Commissioned work by Ministry of Economy, Trade and Industry, Japan

Seminar on the Implementation of the Joint Crediting Mechanism (JCM) in the Republic of Kazakhstan

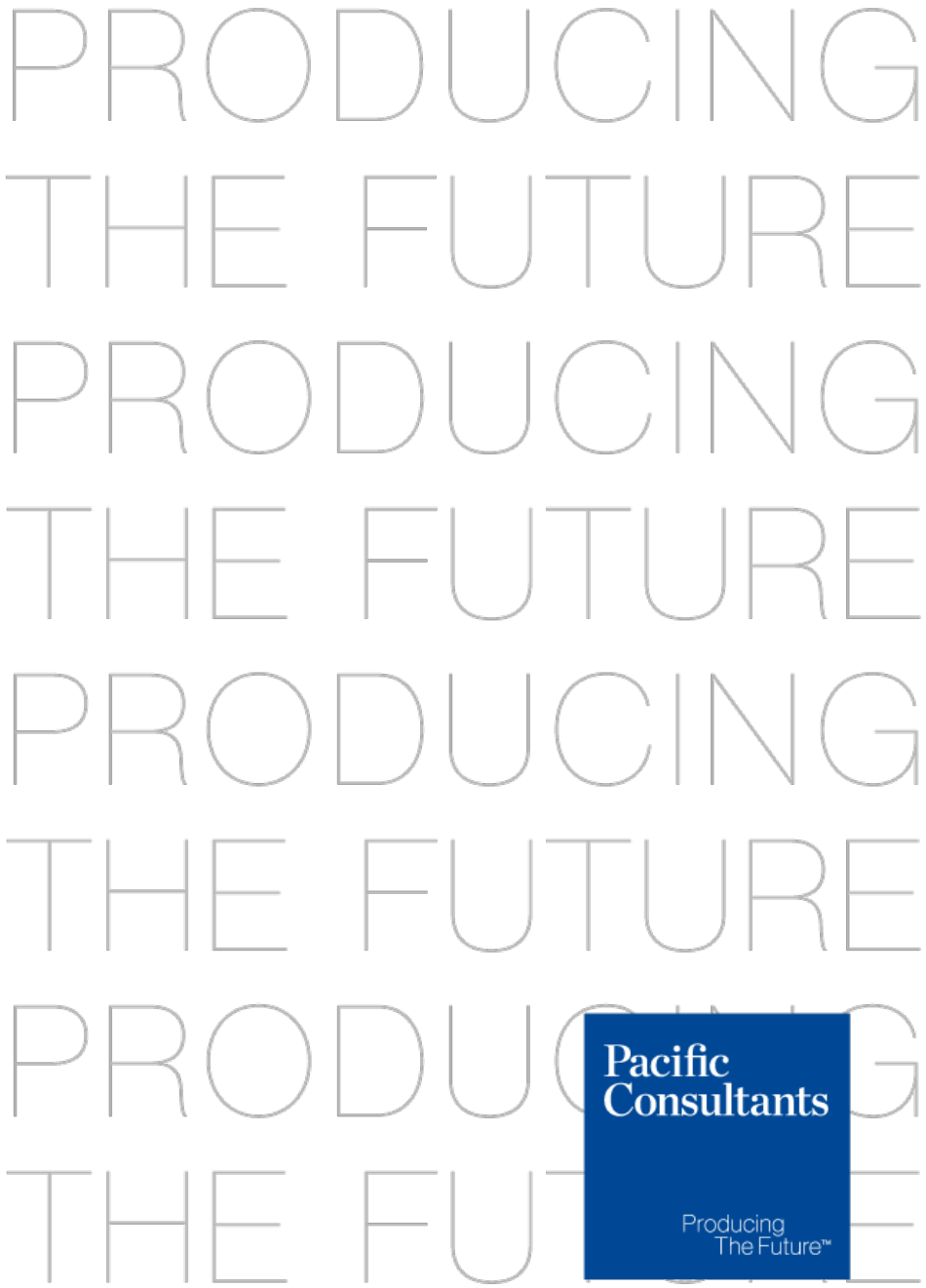
Key Points for Utilizing the METI JCM Feasibility Study Schemes

December 11, 2024

JCM FS Secretariat

PACIFIC CONSULTANTS CO., LTD.

