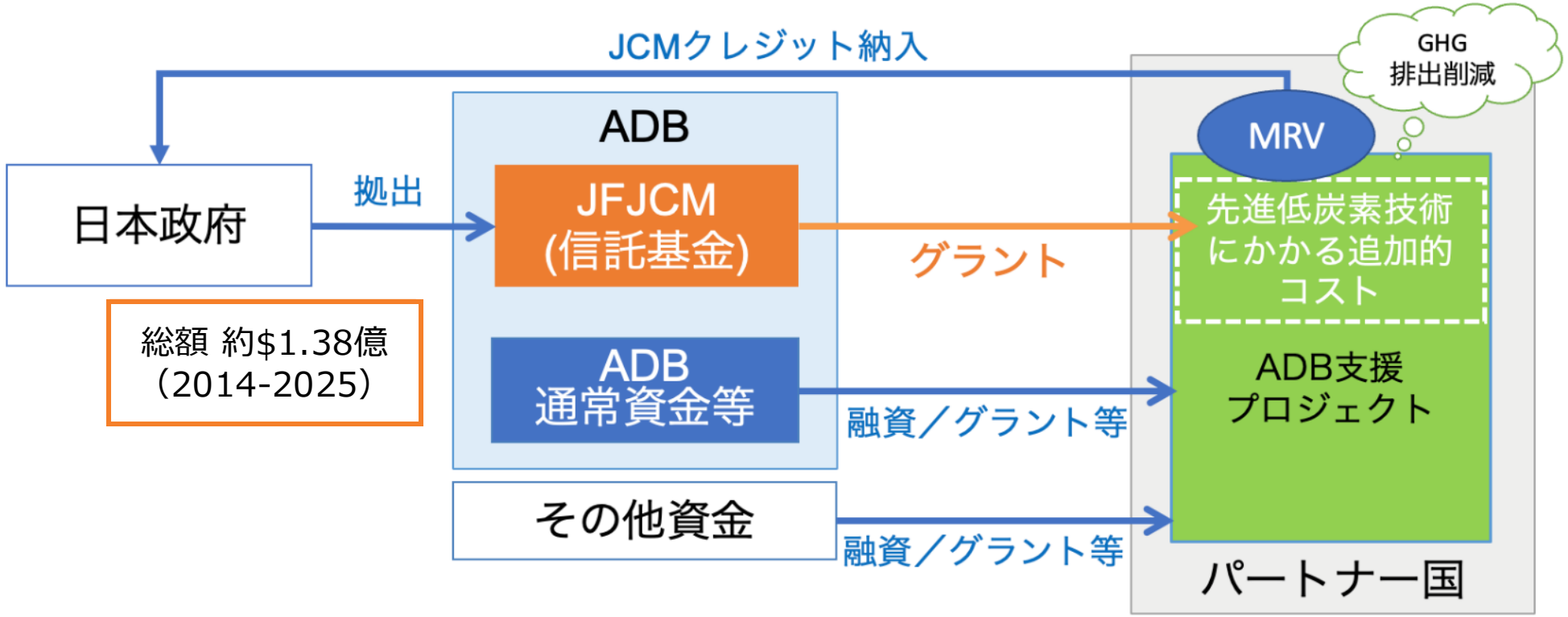
二国間クレジット制度日本基金

2026年2月

二国間クレジット制度日本基金（JFJCM）



- 2014年にADBの信託基金として設立
- 日本政府（環境省）より累計約$1.38億の拠出（2014-2025）
- ADBが支援する案件に対して、先進的な低炭素技術の導入を促進するためにグラントを提供。支援を受けた案件はJCMの制度に基づいて案件登録、クレジット発行を行う。
- ソブリン・ノンソブリン案件いずれも支援可能

JFJCM 支援対象

JFJCM 支援対象・条件

- ADBから資金支援（ローン、グラント等）を受ける案件
- 先進的な低炭素技術の導入を伴う案件（エネルギー起源CO_2削減を含む）
- ソブリン案件（主に政府や公共セクターに対するファイナンス）
  - 優れた低炭素技術導入に伴う追加的コストに対しグラントを提供（モノ、サービス、能力向上トレーニング等含む）
  - 支援上限： (1)総事業費の10% or $1,000万の少ない方、(2)総事業費 < $5,000万の場合、$500万
- ノンソブリン案件（主に民間セクターに対するファイナンス）
  - 開発途上国で実施される民間セクター事業実施者等へのADB融資をベースに、グラント提供（マイルストーン毎の支払）
  - 支援上限： 総事業費の10% or $1,000万の少ない方
- JCM設備補助事業との併用は不可

JFJCM 支援対象国

- JCMパートナー31カ国のうち、ADBの支援対象国である19カ国

アゼルバイジャン、バングラデシュ、カンボジア、ジョージア、インド、インドネシア、カザフスタン、キルギス、ラオス、モルディブ、モンゴル、ミャンマー、パラオ、パプアニューギニア、フィリピン、スリランカ、タイ、ウズベキスタン、ベトナム

JFJCM 案件一覧

#	案件名	国	JFJCMによる支援 ($ million)	案件総費用 ($ million)	ADB承認	導入技術
1	アッドゥ環礁におけるスマート・マイクロ・グリッド・システム (POISED)	モルディブ	5.00	129.00	2015	高性能リチウムイオン蓄電池及びEMS
2	バングラデシュ南西部（バリサル – ゴパルガンジ間）の高効率送電導入プロジェクト	バングラデシュ	7.00	532.00	2018	高効率送電線
3	再生可能エネルギー拡大プロジェクト	モンゴル	6.00	66.22	2018	太陽光発電、高性能蓄電池及びEMS
4	健康サービスへのアクセス性改善プロジェクト	モンゴル	3.48	80.44	2019	高効率暖房・換気・空調システム、高断熱窓、屋根置型太陽光発電及び地中熱ヒートポンプ
5	マレ広域区廃棄物発電プロジェクト	モルディブ	10.00	151.13	2020	廃棄物発電（焼却処理）
6	パトゥハ2号 55MW地熱発電プロジェクト	インドネシア	10.00	479.20	2023	高効率地熱発電
7	再生可能エネルギーを使用した持続可能なエネルギー管理システム開発加速プロジェクト (ASSURE)	モルディブ	6.20	100.47	2023	先進的フロー型蓄電池 海洋再生可能エネルギーパイロット事業
8	災害に強靭なクリーンエネルギー融資プロジェクト (DRCEF)	パラオ	5.00	9.00	2023	低炭素技術への投資を支援する金融仲介
9	ビシュケク市における低炭素技術を活用した公共建物改修パイロット	キルギス	5.00	8.00	承認待ち	高効率ヒートポンプ、廃熱回収換気システム及びBEMS
10	首都ポートモレスビー近郊及びラム地域における高効率送電線導入プロジェクト	パプアニューギニア	10.00	110.00	2025	高効率送電線
11	医療サービスの持続可能性向上プロジェクト（ACCESS-UHC）	フィリピン	3.5	514.00	承認待ち	高効率暖房・換気・空調システム、屋根置型太陽光発電、建物一体型太陽光発電
		合計	**71.18**	**-**		

