Japan Fund for the Joint Crediting Mechanism

August 2025

ADB's Strategy 2030 and Climate Change

Climate action indicators and targets: More than $100 billion in cumulative climate finance (2019–2030) and for climate finance to reach 50% of the total committed financing volume, by 2030

Private sector development indicators and targets: $13 billion of ADB's own account financing and all direct mobilization, including a minimum of $4.5 billion in direct private capital mobilization, and 40% of sovereign operations contributing to PSD, by 2030

Regional cooperation and public goods indicator and target: 30% of operations contributing to RCI, including those supporting public goods by 2030

Digital transformation indicator and target: Operations supporting digital transformation expected to grow year over year across sovereign and nonsovereign operations

Resilience and empowerment indicators and targets: 60% gender mainstreaming across sovereign and nonsovereign operations and 75% of operations supporting poverty reduction and inclusiveness, by 2030

- **ADB's Strategy 2030 updated by midterm review:** More than $100 billion in cumulative climate finance (2019-2030) and for climate finance to reach 50% of the total committed financing volume, by 2030 (August 2024)
- Updated ADB's Capital Adequacy Framework (CAF) to expand the bank's annual new commitments capacity to more than $36 billion to unlock $100 billion in new funding capacity over the next decade (September 2023)

ADB's Carbon Market Program

Mobilizing carbon finance for incentivizing investments in low-carbon technologies

Article 6 Support Facility

- Provides **technical and capacity building support** to enhance DMCs' readiness to participate in and take advantage of the emerging international carbon markets.
- Supported COP29 Presidency in understanding key technical issues and navigating complex negotiations for the finalization of the Article 6 Rules in Baku.
- Funded under TA 9695 (**US$ 7.8M**) by the TASF, Government of Germany, Swedish Energy Agency. The **Government of New Zealand** has announced its interest to contribute **US$1M** to A6SF.
- Supporting a number of DMCs including Armenia, Bhutan, Georgia, India, Indonesia, Maldives, Mongolia, Nepal, Pakistan, the Philippines, Thailand, Timor Leste and Viet Nam.

Climate Action Catalyst Fund

- **First-of-its-kind carbon fund designed to** mobilize carbon finance to catalyze investments in low-carbon technologies and solutions, through purchase of carbon credits under Article 6.
- Designed to send a **strong price signal** through **fixed-price**, **long-term contracts** and **up-front payment** modality**.**
- Commenced operations from Jan 2024 and developing a pipeline of projects supported by ADB Operations.
- The **Swedish Energy Agency** has committed approx. **US$27M** to CACF.
- The **Government of Norway** has expressed its intent to contribute up to **US$50M**. The **Government of New Zealand** also announced its interest to join CACF.

Japan Fund for the Joint Crediting Mechanism

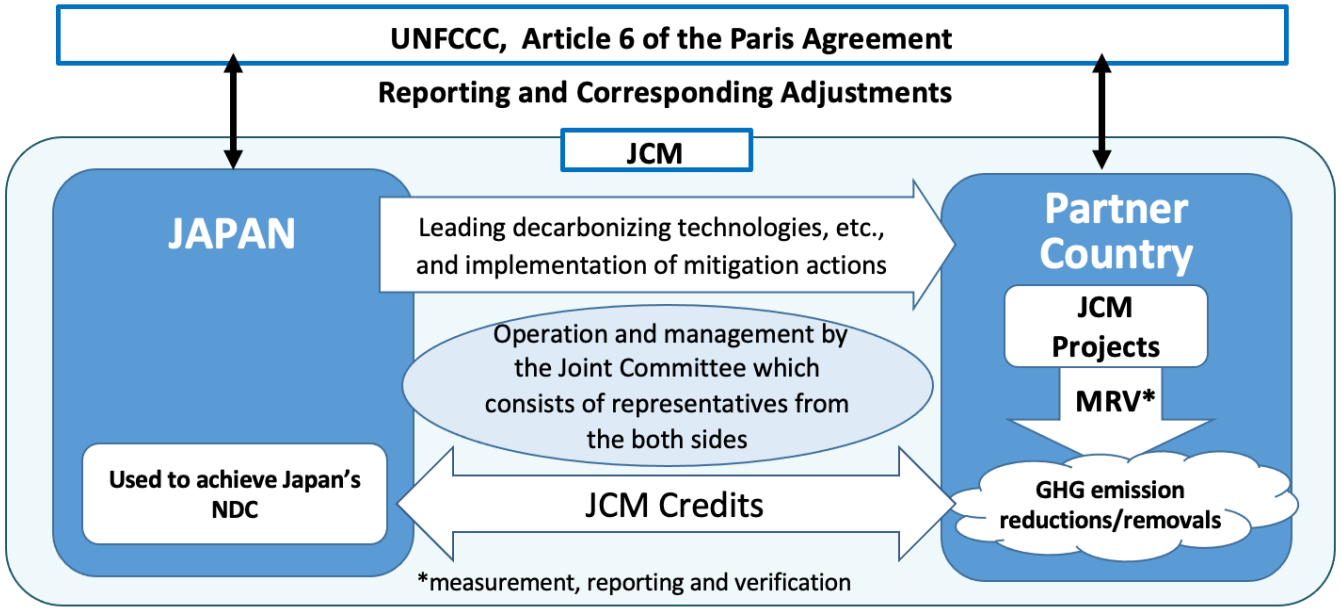
- Provides **financial incentives (grant)** for the adoption of **advanced low-carbon technologies** in **ADB-financed projects** through the Joint Crediting Mechanism, a bilateral carbon market mechanism between Japan and developing countries aligned with Article 6.2 of the Paris Agreement.
- Established in 2014, JFJCM is supporting nine mitigation activities in **Indonesia, Kyrgyz Republic, Maldives, Bangladesh, Mongolia, Palau, and Kyrgyz Republic,** and four TAs to prepare projects and build DMC's capacity.
- Cumulative financial contribution of **US$137.30M** by the Government of Japan, including **US$2.97M** dedicated for the reduction of GHGs with high GWP, such as methane.

Japan Fund for the Joint Crediting Mechanism

- Established in June 2014 as one of ADB's trust funds
- Contribution by Government of Japan: $137.30M (2014-2024)
- Provides financial incentives (grant) for adoption of advanced low-carbon technologies in ADB-financed projects that use the Joint Crediting Mechanism (JCM)*
- Both sovereign and nonsovereign projects are eligible

*Concept of the JCM

- Project-based bilateral offset crediting mechanism managed by Japan and partner countries
- Facilitates the diffusion of low-carbon technologies that lead to GHG emission reductions that are measurable, reportable & verifiable
- A forerunner to cooperative approaches under Article 6 of the Paris Agreement.
- Carbon credits from JCM projects will be shared among the countries and used to achieve their emission reduction targets while ensuring the avoidance of double counting through corresponding adjustment.



JFJCM Eligibility

Eligible Country

- All ADB developing member countries that have signed bilateral agreements on the JCM with the Government of Japan (19 out of 31 JCM partner countries).
- Azerbaijan, Bangladesh, Cambodia, Georgia, India, Indonesia, Kazakhstan, Kyrgyz Republic, Laos, Maldives, Mongolia, Myanmar, Palau, Papua New Guinea, Philippines, Sri Lanka, Thailand, Uzbekistan, and Viet Nam (as of August 2025).