E-mail : jcmfs-sec@tk.pacific.co.jp



CONTENTS

経済産業省 令和５年度
二国間クレジット取得等のためのインフラ整備調査
（JCM実現可能性調査）
企画提案の公募説明会資料

Ministry of Economy, Trade and Industry, Japan
Call for FY2024 JCM Feasibility Study
Briefing for proposal

公募期間：令和5年4月24日（月）～5月26日（金）正午
Open from 24 April 2024 to 12:00 PM 26 May 2024

***Presentation is based on**
JCMFS application guideline for FY2024.

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1. Purpose

❑ Purpose

Examining the feasibility of a project to **commercialize** decarbonization technology(ies) and product(s) by Japanese and/or other entities, and to realize GHG emission reductions and **JCM credits issuance by utilizing the Joint Crediting Mechanism (JCM).**

As an exit strategy of JCM FS, it is expected to **apply for either the NEDO JCM Demonstration scheme** or **Private JCM scheme** after completion of your proposed JCMFS.

2. Target countries, technologies and products

- Target countries

  Current JCM partner countries

  and prospective partner countries.

Current JCM partner countries

Source: JCM Introduction of the Joint Crediting Mechanism (JCM) & Financing Programme for JCM Model Projects

- Target technologies/products

Energy-derived CO2 emission reduction is necessary:

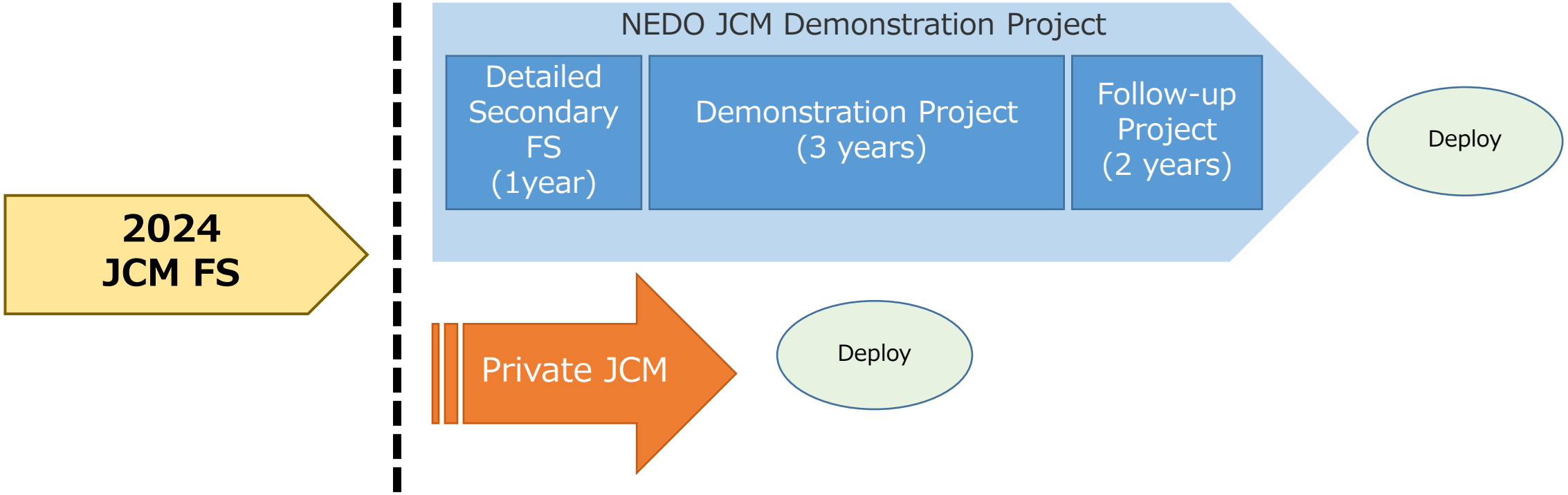
✓ Reduction of energy-derived CO2 emissions through the use of superior decarbonization technologies is necessary, and contribution to issue JCM credits in partner countries that have signed or perspective partner countries.

GHG Emission reduction should be calculated in a quantitative manner:

✓ GHG emission reductions shall be calculated in a quantitative manner. Applicant have to consider existing JCM methodology or propose a new JCM methodology. While no clear threshold for amount of GHG emission reductions will be set, priority may be given to proposals that are expected to achieve larger GHG emission reductions.