*出典: Project Administration Manual of each project or other published documents at ADB website under https://www.adb.org/projects

JFJCMとJCM設備補助事業の比較①

比較事項		JFJCM		R7年度 JCM設備補助事業
		ソブリン案件	ノンソブリン案件	
ファイナンスに関わる事項	前提	ADB資金支援を受ける案件であること		
	対象国	JCMパートナー国のうちADB支援対象であるアジア太平洋の19カ国		JCMパートナー31カ国
	資金支援 上限額	グラントとして、 (1) 総事業費≦$5,000万の場合: $500万 (2) 総事業費＞$5,000万の場合: 総事業費の10% or $1,000万の少ない方	グラントとして、 総事業費の10% or $1,000万の少ない方	当該国で初めて設備補助で導入される技術についてCO_2削減に直接資する費用の50%上限、 2～4件目: 40%上限、5～8件目: 30%上限、9～10件目: 20%上限、11件目以上対象外 （詳細は公募要領等を参照）
	案件発掘の起点	各国政府起点	事業者起点	事業者起点
	競争入札の有無	国際競争入札が原則必須	案件毎に異なる	案件毎に異なる
	ﾌｧｲﾅﾝｽ適格性確認	融資についてADBが審査 JFJCMによる支援についてADB及び環境省が審査		執行団体及び環境省が審査
	費用対効果	＜$40/t$CO_{2e}$を目安		＜4000円/tCO_{2e}であること （詳細は公募要領参照）
	申請者	各国政府 （JFJCM申請書類はADB案件担当者が作成）	ADB融資を受ける事業者 （JFJCM申請書類はADB案件担当者が作成）	日本法人
	応募時期	随時受付、年度の区切り無し		年度毎に公募（詳細は公募要領参照）
	建設期間	制限なし		採択年度を含め3年度以内

JFJCMとJCM設備補助事業の比較②

比較事項		JFJCM		R7年度 JCM設備補助事業
		ソブリン案件	ノンソブリン案件	
JCM関連手続き	Project Idea Note (PIN)	本申請審査前に、パートナー国へPINを送付し異議なしを確認		ヒアリング実施後、できるだけ早くパートナー国へ異議なしを確認
	方法論・PDD	JFJCMグラントから支出可能		環境省予算で支援
	TPE費用 （妥当性確認、検証の費用負担）	環境省予算で支援　妥当性確認及び検証費用をJFJCMグラントから支出可能		妥当性確認及び1回目の検証費用を環境省が支援
	クレジット期間	10年固定または5年×2回更新（計15年）		10年固定もしくは法定耐用年数のいずれか短い方の期間
	クレジット配分	資金支援の貢献度合いに応じ、日本政府・対象パートナー国政府等の間で協議		
	検証回数	稼働開始から1年後に1回目の検証を実施。その後、2030年までの削減量にかかる検証を2031年に実施（モニタリング期間が2030年より前に終了する場合、その事業期間分まで）		
	MRVの責任所在	ADB案件における実施主体 （Borrower）		国際コンソーシアムの代表事業者 （日本法人）
	JCMプロジェクトの適格性確認	両国政府代表者から構成されるJCM合同委員会が確認		
	対象GHG	温室効果ガス7種、ただしエネルギー起源CO_2削減を含むこと		

JFJCM参画機会（ソブリン案件）：EPC/O&Mコントラクター等

1. 基盤形成、マスタープラン策定、初期調査
2. 案件形成、詳細調査、ADB/JFJCM承認
3. 詳細設計、入札図書準備
4. 入札、評価、契約
5. 設計、調達、建設工事
6. 運転・メンテナンス

- ADB・JFJCMやホスト国政府・関係機関に対する技術の紹介、売り込み
- ADB・JFJCMへの技術情報提供
- マーケットサウンディング等への参加

- EPCコントラクター、設備機器のサブコントラクターとして入札に参画

JFJCM参画機会（ソブリン案件）：コンサルティング

1. 基盤形成、マスタープラン策定、初期調査
2. 案件形成、詳細調査、ADB/JFJCM承認
3. 詳細設計、入札図書準備
4. 入札、評価、契約
5. 設計、調達、建設工事
6. 運転・メンテナンス

➢ JFJCM案件の各段階にてコンサルティングサービス受注の機会がある。

1：ADB案件全体のFS業務（ADB発注）

2：JFJCM案件のFS、申請書作成業務（ADB発注）

3&4：詳細設計、入札図書作成、評価支援業務（ADB or ホスト国施主発注。案件により異なる）

5：調達支援・施工監理業務（ホスト国施主発注）

6：JCM方法論及びPDD作成、モニタリング・クレジット発行支援（ホスト国施主発注）

JFJCM参画機会（ノンソブリン案件）：事業者、投資家 (= ADBから見たBorrower)