Eligible Project

- Investment project financed by ADB or ADB administered funds.
- ADB technical assistance for developing JFJCM pipeline projects.

* Can be used for additional financing to ongoing ADB project.

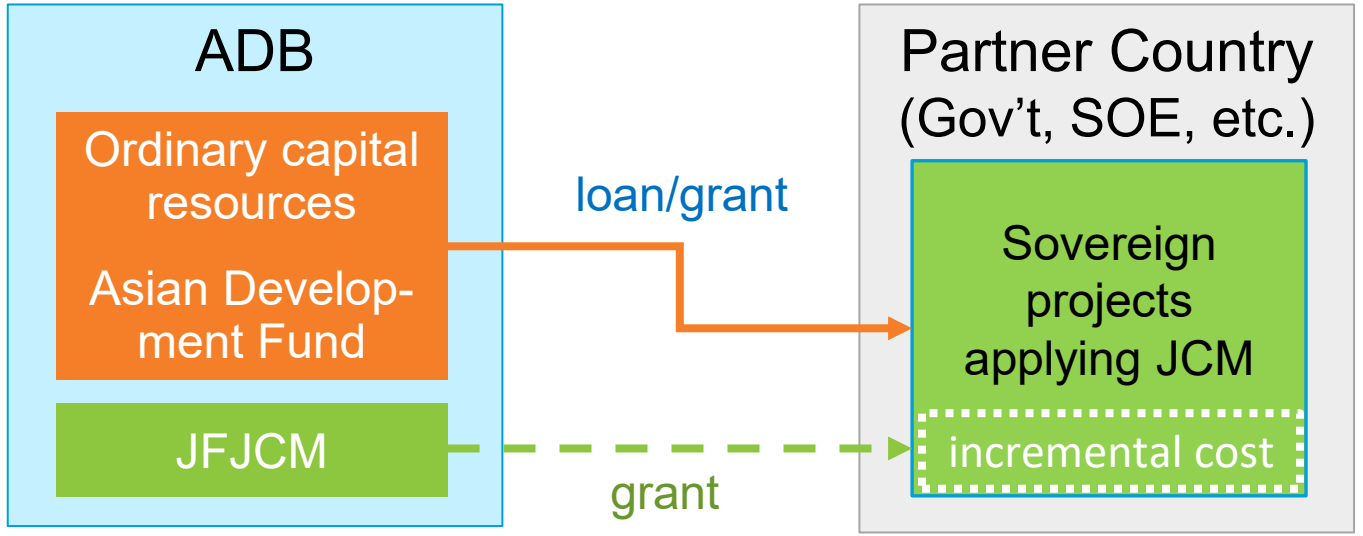
Eligible Technology

- Advanced low carbon technologies that reduce greenhouse gas (GHG) emission including CO_2 from energy source.
- The technologies must have a proven implementation and operation record of its technical effectiveness.

JFJCM Support Schemes

For Sovereign Project

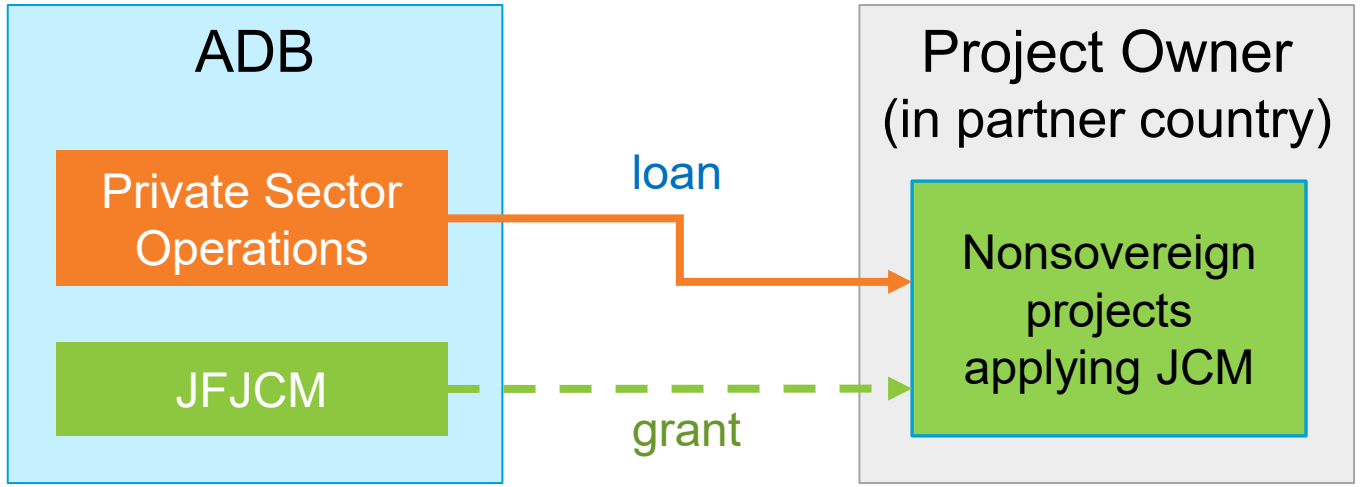
- JFJCM provides grant for incremental cost of advanced low-carbon technologies
- Maximum amount of grant:
  i. 10% of total project cost (capped to $10 million)
  ii. $5 million if the project cost < $50 million



For Nonsovereign Project

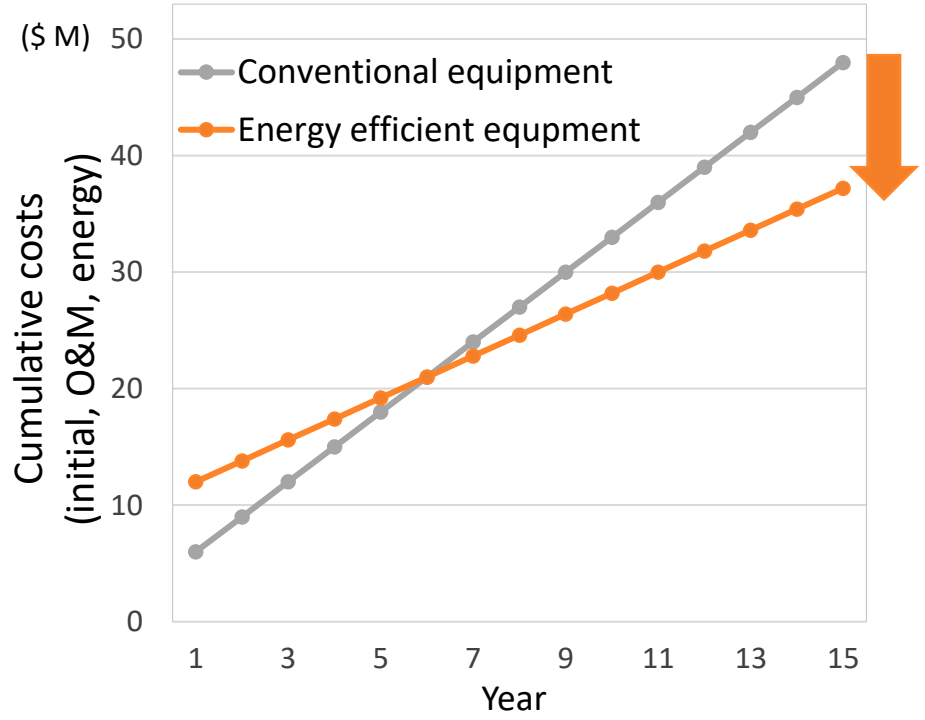
- On top of the ADB loan, JFJCM provides grant by milestones to support deployment of advanced low-carbon technologies
- Maximum amount of grant:

  10% of total project cost (capped to $10 million)



Requirements for procurement (Sovereign)

- All procurement for the JFJCM subcomponent will be carried out in accordance with ADB's Procurement Policy (2017).
- International competitive bidding is required in principle.
- Technical specifications, evaluation and qualification criteria for procurement of the JFJCM subcomponents will be included in the JFJCM proposal. After approval, the procurement shall be in line with what is approved in the JFJCM proposal.
- For JFJCM subcomponents, price adjustment methodologies to account for the life cycle cost (LCC) shall be used in financial evaluation of the bids.



LCC

Energy Efficient Equipment < Conventional Equipment

JFJCM support for nonsovereign investment projects

- The grant will be documented in a grant agreement between ADB and the borrower (as grant recipient).
- JFJCM can be used to finance project costs in relation to planning, design, financing, construction, commissioning and completion of projects that deploy advanced low carbon technologies for nonsovereign investment projects, in accordance with ADB's nonsovereign lending policies and procedures.
- The grant amount will be committed and disbursed in USD, regardless of the currency of the ADB loan.
- PSOD and the fund secretariat, in consultation with clients, will prepare a grant disbursement schedule with milestones. For example:
    1. achievement of critical phases during construction of the project;
    2. completion of commissioning of the project;
    3. the first JCM credit issuance; and
    4. continued operation of the project for three years after the first JCM credit issuance.
- PSOD, with support from the fund secretariat, will supervise the JFJCM-supported projects once the grant is approved by the GoJ, including the implementation of the JCM Requirements (e.g. monitoring and reporting of GHG emission reductions to ADB at least once a year).
- The grant will be conditional and may become repayable upon the recipient's noncompliance with the JCM Requirements.

Other Requirements of the JFJCM support

- Environment and Social Impact
  - The project should benefit recipient DMCs through:
    - a reduction of environmental pollution, including air or water pollution, solid waste treatment, or conservation of natural resources; and/or
    - other social economic benefits, including increased job creation opportunities, better access to basic infrastructure, and gender equality.

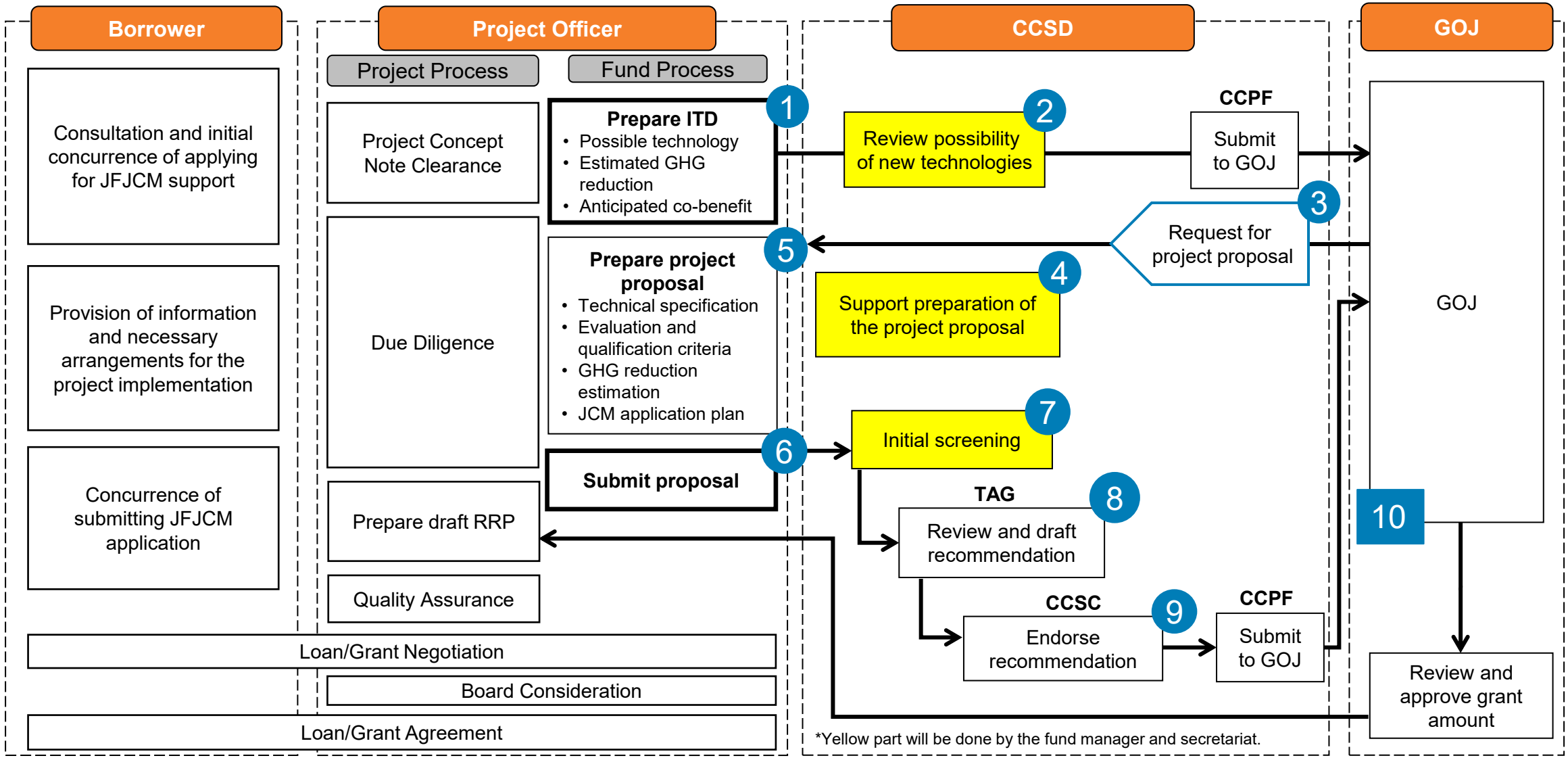
- Cost effectiveness*
  - Cost of reducing 1tCO_2e ≤ $40

  * grant amount / (annual GHG emission reduction x project period)

  This sets a ceiling of the grant amount.