3. Expected exit strategy after JCM FS

- Exit strategy
  - NEDO JCM Demonstration Project, or
  - Private JCM project



3. Expected exit strategy after JCM FS

Differences in target technologies and assumed GHG emission reductions by each exit strategy.

Exit strategy	NEDO JCM Demonstration Project	Private JCM
Target Technology	① The technology **to be demonstrated must be a Japanese low-carbon technology or system owned by the proposer**, and there **must be technical issues to be overcome** in order to promote the technology or system in the partner country. The demonstration is necessary to overcome such technical issues. ② The demonstration project is expected to have **fossil energy-derived CO2 emission reductions**. ③ The demonstration project is expected to have **quantifiable GHG emission reductions**. ④ The dissemination strategy for proposed technology/system must be concrete and highly feasible. ⑤ The demonstration plan must be appropriately prepared as an effective means of overcoming the technical issues identified in ①.	There are no restrictions on the target technologies if the introduction of superior decarbonization technologies that contribute to GHG emission reductions and absorption by private enterprises in Japan is financed by the private enterprises themselves. *Note that the target of JCM FS is the introduction of technologies that contribute to the reduction of energy-based CO2 emissions.
Assumed GHG emission reductions	JCM credits of **1,000 t-CO2 or more are expected during the monitoring period of the demonstration project**, and emission reductions of **10,000 t-CO2 or more per year during the period of diffusion and deployment** after the demonstration project is completed.	No specific criteria are set.

※ Both JCM Demonstration Project and Private JCM are only available for JCM Partner countries.

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4. Research items on JCM FS

	Items	Survey Details
1	**Research related policy and institutional trends in a proposed country**	● Identify trends policies and systems related to FS in a partner country, as well as issues and local needs.
2	**Research socio-economic situation and market trends in a proposed country**	● Understand socio-economic situation, market trends and local needs for proposed systems/technologies in a partner country.
3	**Analise issues and countermeasures against JCM project formation**	● Identify and analyze issues against project commercialization utilizing JCM (business risks, bottlenecks for dissemination, etc.) as well as countermeasures to be taken for JCM project formation .
4	**Draft a GHG emission reduction methodology and calculate GHG emission reductions by introducing proposed technology(ies)**	● Draft a GHG emission reduction methodology utilizing JCM methodology format and calculate GHG emission reduction potential for a proposed JCM project.
5	**Share a proposed JCM project idea with stakeholders**	● Discuss with government officials and business partners and related stakeholders on a proposed JCM project.
6	**Identify remaining issues and analyze solution for JCM project formation**	● Based on the results of JCM FS, identify remaining issues to be solved for JCM project formation from political, economical, social and technical perspectives, and consider their solutions.
7	**Draft a Project Idea Note (PIN) for JCM project registration**	● Based on the results of JCM FS, draft a PIN.

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4. Research items on JCM FS

Project Idea Note

を参照する必要がある。)

PIN reference number	(For the secretariat use only)

All the infromation described in this document is at the pre-implementaion stage and may change as the project developes.

1. Basic project information	
1.1. Date of Submission	dd/mm/yyyy
1.2. Partner country (*A host county where the planned project is located*)	
1.3. Title of the planned project (*Should be self-explanatory and clearly indicate the activity leading to GHG emissions reductions / removals*)	

The Joint Committee makes the result publicly available, including the PIN reference number, the name of the planned project, the date of submission in the above, and the reason for objection when the Joint Committee objects to the planned project described in the PIN through the JCM website.

2. Project participants and contact information	
2.1. Representative Japanese participant for the project and its roles in the project *(For identification of the person in charge for the project in terms of communication)*	
Name of the entity (*Company, etc.*):	
Roles of the entity in the project:	
Address of the contact entity:	
Website of the contact entity:	
Name and position of the main contact person in the entity:	**Last name:** **First name:** **Position:**
E-mail of the main contact person:	
Phone number of the main contact person:	
2.2. Japanese participant(s) for the project and their roles in the project except for the entity in 2.1. *(If possible, please indicate the contact person of each entity involved in the project)*	
Name of the entity (*Company, etc.*):	
Roles of the entity in the project:	
Address of the entity:	
Website of the entity:	
Name and position of the contact person in the entity:	**Last name:** **First name:** **Position:**
E-mail of the contact person:	