ADB融資可能性の初期検討

↓

JFJCM活用可能性の検討

↓

JFJCMコンセプトペーパー（ITD）作成

↓

日本政府 審査

↓

JFJCM 本申請書作成

↓

日本政府 審査・承認

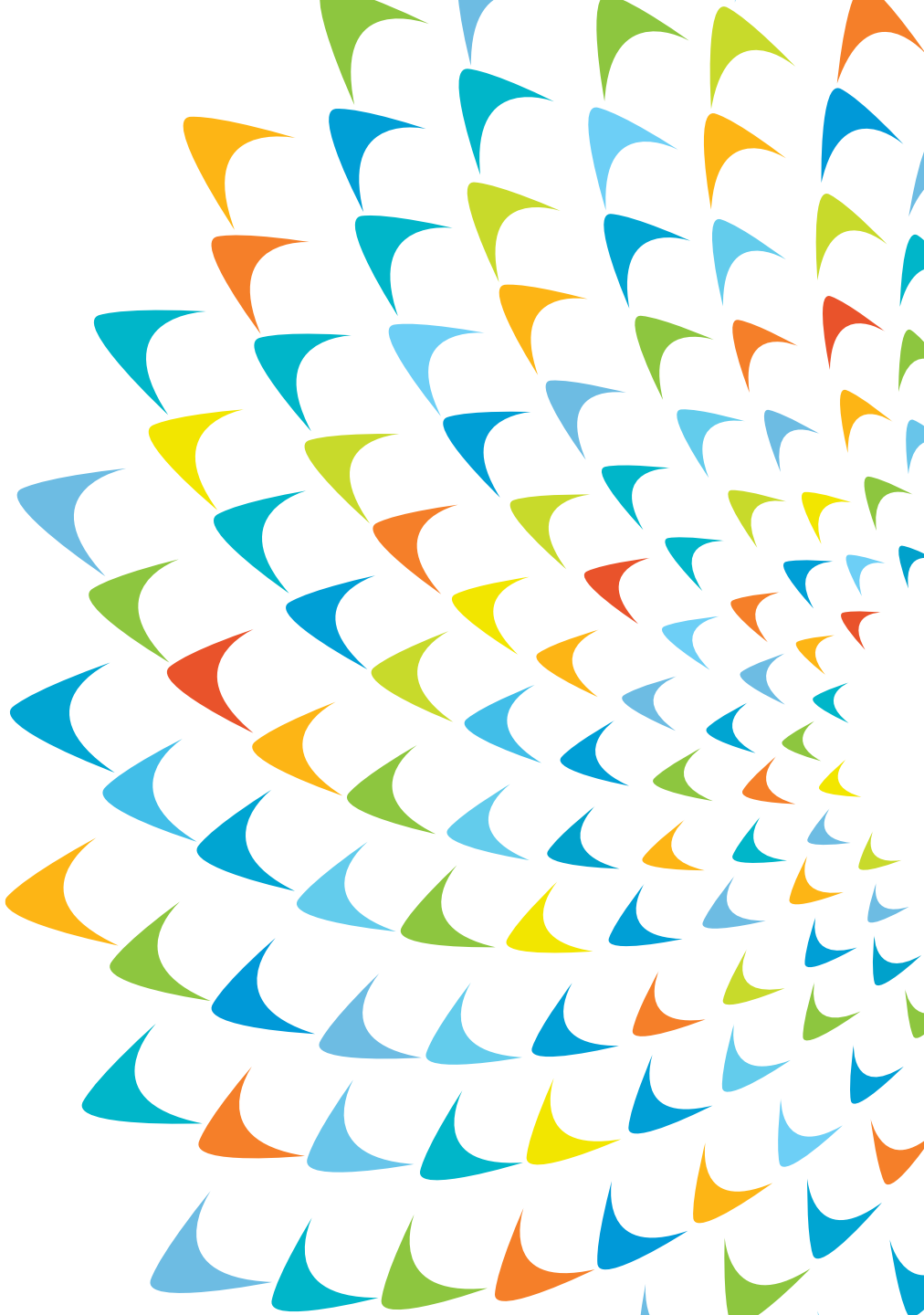
↓

ADB融資 交渉・契約

- ADB融資の可能性について、まず民間セクター業務部門（**PSOD**）と協議。融資可能性のあるものについて、JFJCM活用の検討を開始。
- 融資可能性が見込まれるものについて、ITD （2−3ページのコンセプトノート）をADBの案件担当者が作成、日本政府に提出・審査
- 日本政府のITD承認を得られたものについて、JFJCM本申請書をADB案件担当者が作成、日本政府に提出・審査
- JFJCM事務局に案件相談いただければ、PSOD担当者を紹介可能

Japan Fund for the Joint Crediting Mechanism

February 2026



Leveraging Carbon Markets for Accelerating Climate Action

The Challenge

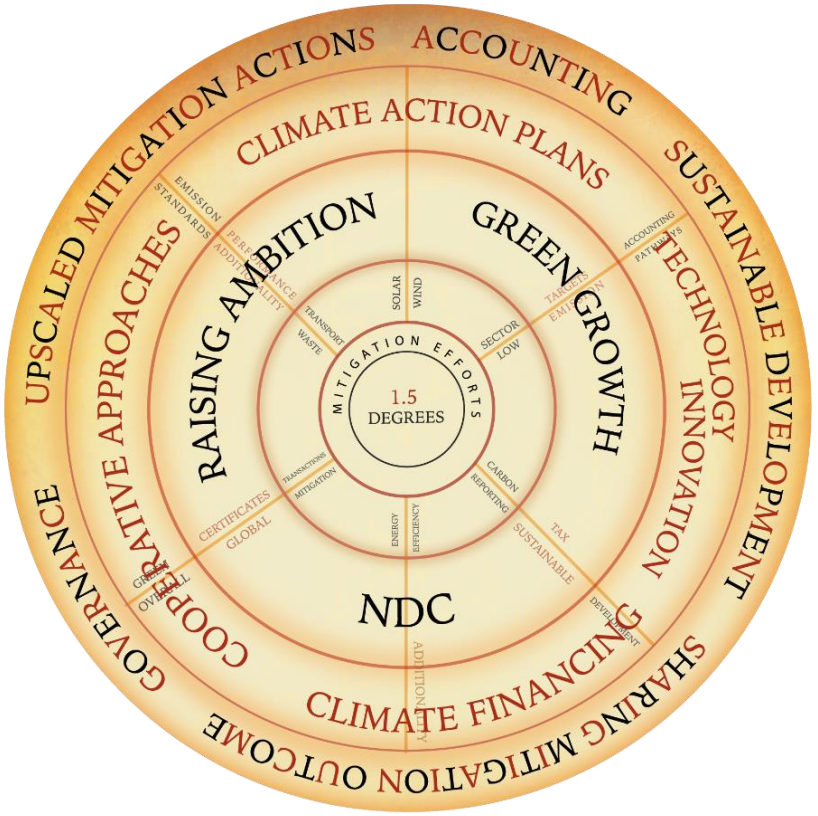
- $1.7 trillion required annually through 2030 to take needed climate actions in developing countries
- Existing public finance is insufficient to close the financing gap
- Private sector engagement is critical to scale up investments

The Role of Carbon Markets

- Mobilize carbon finance to overcome financial, regulatory, and technical barriers
- Create incentives for the deployment of low carbon technologies & solutions
- Catalyze private sector investments in climate mitigation actions

Growing Momentum

- Article 6 rules finalized in COP29 in Baku (2024)
- Growing interest in carbon markets for reducing GHG emissions cost-effectively
- Asia and the Pacific region expected to be the center of gravity for international carbon markets



ADB - Driving Climate Mitigation through Innovative Carbon Finance

- **Carbon Market Development**: Technical assistance and capacity-building support
- **Carbon Finance** Mobilization: Incentivizing investments in low-carbon technologies and solutions

ADB collaborates closely with regional and international development partners to co-create high-integrity carbon markets that supports transparent, inclusive and impactful climate action across Asia and the Pacific.