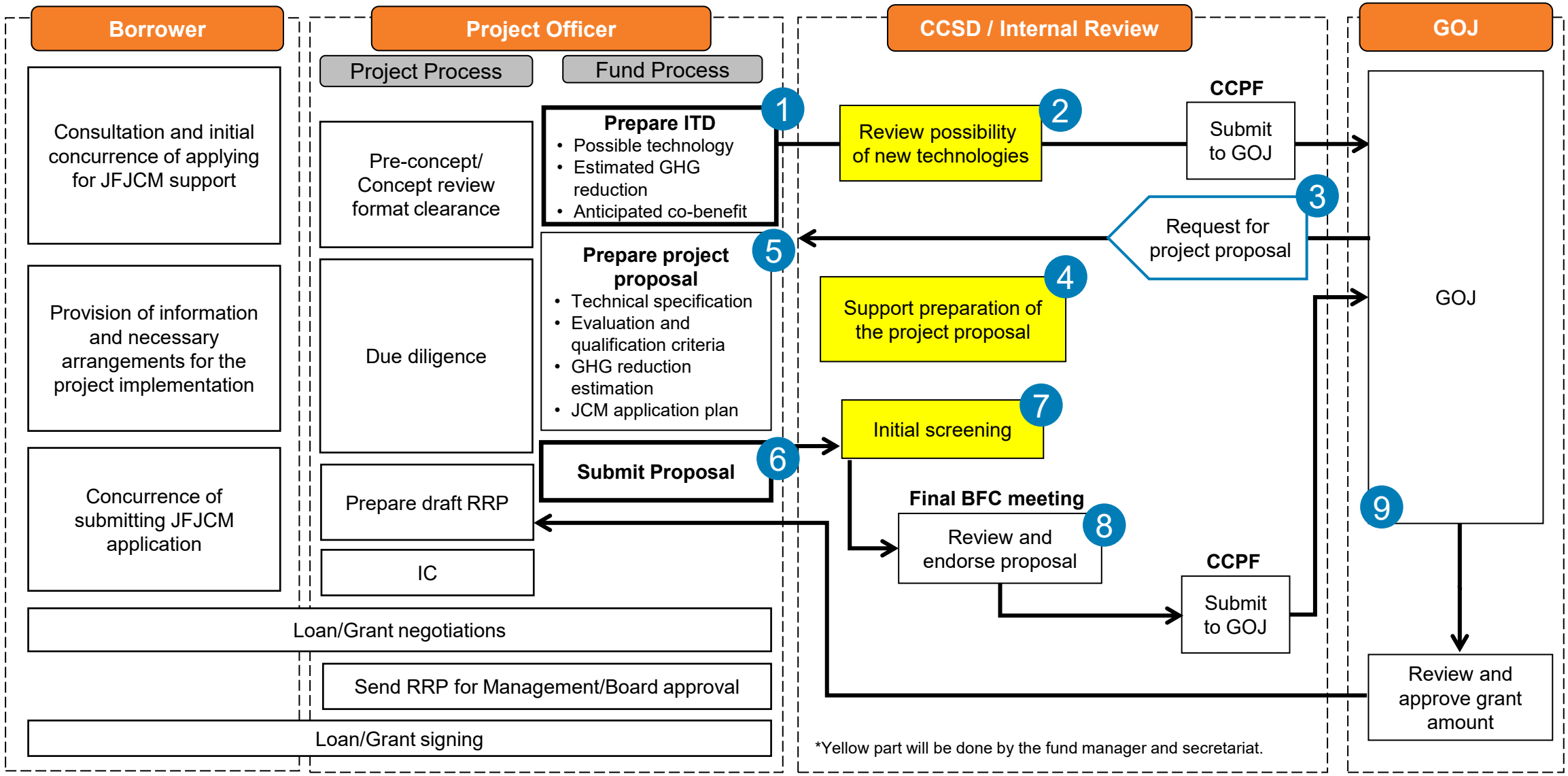
- Others
  - The JFJCM subcomponents cannot apply for other international carbon market mechanisms.

JFJCM Application Process (Sovereign)



CCSC = Climate Change Steering Committee; CCSD = Climate Change and Sustainable Development Department; CCPF = Partner Funds Division, CCSD; GHG = greenhouse gas; GOJ = Government of Japan; ITD = Initial Title and Description; JCM = Joint Crediting Mechanism; RRP = report and recommendation of the President; TAG =Technical Advisory Group.

JFJCM Application Process (Nonsovereign)



BFC = Blended Finance Committee; CCSD = Climate Change and Sustainable Development Department; CCPF= Partner Funds Division, CCSD; GHG = greenhouse gas; GOJ = Government of Japan; IC = investment committee; ITD = Initial Project Title and Description; JCM = Joint Crediting Mechanism; RRP = report and recommendation of the President.

Requirements for the JCM (after grant approval)

- After approval of the JFJCM funding, a borrower (grant recipient) is required to meet JCM application requirements as follows.

