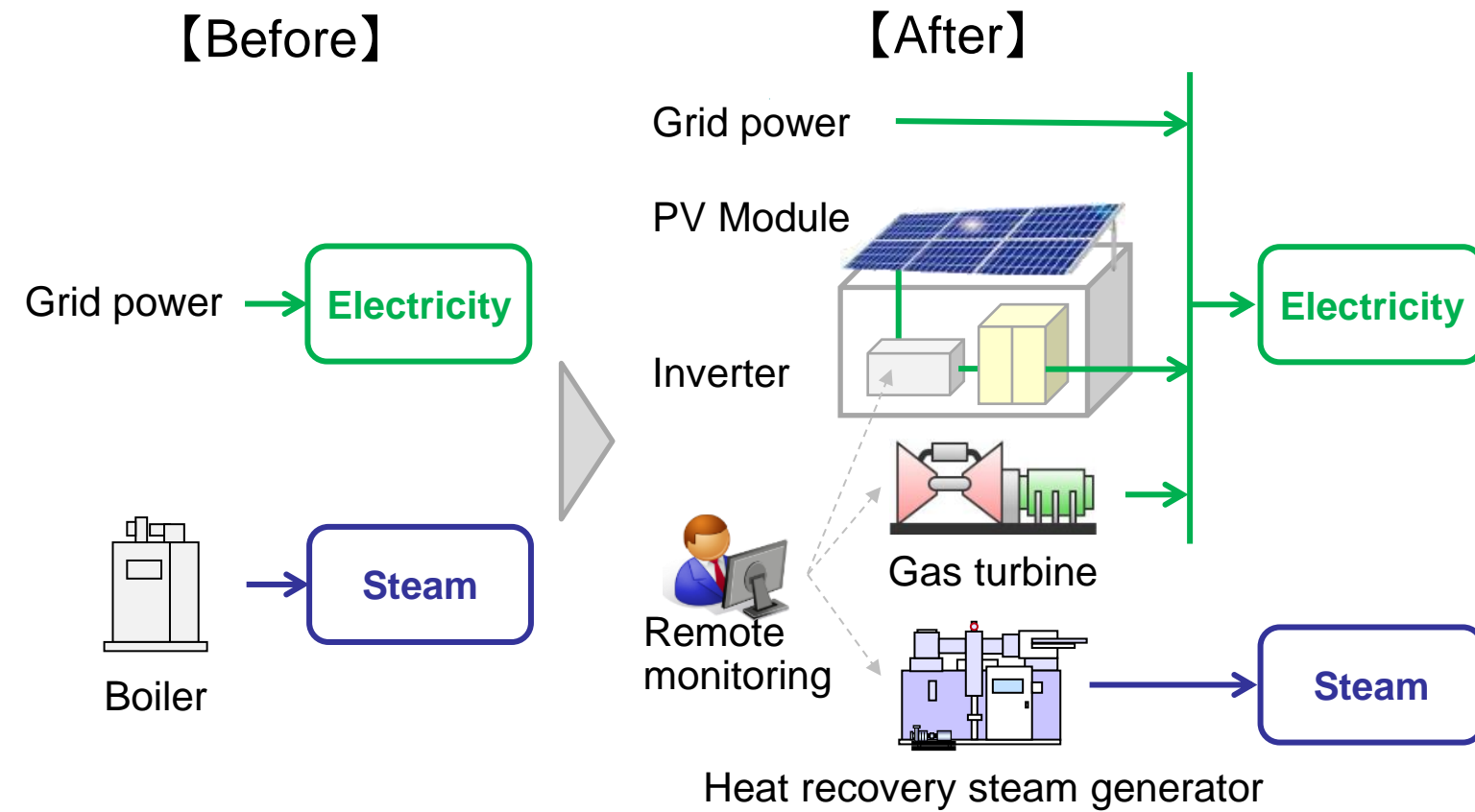
This project introduces a 6MW waste heat recovery power generation system in the existing cement manufacturing plant in Bulacan in the Central Luzon region. The system makes use of the unused waste heat, which is released during the calcining process of cement production, to generate electricity and effectively reduces electricity from fossil fuel, resulting in the reduction of greenhouse gas (GHG) emissions. This Waste heat recovery power generation technology is selected for a JCM Model Project in the Philippines for the first time. This project also contributes to the nation's Roadmap, "The Philippine Sustainable Finance Roadmap" launched in 2021, which focuses on the transition to a low carbon economy.