1

あり最新様式はJCM ホームページの各パートナー国ページを参照する必要がある。)

y for the project and their roles in the project
ct person of each entity involved in the project)

t **Last name:** **First name:**
Position:

tal agency of partner country
ct person)

t **Last name:** **First name:**
Position:

☐ Yes (*Briefly explain the status below*)

☐ No

2

JCM ホームページの各パートナー国ページを参照する必要がある。)

ect costs:
ct currency:
ese Yen:
n (in project currency):

g methodology(ies) (*Please specify below*)

ethodology(ies) needed (*Briefly explain the status below*)

02/year

g project participants.
centage of credit allocation as below, *understanding the t Committee at the time of project registration*:
pport from the Government of Japan, the Government of it allocation.

nts)	%
	%

expected; otherwise, explain in the "Other" section.)

f Japan: Select one of the	**Fiscal Year of Japan**
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ナー国と調整中のものであり最新様式はJCM ホームページの各パートナー国ページを参照する必要がある。)

onomic incentive will make the project viable.):

ion structure

age of the implementation structure including financial flows below:

of PIN

Date	Contents revised
nm/yyyy	
nm/yyyy	
nm/yyyy	

nts fill in this section when they submit a revised PIN to the Joint Committee.
ded, as needed

4

Source: https://www.meti.go.jp/press/2022/03/20230328004/20230328004-2.pdf

5. JCM FS budget and eligibility for application

- **Type** : **Entrustment from JCMFS secretariat**

- **Schedule** : **from Contract date to 7 February 2024**

  Schedule of open call for proposal in 2024:

  1st call from 22 April to 24 May 2024 (7 projects approved). Contract date: middle July.

  2nd call from 22 July to 23 August 2024 (7 projects approved). Contract date: late September.

  3rd call from 21 October to 1 November 2024 (1 projects approved).Contract date: middle Nobember

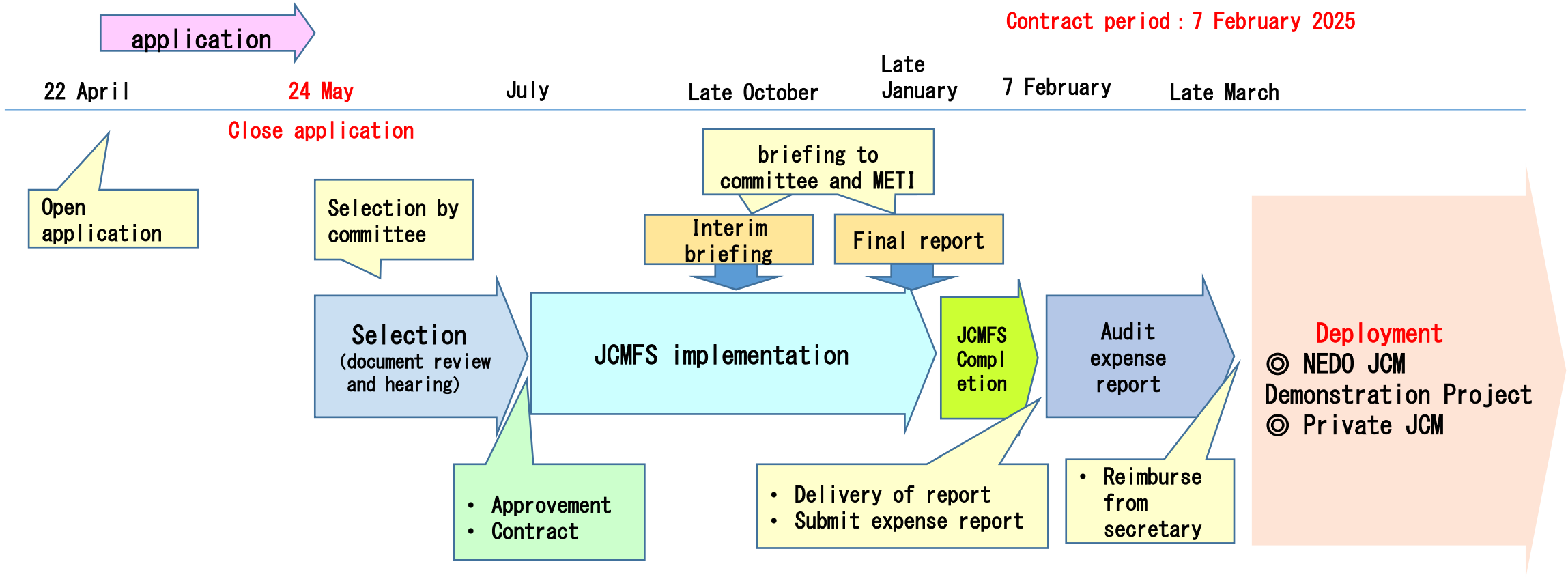
- **Budget** : **Maximum 15 million JPY (tax excluded)/proposal**
  = 100,000 USD/proposal (1USD=150JPY)
  = 50 million tenge/proposal (1USD=500tenge)