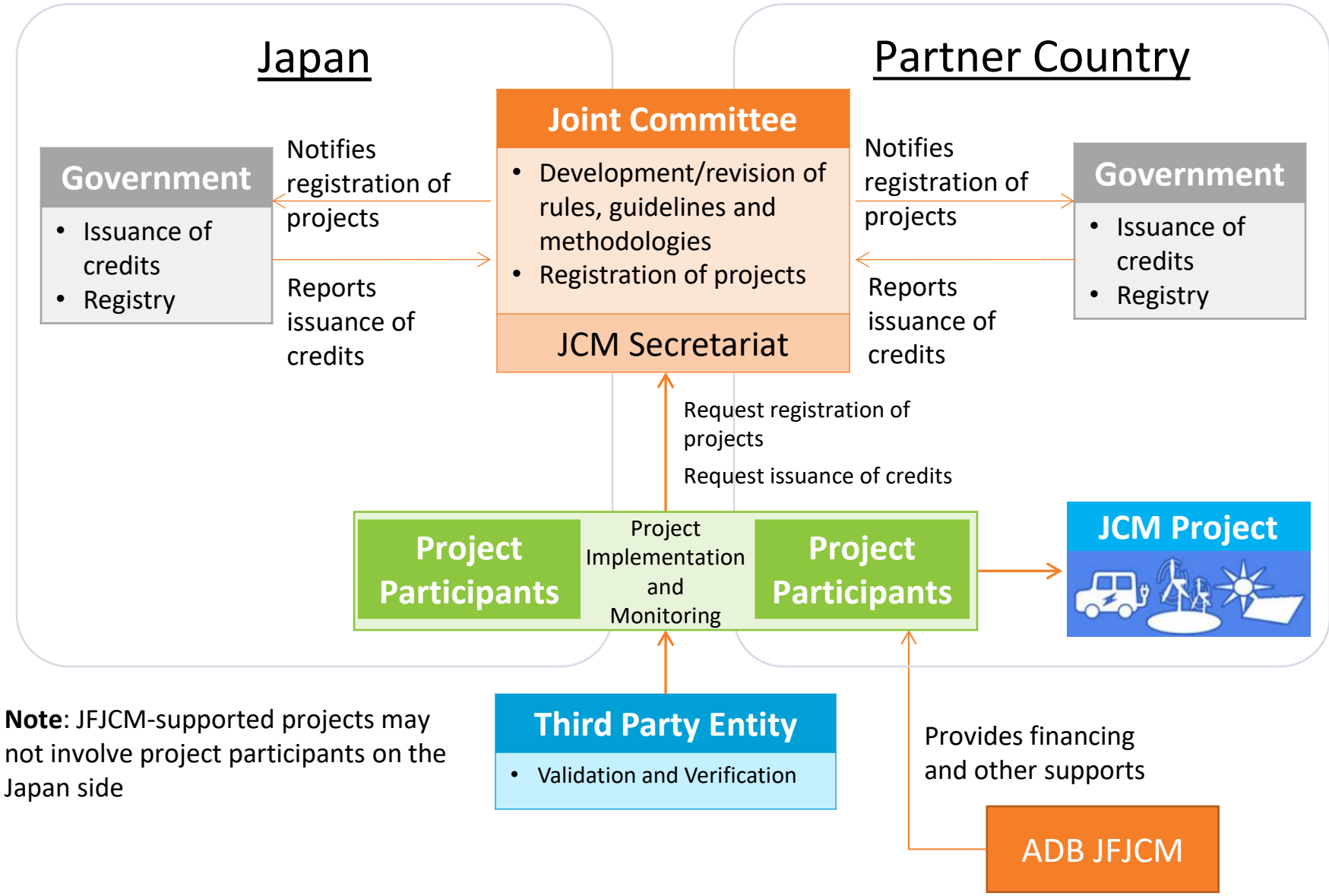
JCM Requirements

- Preparation and approval of JCM Methodology
- Preparation of Project Design Documents (PDD)
- Validation by Third Party Entities (TPEs), and registration of the project
- Monitoring, reporting and verification of GHG emission reduction
- Issuance of the JCM credits and delivery to government(s)

Borrower needs to engage consultant by using the JFJCM grant
JFJCM secretariat may help the process

Reference: Handbook for Developing JCM Projects

Roles of key entities in JCM projects



Note: JFJCM-supported projects may not involve project participants on the Japan side

JCM project cycle and requirements (1)

JCM steps	Borrower requirements	Consultant's support*
Methodology Development	Prepare a methodology for GHG emission reduction calculation, and submit to Joint Committee (JC)	Draft a methodology, and facilitate communication with JCM secretariat
Approval of Methodology		
PDD Development	Develop a project design document (PDD) and hold a local stakeholder consultation	Draft a PDD and help holding a local stakeholder consultation
Validation	Hire TPE, and submit PDD to JC	Assist responding to queries from TPE, and facilitate communication with TPE, JC and JCM secretariat
Registration	Submit registration request to JC	

One-time

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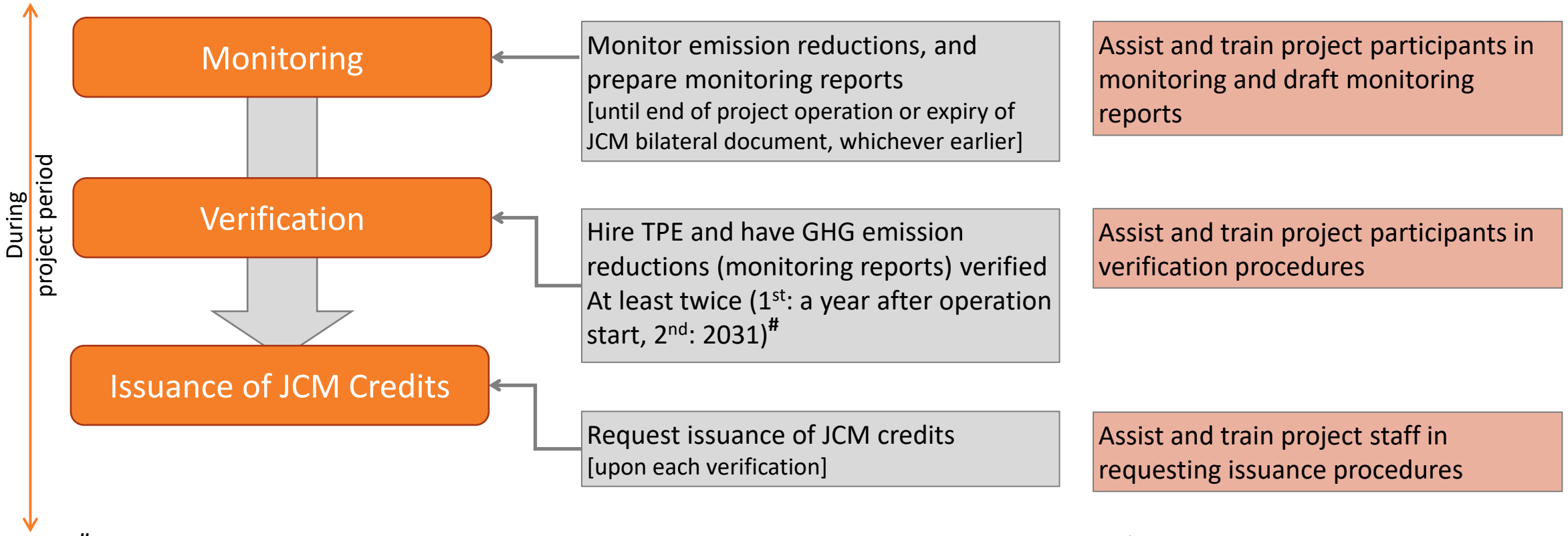
* JFJCM grant can be used to hire a consultant to support the process

JCM project cycle and requirements (2)



Cost for hiring TPE will be borne by Borrower for the verification to be done if the timing is after the ADB project implementation period.

* JFJCM grant can be used to hire a consultant to support the process

Credit allocation for JFJCM-supported projects

1. General principle

Project participants of a JFJCM-supported project consult among themselves and with both governments the percentage of JCM credit allocation among the Government of Japan and the partner's country respectively, taking into consideration their respective contribution to GHG emission reductions or removals by the project.

2. Credit allocation for JFJCM-supported projects

Project participants should calculate the percentage of JCM credit allocation with the following equation:

A percentage of JCM credits that Japan will acquire from a JFJCM-supported project (%)

$$= \frac{\text{Amount of financial support from JFJCM grant}}{\text{Total project costs}} \times 100$$

Where

"**Japan**" includes the Government of Japan.
"**JFJCM grant**" is the actual grant amount utilized by the project participants to implement the JCM project
"**Total project costs**" are capital expenditures directly attributable to a JFJCM-supported project but do not include, among others, cost to purchase of land and existing structures, insurance cost, and operating expenses of the project.