Introduction of Gas Co-generation System and 22MW Rooftop Solar Power System to Tire Factory
PP (Japan): The Kansai Electric Power Company, Incorporated
PP (Thailand): Kansai Energy Solutions (Thailand) Co., Ltd.

Outline of GHG Mitigation Activity

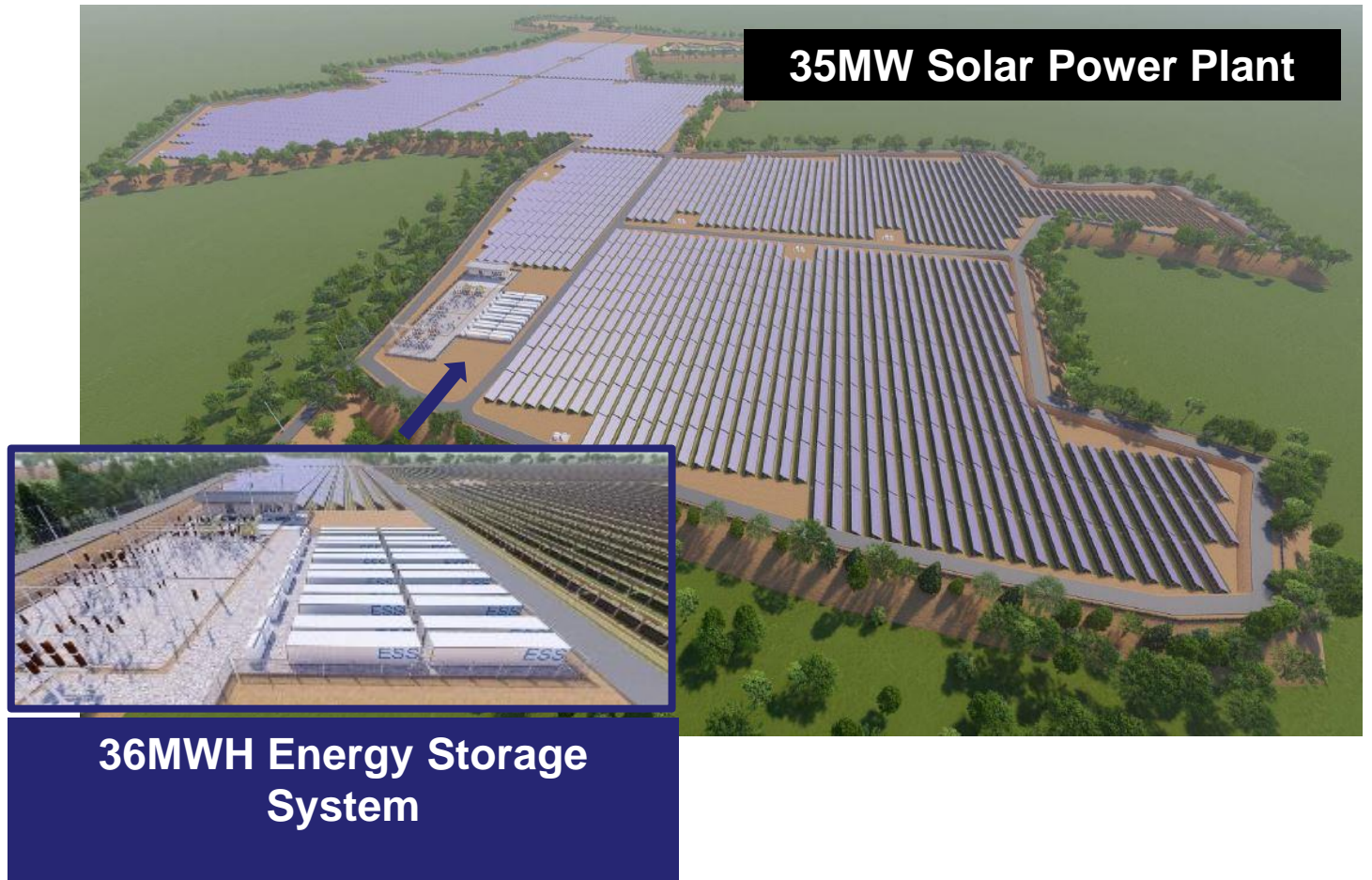
A Gas Co-generation System (6.6MW class × 2 units) and a Rooftop Solar Power System (total of about 22 MW) are installed to the tire factory, and all the generated power and steam are supplied to replace those consumed in the factory. These high-efficient systems and renewable energy sources realize energy saving, stable energy supply, and reduction in green house gas (GHG) emissions.