- **One of eligibilities for applicants** :

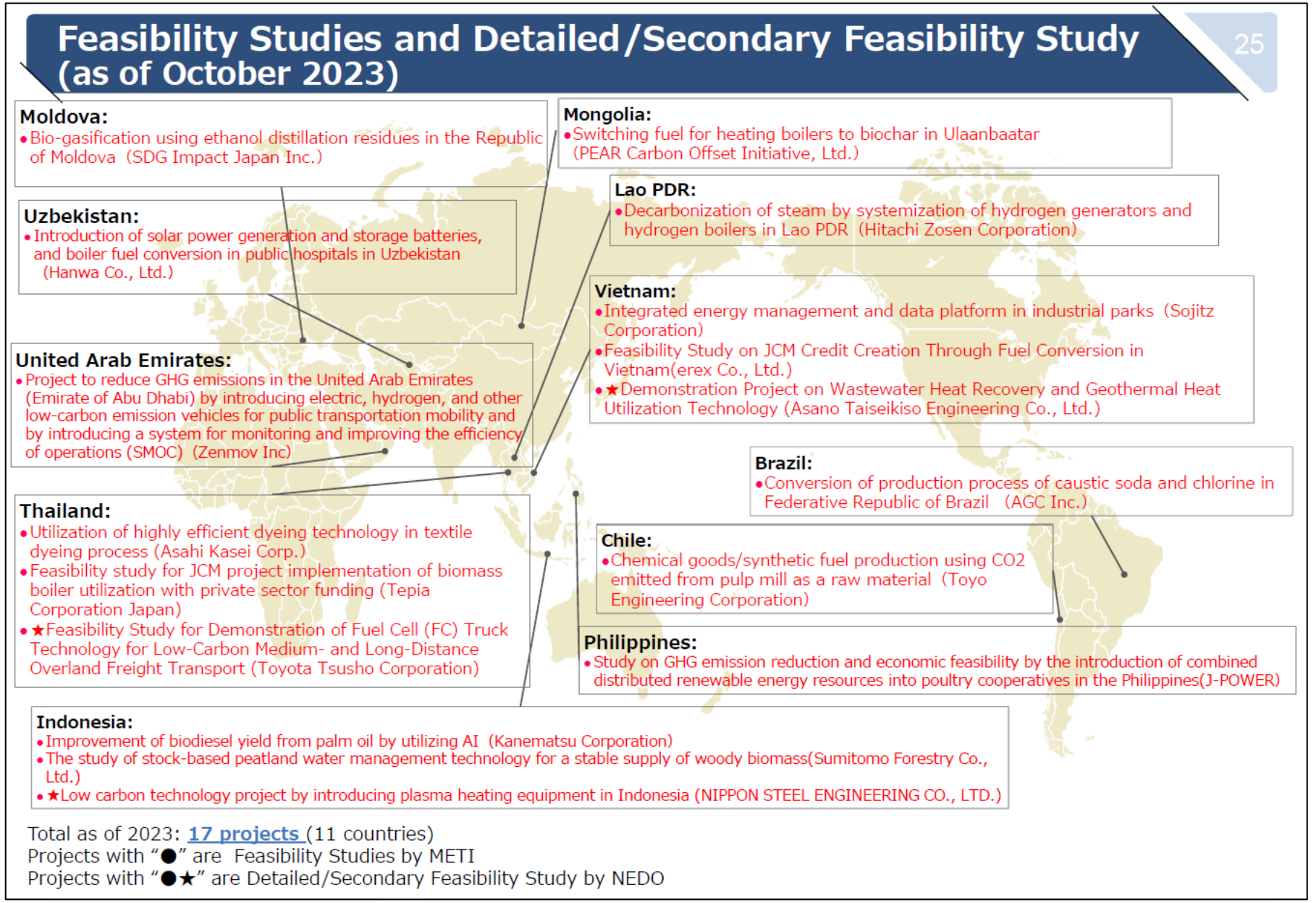
  Having a parent company in Japan.