Approved JFJCM Projects

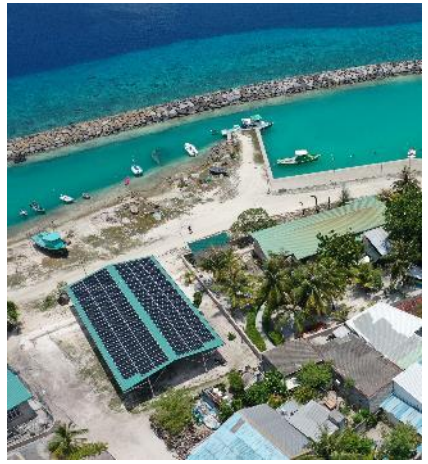
#	Project	Country	JFJCM grant ($ million)	ADB Approval	Technologies supported
1	Preparing Outer Islands for Sustainable Energy Development Project (POISED)	Maldives	5.00	Mar 2015	Advanced battery and energy management system (EMS)
2	Southwest Transmission Grid Expansion Project	Bangladesh	7.00	Jul 2018	Energy efficient transmission lines
3	Upscaling Renewable Energy Sector Project	Mongolia	6.00	Sep 2018	Solar PV with advanced battery system and EMS
4	Improving Access to Health Services for Disadvantaged Groups Investment Program	Mongolia	3.48	Oct 2019	Energy efficient HVAC, high insulation window, rooftop solar PV and ground source heat pump
5	Greater Male Waste to Energy Project	Maldives	10.00	Aug 2020	Waste-to-energy plant (incineration)
6	Geothermal Power Generation Project (Phase 1)	Indonesia	10.00	Jun 2023	Geothermal power plant with advanced designs
7	Accelerating Sustainable System Development Using Renewable Energy Project (ASSURE)	Maldives	6.20	Sep 2023	Advanced flow battery system Ocean renewable energy pilot
8	Disaster Resilient Clean Energy Financing Project (DRCEF)	Palau	5.00	Dec 2023	Financial intermediation to support investment in low-carbon technologies
9	Bishkek Low-carbon Municipal Building Upgrading Pilot	Kyrgyz Republic	5.00	Q1 2026	Energy efficient heat pumps, ventilation system with heat recovery, and building energy management systems (BEMS)
		Total	**57.68**		

Case study 1: Advanced micro-grid technology in Maldives

Project name	Preparing Outer Islands for Sustainable Energy Development Project (POISED)
JFJCM grant	$5 million
Technology supported	Advanced battery energy storage system (BESS) and energy management system (EMS)
Description	On top of 1.6 MW of solar PV installed under the POISED project, the advanced BESS and EMS are supported by JFJCM. The systems enable: ➢ Smoothing out the fluctuation of variable solar PV generation ➢ Optimizing diesel generator operation ➢ Integrating large amounts of renewable energy to the grid The BESS and EMS have started operation since August 2021.
Location	Addu, Maldives
Emission reductions	1.3 thousand tCO_2/year (estimate)