35MW Solar Power and Storage Battery Project in Suphanburi Province PP (Japan): Kanematsu KGK Corp. PP (Thailand): Blue Solar Co., Ltd., Blue Solar Farm 2 Co., Ltd.

Outline of GHG Mitigation Activity

This project installs 35MW solar power system and 36MWH energy storage system in Suphanburi province. The electricity generated by solar power utilizes storage batteries to supply electricity to the grid systematically. In daytime, the plant supplies electricity to the grid, and charged power is supplied to the grid during evening time. The project contributes to Thailand's target to reduce greenhouse gas (GHG) emissions by shifting power resource to renewable energy from fossil fuel.



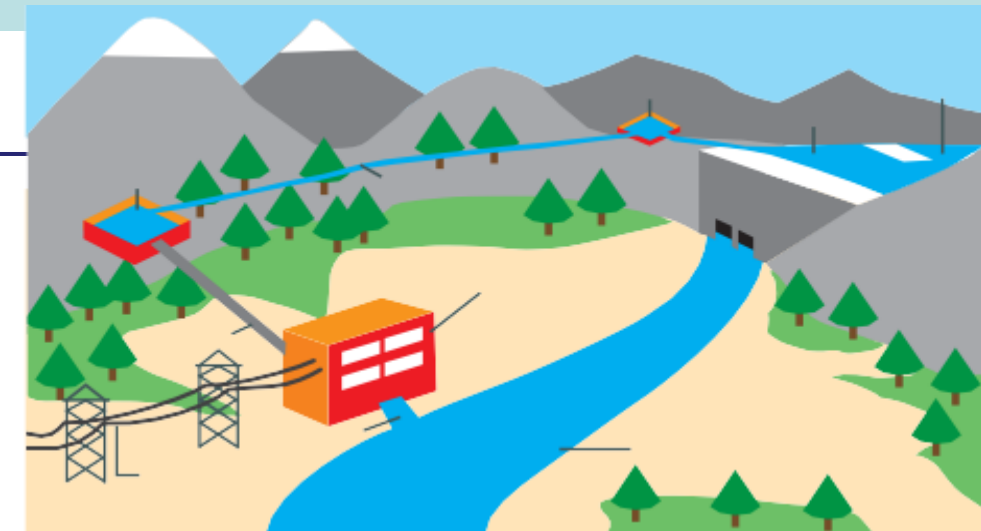
Introduction of 14.5MW Mini Hydro Power Plant Project in Siguil River in Mindanao

PP (Japan): Toyota Tsusho Corporation

**PP (Philippines): Alsons Consolidated Resources, Inc.,
Alsons Renewable Energy Corporation
Siguil Hydro Power Corporation**

Outline of GHG Mitigation Activity

This project aims to reduce CO2 emissions by constructing a run-of-river mini hydroelectric power plant 14.5MW (14.5 X 1unit) utilizing water resources in the Municipality of Maasim, in the southern part of Mindanao Island. This project contributes to the reduction of greenhouse gas (GHG) emissions by replacing grid electricity with renewable energy and also contribute to the realization of a sustainable society by addressing the growing demand for electricity necessitated by economy growth.



Waste to Energy Project in Bac Ninh Province
PP (Japan): JFE Engineering Corporation
PP (Vietnam): T&J Green Energy Company Limited

Outline of GHG Mitigation Activity

A waste-to-energy plant is introduced in Bac Ninh province. This plant incinerates and generates electricity from 230tons/day of municipal solid waste, which has been disposed of as landfill. The plant also incinerates and generates electricity from 120 tons/day of municipal solid waste and 150tons/day of industrial solid waste, which were previously incinerated. This scheme enables the proper waste treatment and the supply of electricity without the use of fossil fuels. It also reduces methane emissions from landfill sites and greenhouse gas (GHG) emissions by replacing grid electricity.



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JCM Global Match enhances the efficiency of your project development specializing in the JCM financing programme.