  An overseas subsidiary of a Japanese company whose parent company's head office locates in Japan is also able to apply.

6. Overall schedule (in case of 1st call application in FY2024)



7. JCM FS records (FY2023)



Source: Recent Developments of the Joint Crediting Mechanism (JCM)(Government of Japan, May 2024) http://carbon-markets.env.go.jp/document/20240517_JCM_goj_eng.pdf

7. JCM FS records (FY2024)

Approved in the 1st call in JFY2024

- ✓ Asahi Kasei Corp
  (Thai) JCM FS on Energy-Efficient High-Definition Flexographic Printing Technology
- ✓ AGC Inc.
  (Chile)JCM FS on the Introduction of Solar Thermal Power Generation in the Mining Industry (at Coquimbo)
- ✓ NTT COCOMO INC.
  (Philippines) JCMFS on the Installation of Solar Panels and Batteries and Optimal Power Control Technology for Wireless Base Stations
- ✓ Kubota Corp
  (Philippines) on Biomass Power Generation Utilizing Agricultural Residues
- ✓ Sojitz Corp
  (Uzbekistan) JCMFS on large-scale onshore wind power project
- ✓ Nippon Koei Co., Ltd.
  (Costa Rica) JCMFS on the Introduction of Battery Locomotives for Cargo Railway
- ✓ Fine Eco Solution Co., Ltd.
  (India) JCMFS on the Introduction of Distributed Power Generation Systems Utilizing Methane Gas Derived from Cow Dung

Approved in the 2nd call in JFY2024

- ✓ MITSUI & CO., LTD.
  (Kazakhstan) JCMFS on the Introduction of a Large-scale Onshore Wind Power Project
- ✓ JAPAN CARBON FRONTIER ORGANIZATION
  (Thai) JCMFS on Biochar Production and Utilization
- ✓ EX Research Institute Ltd.
  (India) JCMFS on Large-scale Introduction of Waste to Steam in Petrochemical Industry and Regional Transportation System of Urban Waste
- ✓ NTT DATA INSTITUTE OF MANAGEMENT CONSULTING, Inc.
  (Brazil) JCMFS on Biomass Power Generation Project Led by Private Sector
- ✓ Sustainable Holdings Co., Ltd.
  (Papua New Guinea) JCMFS on Introduction of Hybrid Solar Power System
- ✓ NIPPON STEEL ENGINEERING CO., LTD.
  (India) JCMFS on Introduction of "Second-Generation Bioethanol Production Technology"
- ✓ Mitsubishi Corporation India Pvt. Ltd.
  (India) JCMFS on Compressed Bio Gas Technology

Approved in the 3rd call in JFY2024

- ✓ Cleansystem CO., LTD.
  (Georgia) JCM FS on the Utilization of Waste-Derived Fuel

Example: Potential areas of JCM projects in the Kazakhstan

GHG Emissions in the Kazakhstan

- **"Energy sector"** account for about **77.6%** (272.5 MtCO2e) of total GHG emissions (351.2 MtCO2e) as of 2020.
  - Energy-derived CO2 emissions (IEA, 2021)
    - →58.6% from coal, 22.5% from oil and 18.9% from natural gas.
    - →51.8% from power and heat, 14.6% from residential, 13.2% from industry, 10.1% from transport and 10.3% from others.

Sector	1990		2020	
	MtCO2e	%	MtCO2e	%
Energy	316.9	83	272.5	77.6
IPPU	19.3	5.1	22.3	6.3
Agriculture	44.7	11.7	40.7	11.6
LULUCF	-3.9	-1	8.4	2.4
Waste	4.7	1.2	7.4	2.1
Total	381.7	100	351.2	100

Source: PACIFIC CONSULTANTS made from "Presidential Decree No. 121 validating the Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060"

NDC (2023)

- Actions are based on
  - “National Development Plan of the Republic of Kazakhstan until 2025” (Decree of the President of the Republic of Kazakhstan #636 dated 15 February 2018) and
  - “Action Plan for the implementation of the Concept for the Transition of the Republic of Kazakhstan to a "green economy" for 2021-2030” (Enactment of the Government of the Republic of Kazakhstan #479 dated 29 July 2020).
- To ensure the achievement of NDC in the next carbon budgeting period from 2026 to 2030, the carbon budget for each calendar year will need to increase reduction from the planned 1.5 per cent to 2.25–5.1 per cent of the level of the carbon budget of the previous year.