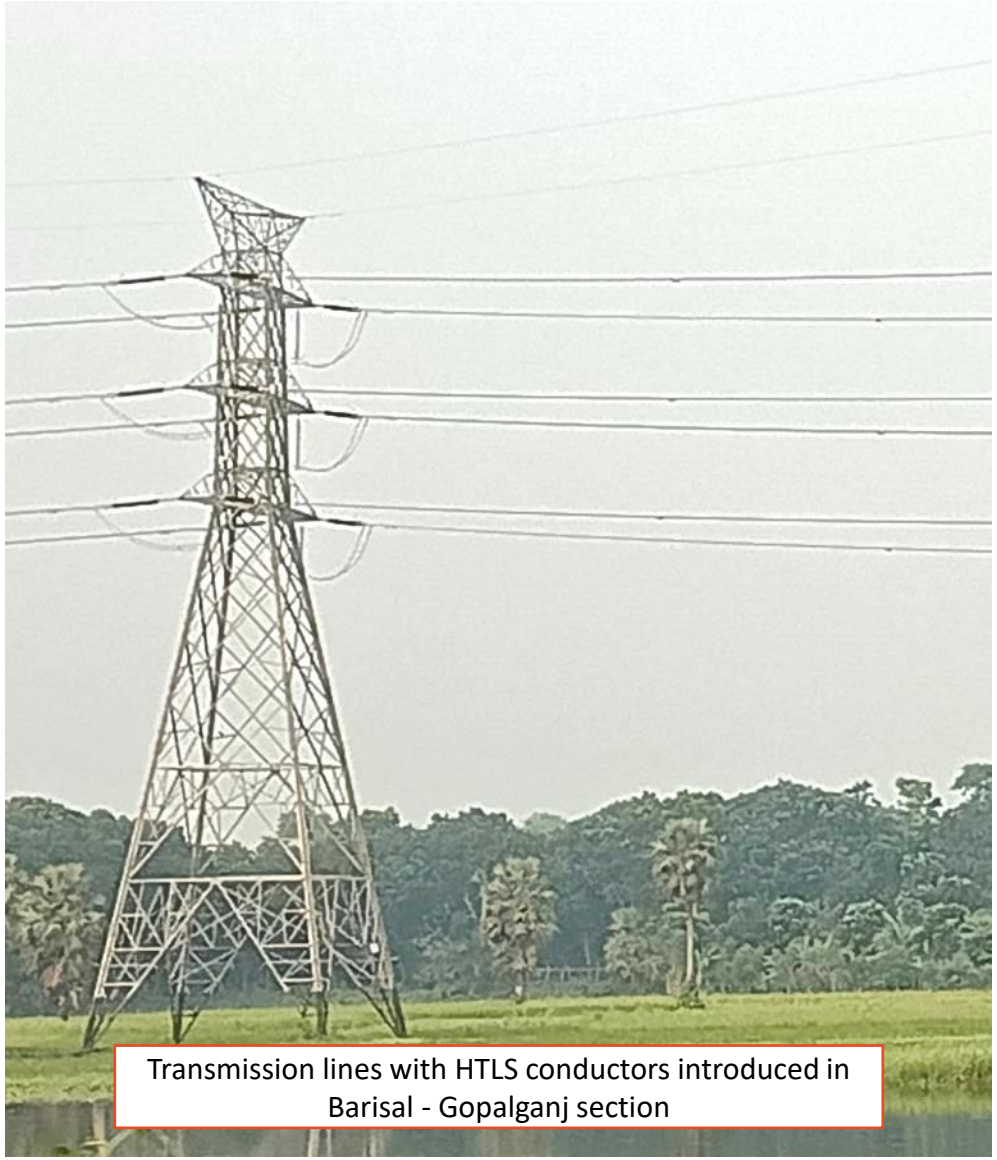
BESS at the project site


Training local staff for EMS operation


Solar PV at the project site

Case study 2: Energy efficient transmission lines in Bangladesh

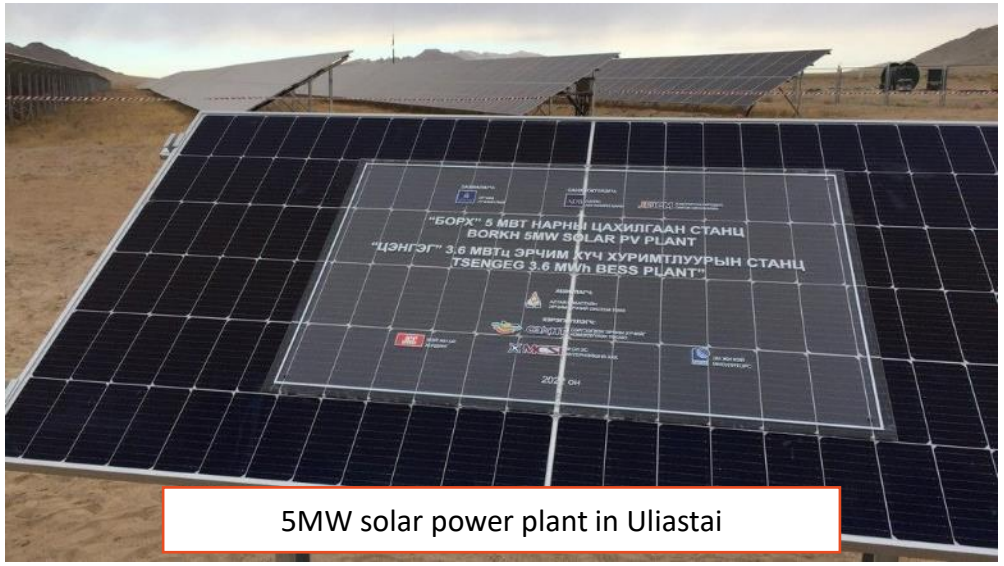
Project name	Southwest Transmission Grid Expansion Project
JFJCM grant	$7 million
Technology supported	Energy efficient transmission lines
Description	Energy efficient transmission lines will increase high-voltage network capacity while reducing transmission losses and emissions including carbon dioxide. The key technology is high-temperature low-sag (HTLS) conductors. HTLS conductors have less sag at high temperatures and higher capacity compared to conventional aluminum conductor steel reinforced (ACSR) cables, which are currently widely used in Bangladesh. HTLS utilize cores made of steel alloys, composite-reinforced metal, or carbon fiber composite material.
Location	Between Barisal and Gopalganj, Bangladesh
Emission reductions	23.1 thousand tCO_2/year (estimate)



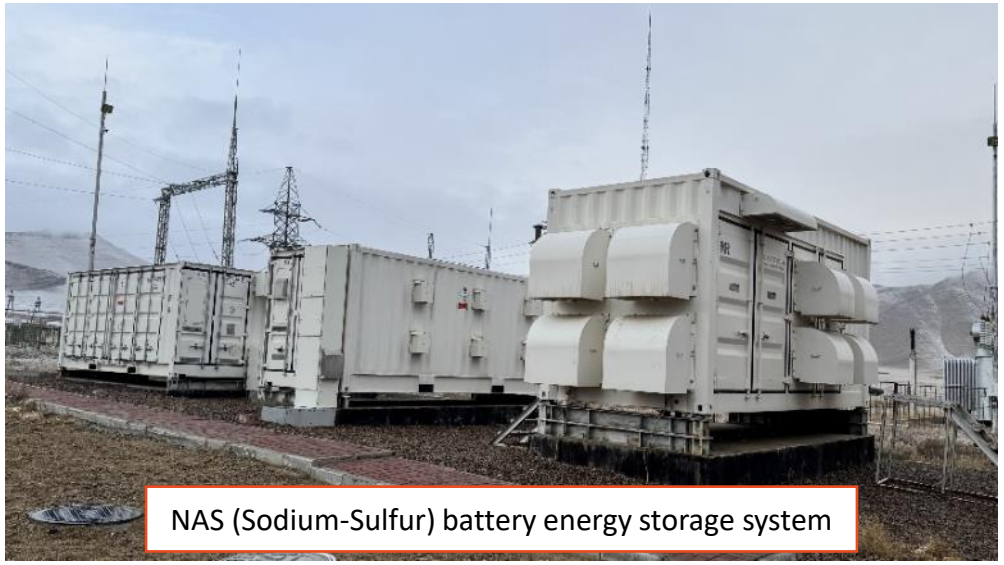
Transmission lines with HTLS conductors introduced in Barisal - Gopalganj section

Case study 3: Upscaling renewable energy in Mongolia

Project name	Upscaling Renewable Energy Sector Project
JFJCM grant	$6 million
Technology supported	5MW solar PV system, advanced battery energy storage system (BESS) of 3.6 MWh and energy management system (EMS)
Description	This solar power plant with advanced BESS and EMS can supply as much locally produced renewable energy as possible to local consumers, reducing carbon intensive domestic and imported grid electricity, while strengthening the country's power self-sufficiency. This is the very first utility scale battery system in Mongolia combined with a grid connected renewable energy. The plant started operation in Nov 2022.
Location	Uliastai, Mongolia
Emission reductions	6.4 thousand tCO_2/year (estimate)



5MW solar power plant in Uliastai


NAS (Sodium-Sulfur) battery energy storage system

Case study 4: Green Hospital in Mongolia

Project name	Improving Access to Health Services for Disadvantaged Groups Investment Program
JFJCM grant	$3.48 million
Technology supported	Energy efficient heating, ventilation and air-conditioning (HVAC) system, high insulation window, rooftop solar PV, and ground source heat pump (GSHP)
Description	A new annex building as expansion of the existing Khan Uul district hospital in Ulaanbaatar will be constructed with adoption of advanced low carbon technologies including HVAC system, high insulation window and rooftop solar PV. New construction of three family health centers is also planned with GSHP installation, which replace the heat supply from electric heaters powered by coal fired power plants.
Location	Ulaanbaatar, Mongolia
Emission reductions	2.9 thousand tCO_2/year (estimate)