ADB's Carbon Market Program

Japan Fund for the Joint Crediting Mechanism

Carbon finance to incentivize deployment of advance low-carbon technologies

- Provides financial incentive for deploying advanced low-carbon technologies in ADB-financed projects, under the Joint Crediting Mechanism, aligned with Article 6.2.
- Upfront finance
- Demand signal

$138.58 mn

Article 6 Support Facility

Technical and Capacity Building Support to enhance carbon market readiness and projects

- **Upstream**: National Strategies, Frameworks, Institutional Infrastructure for carbon markets
- **Midstream**: Pipeline of projects for carbon credits
- **Downstream**: Support development of carbon projects to generate carbon credits

$7.8 mn

Climate Action Catalyst Fund

Carbon finance to support transformative mitigation actions

- Pre-purchase of carbon credits from ADB financed projects generating carbon credits under Article 6 of the Paris Agreement
- Long term fixed price contracts and upfront payments
- Price signal

$77.0 mn

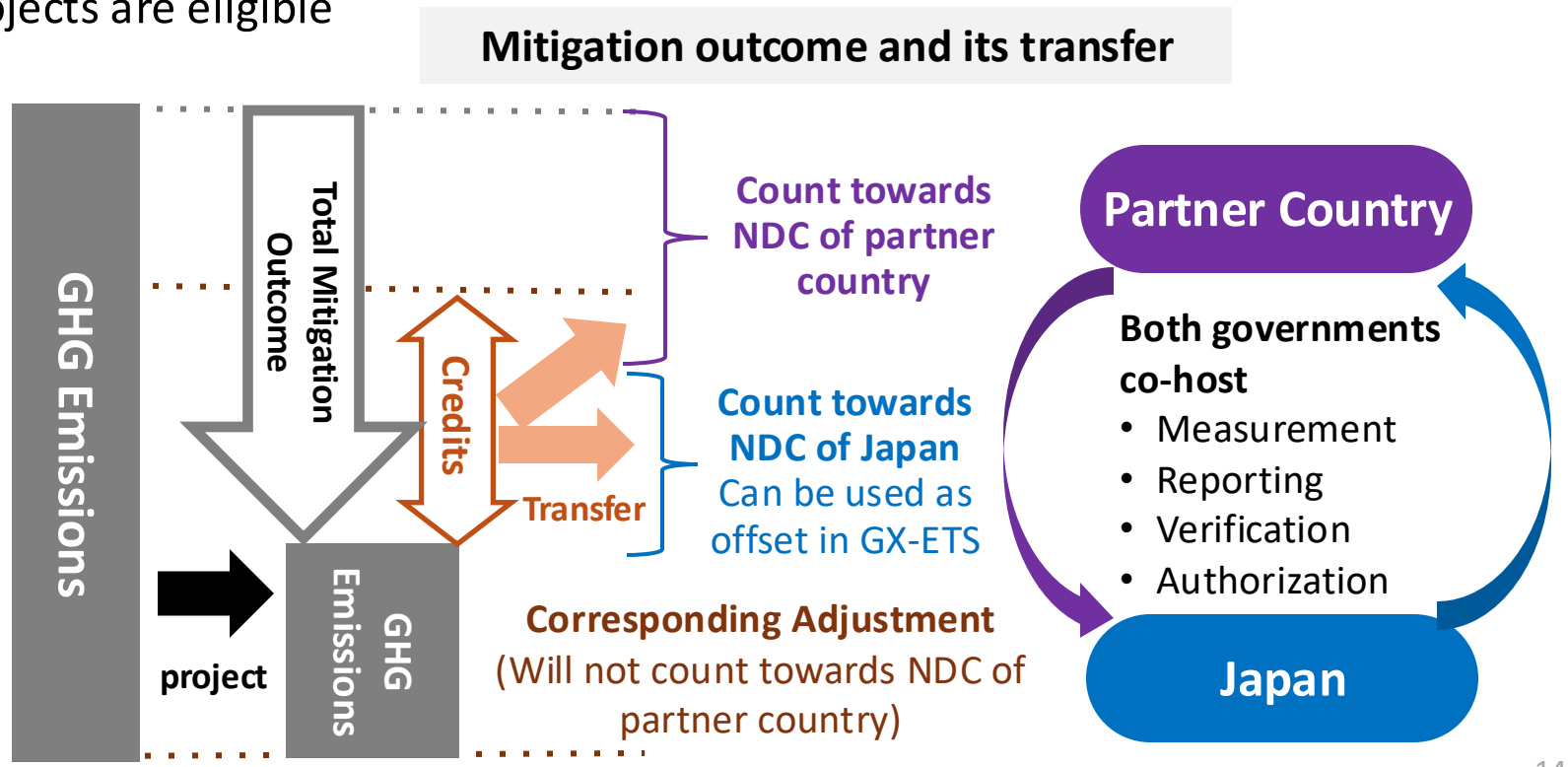
- **Ministry of the Environment, Japan**
- **Ministry of Foreign Affairs and Trade, New Zealand**
- **Federal Ministry for Economic Cooperation and Development, Germany**
- **Swedish Energy Agency**
- **Norwegian Ministry of Climate and Environment**

Japan Fund for the Joint Crediting Mechanism

- Established in June 2014 as one of ADB's trust funds
- Contribution by the Government of Japan: $138.58M (2014-2025)
- Provides financial incentives (grants) for adoption of advanced low-carbon technologies in ADB-financed projects.
- Projects funded by JFJCM are required to generate carbon credits under the Joint Crediting Mechanism (JCM)* and allocate a portion of these credits to the Government of Japan
- 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.