	Overview	
GHG emission reductions target	・ Unconditional ➢ 15% reductions by 2030 (compared with 1990 level) ・ Conditional ➢ 25% reductions by 2030 (compared with 1990 level)	
Focus sector	Energy	・ Make power sector smart ・ Increase the share of renewable energy in the electricity sector to 15% by 2030 ・ Diversity energy sources, including green hydrogen ・ 60% gasification of the country area
	Transport	・ Develop sustainable transport infrastructure for electric and gas vehicles

Source: PACIFIC CONSULTANTS made from NDC (Ministry of Ecology and Natural Resources of the Republic of Kazakhstan, “https://unfccc.int/sites/default/files/NDC/2023-06/12updated%20NDC%20KAZ_Gov%20Decree313_19042023_en_cover%20page.pdf”

Presidential Decree No. 121 validating the Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060)

■ It states “target”, “principles”, “investment needs”, “approaches”, “vision” and “cross-sectoral approaches” towards carbon neutrality until 2060.

1) Decarbonization of sectors and processes related to fossil fuels use,
2) Decarbonization of sectors and processes not related to fossil fuels use,
3) Enhancement of natural emission sinks and introduction of industrial solutions for carbon capture, utilization, long-term storage, and sequestration.

	Overview
Energy supply	・ Decarbonization of primary energy supply. ・ Decarbonization of electricity and thermal energy production. ・ Decarbonization and efficient final energy use **in buildings, transport and industry.**
Electricity/heat supply	・ Formulate a long-term vision for **alternative and renewable energy.** ・ Formulate a long-term vision for **hydroelectric power generation.** ・ Consider shutting down coal-fired power plants that are more than 30 years old and the possibility of continuing them by introducing CCS. ・ Utilization of natural gas, heat pumps, biofuels, etc.
Transportation	・ Eliminate or reduce the need for travel (avoidance), improve fuel efficiency, optimize passenger and freight flows, public transport, optimal urban planning, etc. ・ Shift to more eco-friendly means of transport (shift), alternative fuels, electrification. ・ Increase energy efficiency and reduce emissions from transport vehicles.
Industry	・ Use of alternative building materials with low or no GHG emission intensity to replace **cement, steel and aluminum.** ・ Increased scale of waste (including scrap) processing to reduce the need for raw material processing as the main source of emissions in the sector. ・ Introduction of **new zero-emission production technologies in combination with carbon capture and storage.**

Source:「2060年までのカザフスタン共和国カーボンニュートラル達成戦略の承認について」（ROTOO, 2023）による仮訳(https://jp-kz.org/wp/wp-content/uploads/CarbonNeutralityStrategyKZ20230202.pdf)からPCKK作成。

Individual consultation is also available.

- Individual consultations (TEAMS/Zoom etc) are available to discuss your JCM FS project ideas.

- Please contact the JCM FS secretariat after the seminar.

(Please indicate your request for a consultation in the questionnaire after the seminar)

If you have a project idea that might be a candidate for JCMFS, please contact the secretariat!

■If you have a project idea that may be applicable to JCM FS, Please download the information sheet and send it to us [jcmfs-sec@tk.pacific.co.jp].

- Information sheet
  - https://pckk.box.com/s/49i1n6mydjcyigh3wk8v0p1f538qrfpu
    File : 【記入用】将来的なJCMFSに繋がる可能性のある案件候補情報, or
    [Please fill in] Project information sheet for JCMFS

Useful Links

■JCM Official Website (incl. Rules and Guidelines, Methodologies for each partner country)
- https://www.jcm.go.jp/

■About JCM
- http://carbon-markets.env.go.jp/index.html
- http://carbon-markets.env.go.jp/eng/

■Guidance for the Development of Private-Sector JCM Projects
- (Japanese) https://www.meti.go.jp/policy/energy_environment/global_warming/jcm/pdf/private_secor_JCM_guidance_all_202403.pdf
- (English) https://www.meti.go.jp/english/press/2023/0328_002.html

■2024 JCM-FS website for application（No English website）
- https://jcmfs.meti.go.jp/

Thank you so much for
allowing us to make a presentation.

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