Project site for a family health center with GSHP

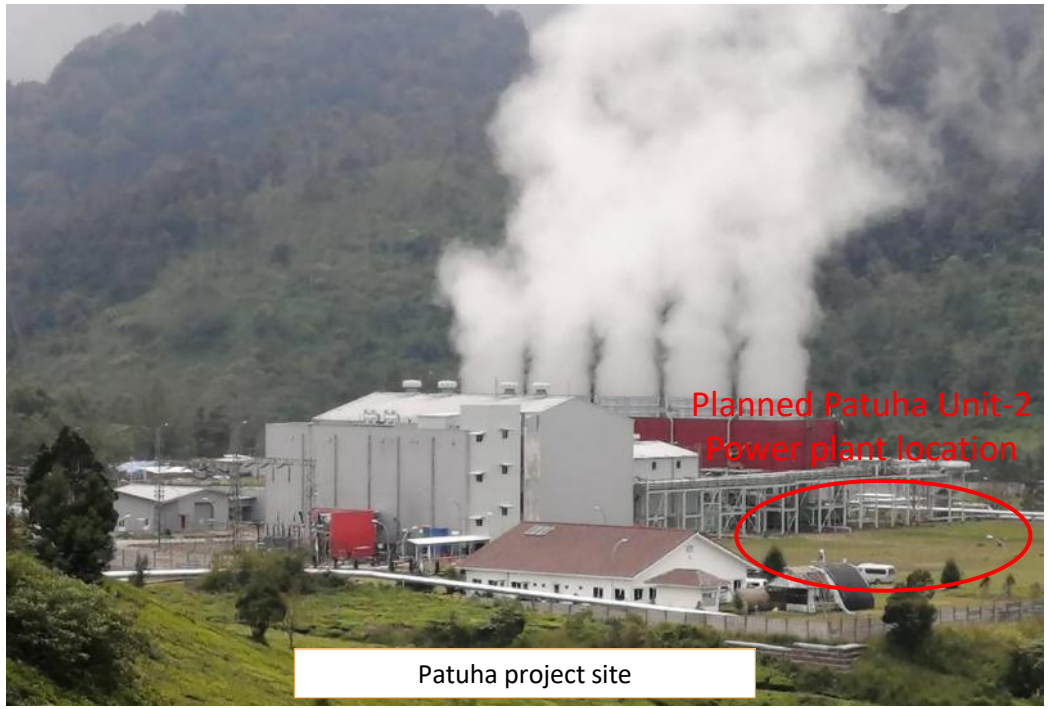
Test drilling for GSHP

Case study 5: Waste to Energy in Maldives

Project name	Greater Male Waste to Energy Project
JFJCM grant	$10 million
Technology supported	Waste to energy plant (incineration)
Description	The project will establish an integrated regional solid waste management system in Greater Male consisting of collection, transfer, treatment using advanced waste-to-energy (WtE) technology, disposal, recycling, and dumpsite closure and remediation. The WtE facility can process 500 tons/day of municipal solid waste, with up to 12 MW power generation. Installation of MSW incinerators avoids emissions of methane associated with disposed organic waste in a solid waste disposal site.
Location	Thilafushi, Maldives
Emission reductions	40.4 thousand tCO_2e/year (estimate) *Average of emission reductions for 20 years

Case study 6: Geothermal Energy in Indonesia

Project name	Geothermal Power Generation Project
JFJCM grant	$10 million
Technology supported	(i) Anomaly predictive diagnosis using Internet of Things (IoT) and Artificial Intelligence (AI), (ii) steam turbine with advanced design, (iii) direct drive motors for cooling tower fans, (iv) hybrid type cooling tower fill, and (v) optical fiber monitoring for temperature distribution inside cooling tower
Description	PT Geo Dipa Energi (GDE), a state-owned geothermal company, will develop a single-flash geothermal power plant with 55 MW at the Patuha geothermal field (Patuha Unit-2). The project will introduce the first-of-its-kind technologies for large scale geothermal power plant in Indonesia, which lead to improving plant efficiency, minimizing degradation of plant performance, and reducing unplanned shutdown periods of the geothermal power plant, and thereby increasing renewable energy penetration into the existing grid system.
Location	West Java, Indonesia
Emission reductions	273.8 thousand tCO_2e/year (estimate) *Average of emission reductions for 20 years



Patuha project site


Geothermal steam pipes

Case study 7: Advanced Flow BESS and Ocean Renewable Pilot

Project name	Accelerating Sustainable System Development Using Renewable Energy Project
JFJCM grant	$6.2 million
Technology supported	(i) Advanced flow battery energy storage (BESS) (ii) Ocean renewable energy pilot
Description	(i) Flow BESS of 3 MWh each for two target outer islands together with advanced EMS will be introduced to enable further integration of solar power generation by the private sector. The flow BESS will be used for time-shifting to bring the renewable energy penetration to 40-60% in energy term. (ii) Current and/or wave power generation with 100 kW capacity will be deployed on a pilot basis in selected outer islands.
Location	Several outer islands, Maldives
Emission reductions	(i) 4.5 thousand tCO_2e/year (estimate) (ii) 211 tCO2e/year (estimate) *Average of emission reductions for 20 years

Renewable Energy Installation in Maldives

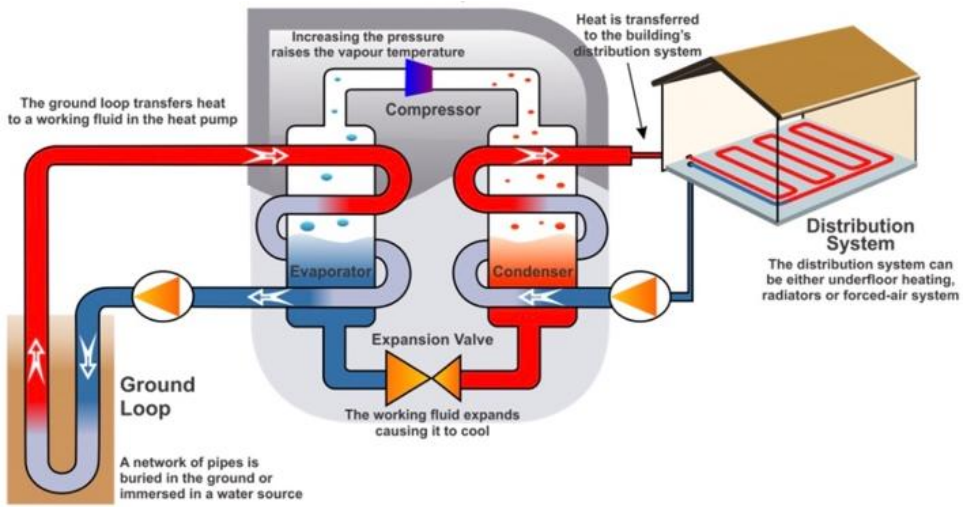
Case study 8: Low Carbon Financing Intermediation in Palau

Project name	Disaster Resilient Clean Energy Financing (DRCEF) - Additional Financing
JFJCM grant	$5 million
Technology supported	Cycle 1: Roof-top solar photovoltaic (PV) with battery energy storage systems (BESS) Cycle 2: clean energy technologies to be identified at the time of commencement of this cycle (e.g. wind, ocean energy and other renewable power generation, hydrogen, electric vehicle) that can meet JCM requirements
Description	National Development Bank of Palau (NDBP) will establish a new loan product with subsidized interest rate to promote low-carbon technologies, which is also expected to improve disaster resilience. The product is designed to support clean energy investment by the private sector in Palau, with particular focus on micro, small and medium enterprises (MSMEs) borrowers, including women-led businesses. The funding will be managed as a revolving fund, where the repaid principal will be used for multiple cycles by NDBP.
Location	MSMEs' premises within Palau
Emission reductions	3.1 thousand tCO_2e/year (estimate) *Average of emission reductions by Cycle-1 for 20 years

Rooftop solar panels installed under Phase 1 of DRCEF Project.

Case study 9: Low-carbon Municipal Building Upgrading Pilot

Project name	Bishkek Low-carbon Municipal Building Upgrading Pilot under the Multisector Activities Support Facility 2025–2030
JFJCM grant	$5 million
Technology supported	(i) Heat pumps (closed-loop ground-source, air-to-water, and wastewater types) (ii) Heat recovery ventilation (iii) Building energy management systems
Description	The project will introduce low-carbon and energy-efficient technologies in five schools and one preschool in Bishkek. It will combine conventional measures (mainly building envelope insulation) with advanced technologies such as energy-efficient space conditioning using heat pumps, heat recovery ventilation, and building energy management systems. These upgrades will replace coal-fired heating, reducing GHG emissions and energy costs, and improving indoor and outdoor air quality. The project will also build local expertise and demonstrate scalable, replicable energy-efficient building solutions in the country and the region.
Location	five schools and one preschool in Bishkek, Kyrgyz Republic
Emission reductions	6.4 thousand tCO_2e/year (estimate)



Source: Niessink, R.J.M. 2019. Ground-source Heat Pump (GSHP) – Households. Energy.nl

How closed-loop ground-source heat pumps work

Existing coal-fired boilers in a targeted school

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Thank you.