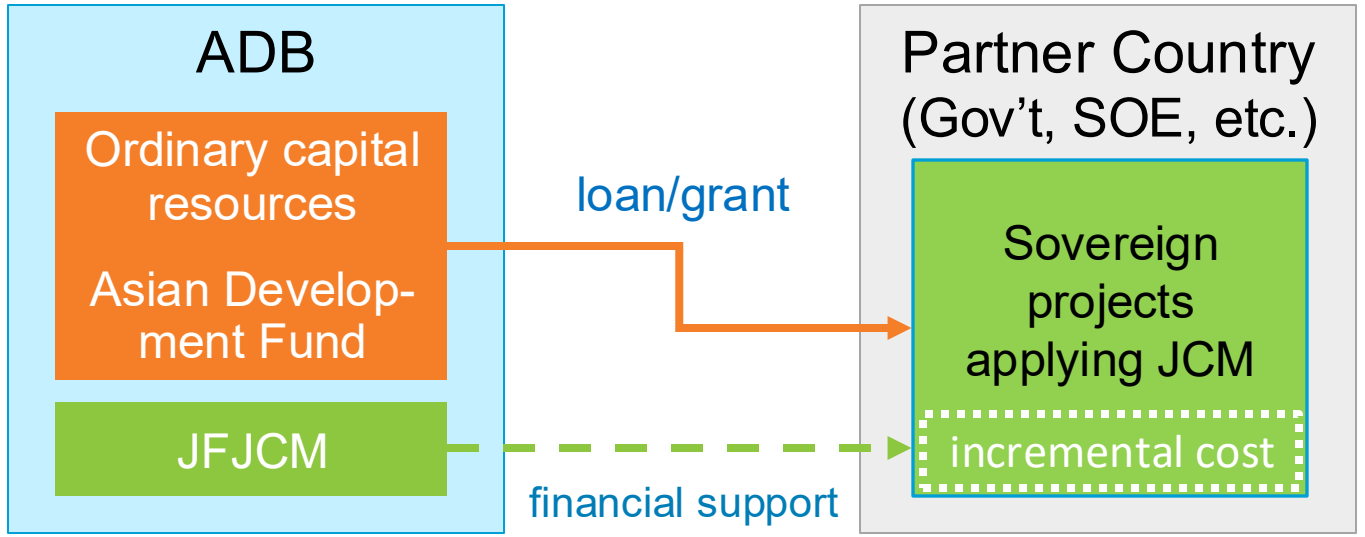
Eligible Technology

- 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

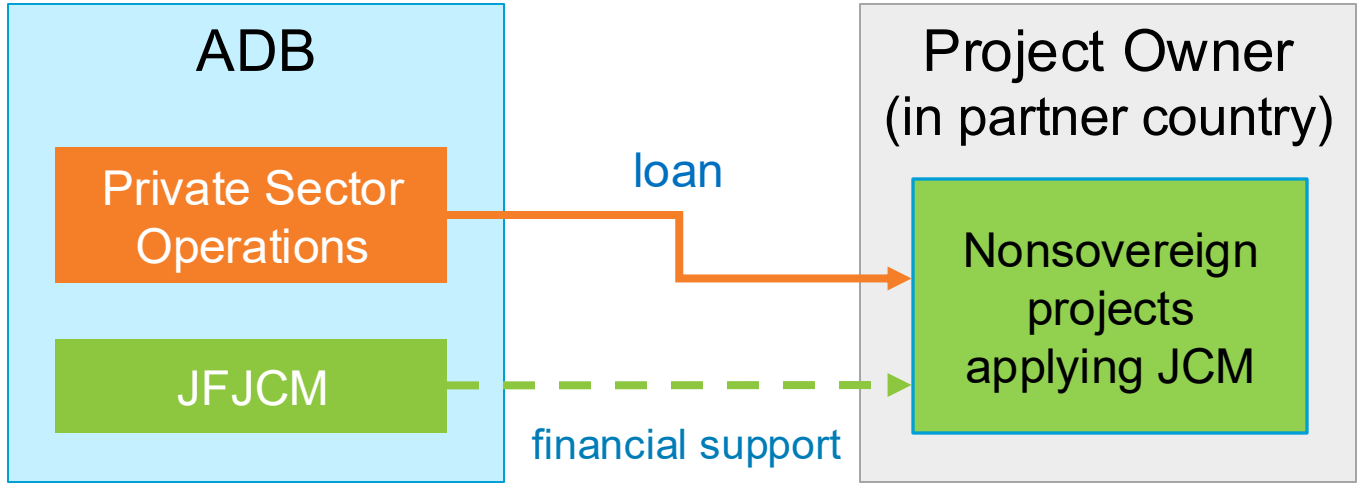
- JFJCM provides financial support for incremental cost of advanced low-carbon technologies
- Maximum amount of financial support:
  i. 10% of total project cost (capped to $10 million)
  ii. $5 million if the project cost < $50 million



For Nonsovereign Project

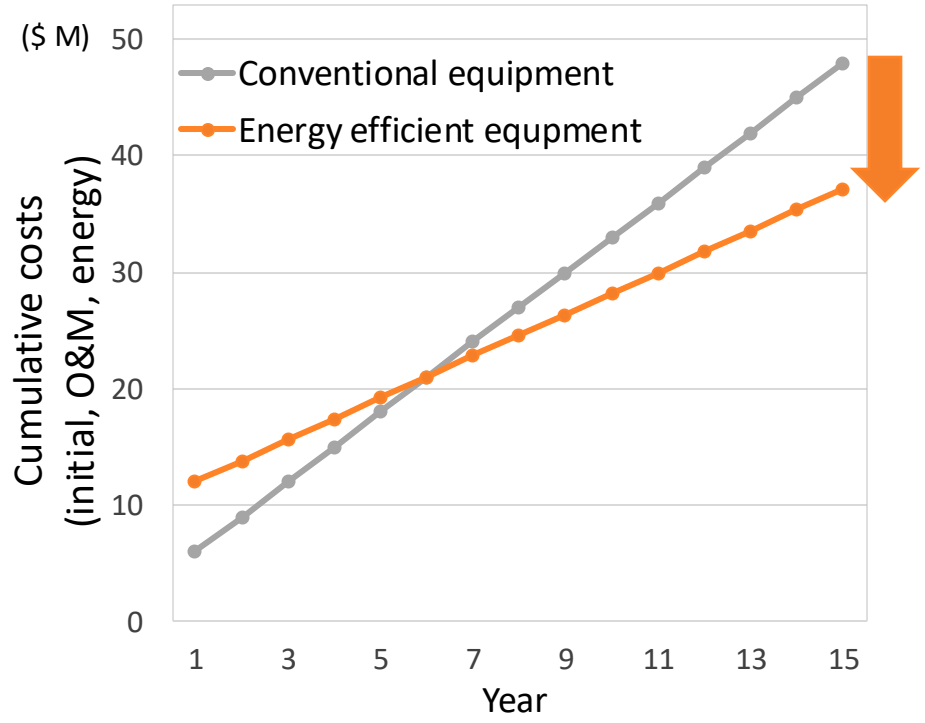
- On top of the ADB loan, JFJCM provides financial support by milestones to support deployment of advanced low-carbon technologies
- Maximum amount of financial support:

  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 financial support will be documented in a financing agreement between ADB and the borrower (as 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 amount of financial support 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 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 financial support 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 financial support 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.