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FIND

Potential partner

2

ADVERTISE

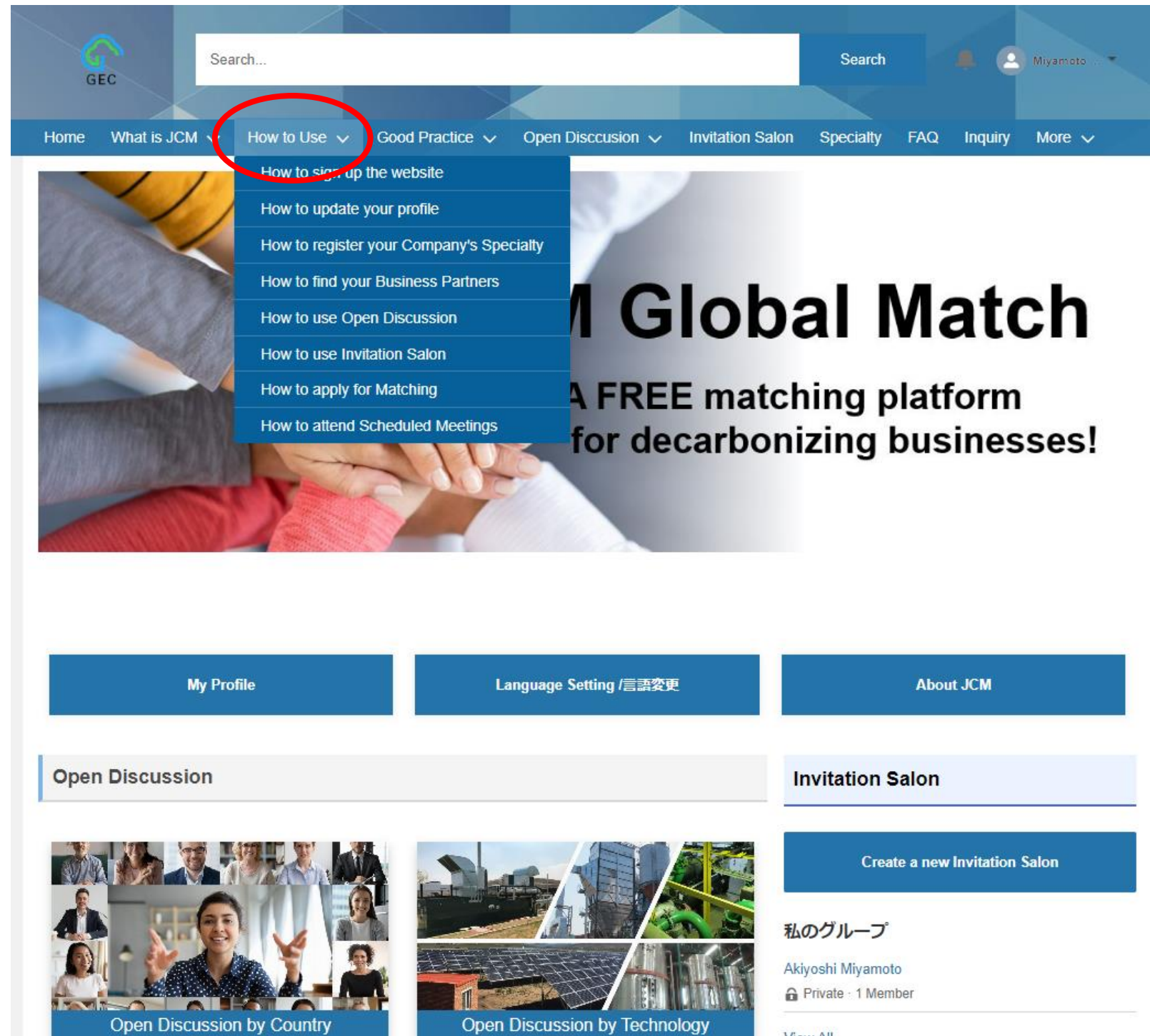
Your company to other users

3

DISCUSS

Your business plan

JCM Global Match For Further Information



< JCM Global Match QR code >



Link to JCM Global Match site
<https://gec.force.com/JCMGlobalMatch>

Please let any enterprize who may plan a JCM Model project in your country know about this information.

Consult GEC anytime during the year (except for evaluation period.)