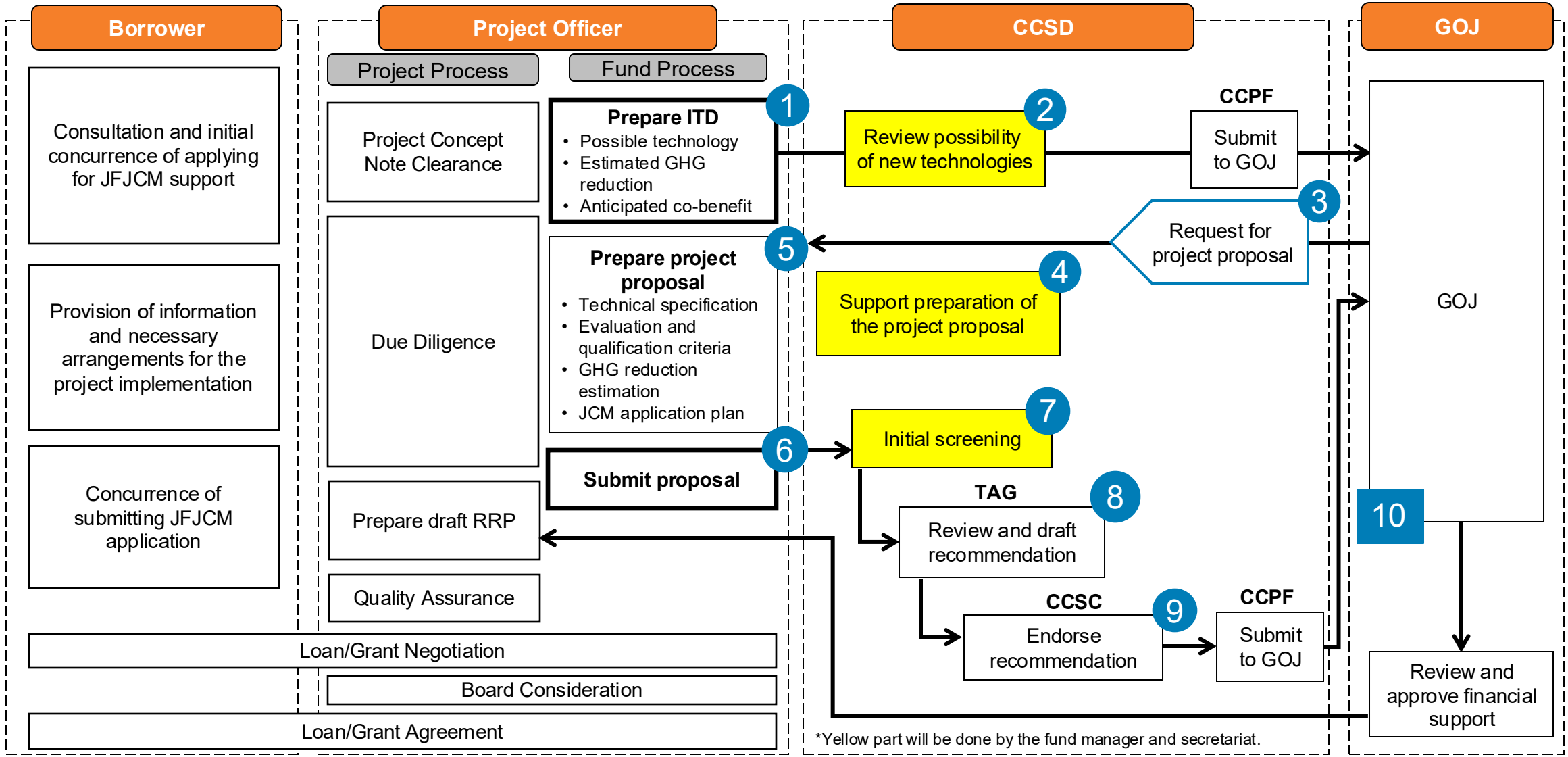
- Cost effectiveness*
  - Cost of reducing 1tCO_2e ≤ $40

  * amount of financial support / (annual GHG emission reduction x project period)

  This sets a ceiling of amount of financial support.

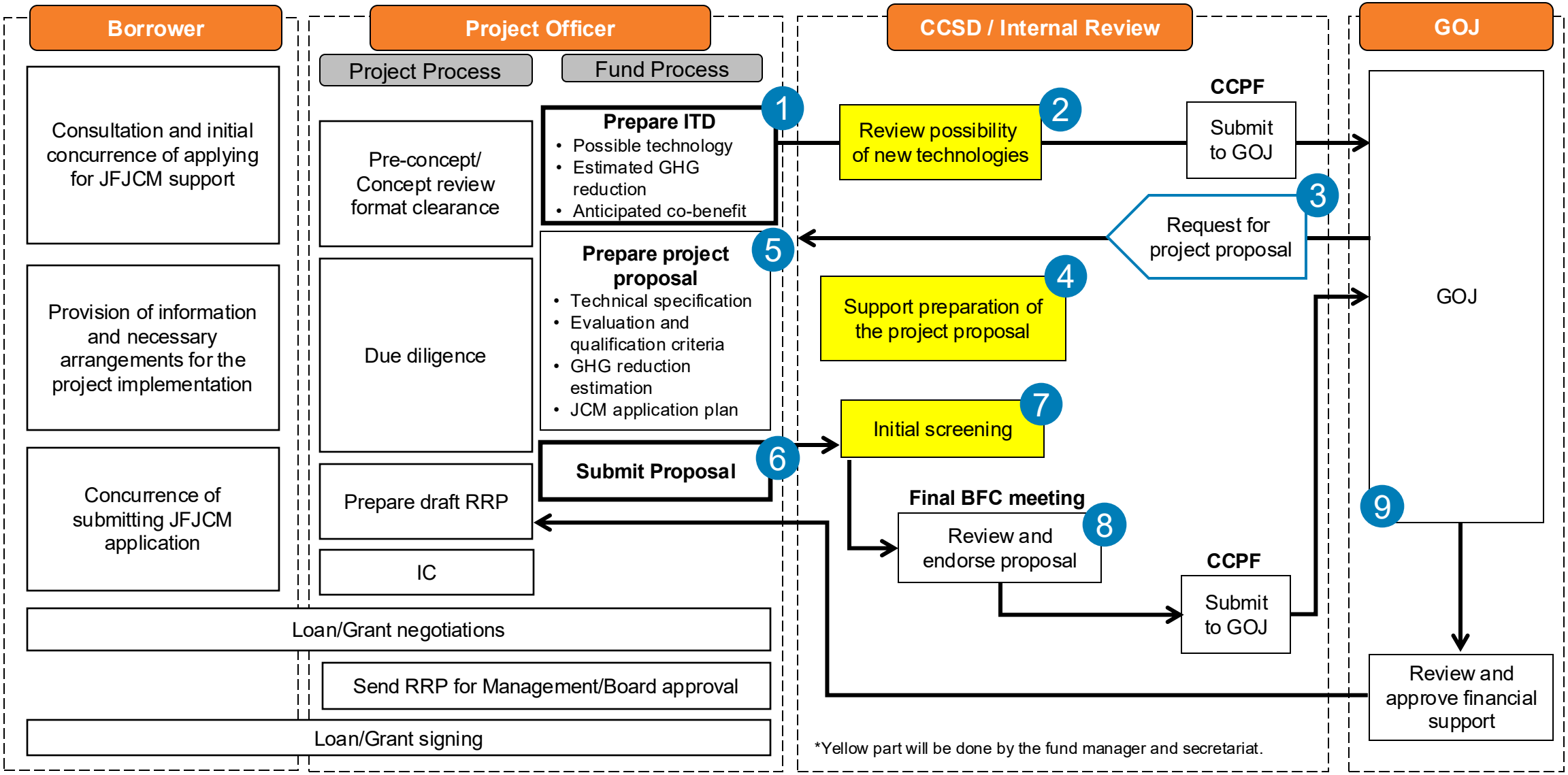
- Others
  - The JFJCM subcomponents cannot be registered under other international carbon market mechanisms.

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.

MRV requirements of the JCM (after approval)

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

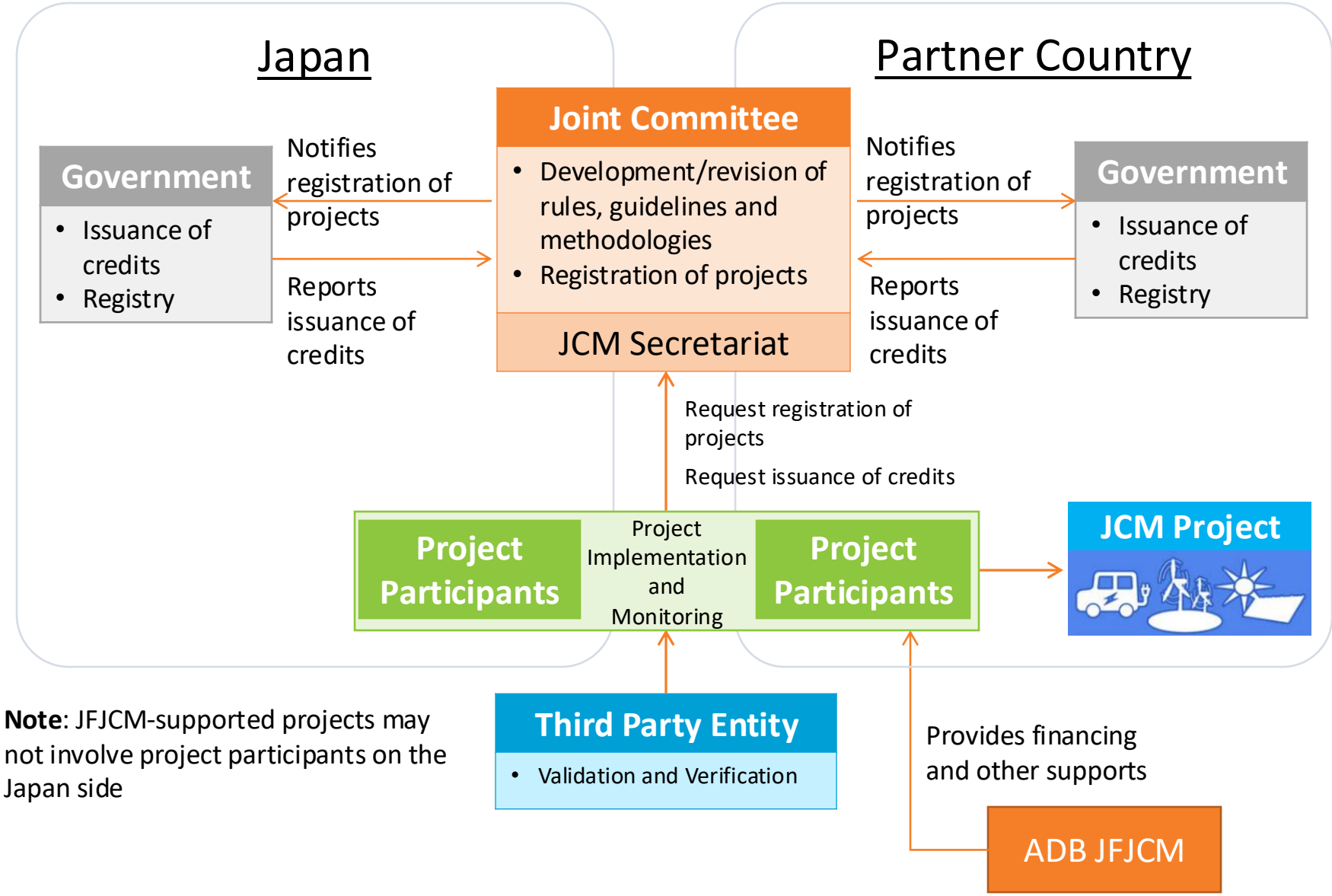
MRV requirements of the JCM

- 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 reductions
- Issuance of the JCM credits and delivery to government(s)