Please fill out the Consultation Form which URL is shown here [“consultation form”](#) as much as possible and send it to jcm-info@gec.jp for free of charge consultation online or offline. Your email title should be “Consultation on application for JCM Model Project (Your company name).”

GEC will support you by answering to your questions and offer practical advices on points like below:

➤ Sample points of consultation

- ✓ Definition of Eligible Project and advanced technologies
- ✓ International Consortium
- ✓ MRV methodologies to calculate reduction in GHG emission
- ✓ Legal durable years, maximum percentage of financial support, and cost effectiveness
- ✓ Plan to obtain necessary financing, concession, licenses, etc.
- ✓ Reasons financial soppurts are needed, Profitability

Consultation Form (part)

Global Environment Centre Foundation (GEC)
 Consultation Form for JCM Project and Demonstration project for application of new decarbonizing technology [FY2024]
*Please fill out the white space as much as possible.
 *Reference material - Guidelines for Submitting Proposals (Tentative translation) for JCM Project
[https://gec.jp/jcm/jp/kobo/r06/mp/\(tentative\)2024_Guidelines_for_Submitting_Proposals.pdf](https://gec.jp/jcm/jp/kobo/r06/mp/(tentative)2024_Guidelines_for_Submitting_Proposals.pdf)

Information of Consultation	
Select for which project would you like to apply.	<input type="checkbox"/> JCM Model Project <input type="checkbox"/> Demonstration project for application of new decarbonizing technology <input type="checkbox"/> Undecided
Entry date	Click here to select a date
Method of meeting	<input type="checkbox"/> In-person (Location: _____) <input type="checkbox"/> Online
Meeting attendee(s)	<i>*Please list the name(s) and organization(s).</i>
Past consultation date for the same project	<input type="checkbox"/> First time <input type="checkbox"/> () times : Previous Consultation Date : Click here to select a date
ID No. / Meeting date	<i>*For internal use / Select a meeting date for internal use</i>
GEC respondents	<i>*For internal use</i>
Project Information Provided by	
Company name	
Department/division	
Your name	
E-mail address	
Phone No.	<i>*Country code + local number</i>
JCM Global Match registration	<input type="checkbox"/> Registered <input type="checkbox"/> Not registered yet <i>*Please consider registration with JCM Global Match: https://jcm-gm.my.site.com/JCMGlobalMatch/s/?language=en_US</i>
Project Information	
Would you like explanation of JCM and/or New Technology Introduction Project during the meeting?	JCM Model Project: <input type="checkbox"/> Yes <input type="checkbox"/> No Demonstration project for application of new decarbonizing technology: <input type="checkbox"/> Yes <input type="checkbox"/> No
Application target	<input type="checkbox"/> FY2024 <input type="checkbox"/> FY2025 <input type="checkbox"/> TBD If other than above, please specify:
Partner country	

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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.

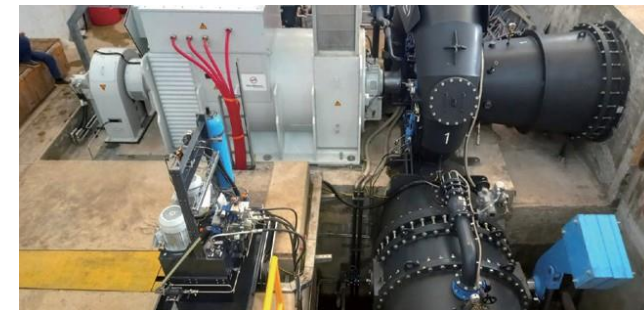


Gas Co-generation System & Chiller (Thailand)
The Kansai Electric Power Co., Inc.

Renewable Energy



Rice Husk Power Generation (Chile)
Asian Gateway Corporation



Mini Hydro Power Plant (Indonesia)
NiX 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 Handling and Disposal



Waste to Energy Plant (Vietnam)
JFE Engineering Corporation

Transportation



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

Thank you for your attention!

Global Environment Centre Foundation(GEC) Tokyo Office

4th Floor, Hongo Ozeki Bidg 3-19-4, Hongo, Bunkyo-ku,

Tokyo 113-0033, JAPAN

Phone : +81-3-6801-8860 / FAX : +81-3-6801-8861

E-mail : jcm-info@gec.jp

URL : <http://gec.jp/>