Borrower needs to engage consultant by using the JFJCM financial support (grant)
JFJCM secretariat may help the process

Reference: Handbook for Developing JCM Projects

Roles of key entities in JCM projects

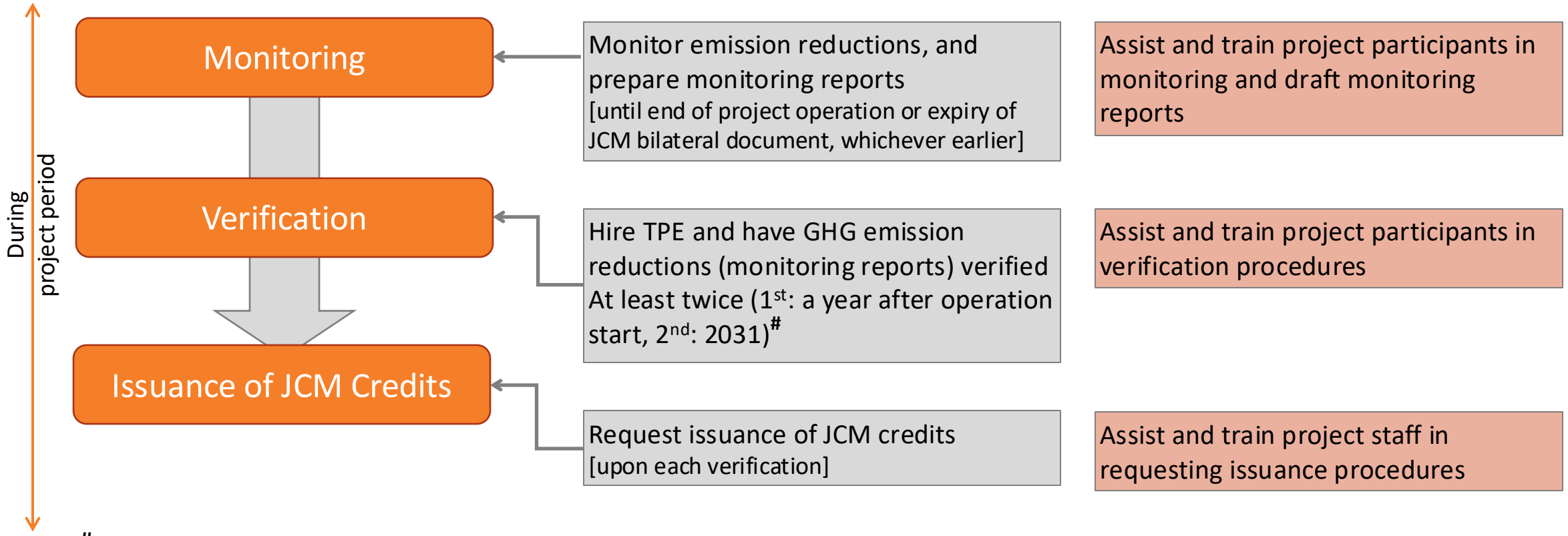


Note: JFJCM-supported projects may not involve project participants on the Japan side

JCM project cycle and requirements (1)

* JFJCM financial support can be used to engage 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 financial support can be used to engage 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 the Government of Japan will acquire from a JFJCM-supported project (%)

$$= \frac{\text{Amount of JFJCM financial support}}{\text{Total project costs directly attributable to the JFJCM component}} \times 100$$

Where
“**Amount of JFJCM financial support**” is the actual amount utilized by the project participants to implement the JCM project
"**Total project costs directly attributable to the JFJCM component**" 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.

JFJCM Project Portfolio

#	Project	Country	JFJCM support ($ million)*	Total project cost ($ million)*	ADB Approval	Technologies supported
1	Preparing Outer Islands for Sustainable Energy Development Project (POISED)	Maldives	5.00	129.00	2015	Advanced battery and energy management system (EMS)
2	Southwest Transmission Grid Expansion Project	Bangladesh	7.00	532.00	2018	Energy efficient transmission lines
3	Upscaling Renewable Energy Sector Project	Mongolia	6.00	66.22	2018	Solar PV with advanced battery system and EMS
4	Improving Access to Health Services for Disadvantaged Groups Investment Program	Mongolia	3.48	80.44	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	151.13	2020	Waste-to-energy plant (incineration)
6	Geothermal Power Generation Project	Indonesia	10.00	479.20	2023	Geothermal power plant with advanced designs
7	Accelerating Sustainable System Development Using Renewable Energy Project (ASSURE)	Maldives	6.20	100.47	2023	Advanced flow battery system and ocean renewable energy pilot
8	Disaster Resilient Clean Energy Financing Project (DRCEF)	Palau	5.00	9.00	2023	Financial intermediation to support investment in low-carbon technologies
9	Bishkek Low-carbon Municipal Building Upgrading Pilot	Kyrgyz Republic	5.00	8.00	To be approved	Energy efficient heat pumps, ventilation system with heat recovery, and building energy management systems (BEMS)
10	Sustainable Energy Sector Development Program – Subprogram 1	Papua New Guinea	10.00	110.00	2025	Energy efficient transmission lines
11	Accelerating Expansion and Sustainability of Health Services for Universal Health Care (ACCESS-UHC) Project	Philippines	3.5	514.00	To be approved	Energy-efficient HVAC, rooftop solar PV and building-integrated PV (BIPV)
		Total	**71.18**	**-**		

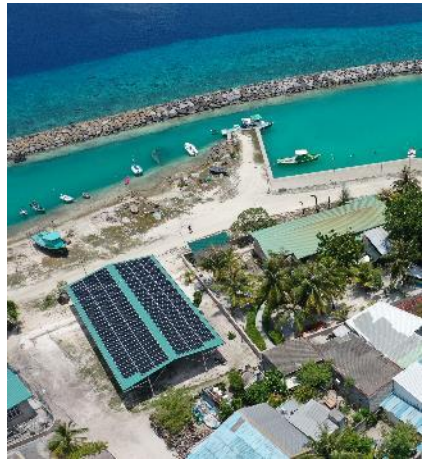
*Source: Project Administration Manual of each project or other published documents at ADB website under https://www.adb.org/projects

Case study 1: Advanced micro-grid technology in Maldives

Project name	Preparing Outer Islands for Sustainable Energy Development Project (POISED)
JFJCM / Total project cost	$5 million / $129 million
Technologies 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_2e/year (estimate)

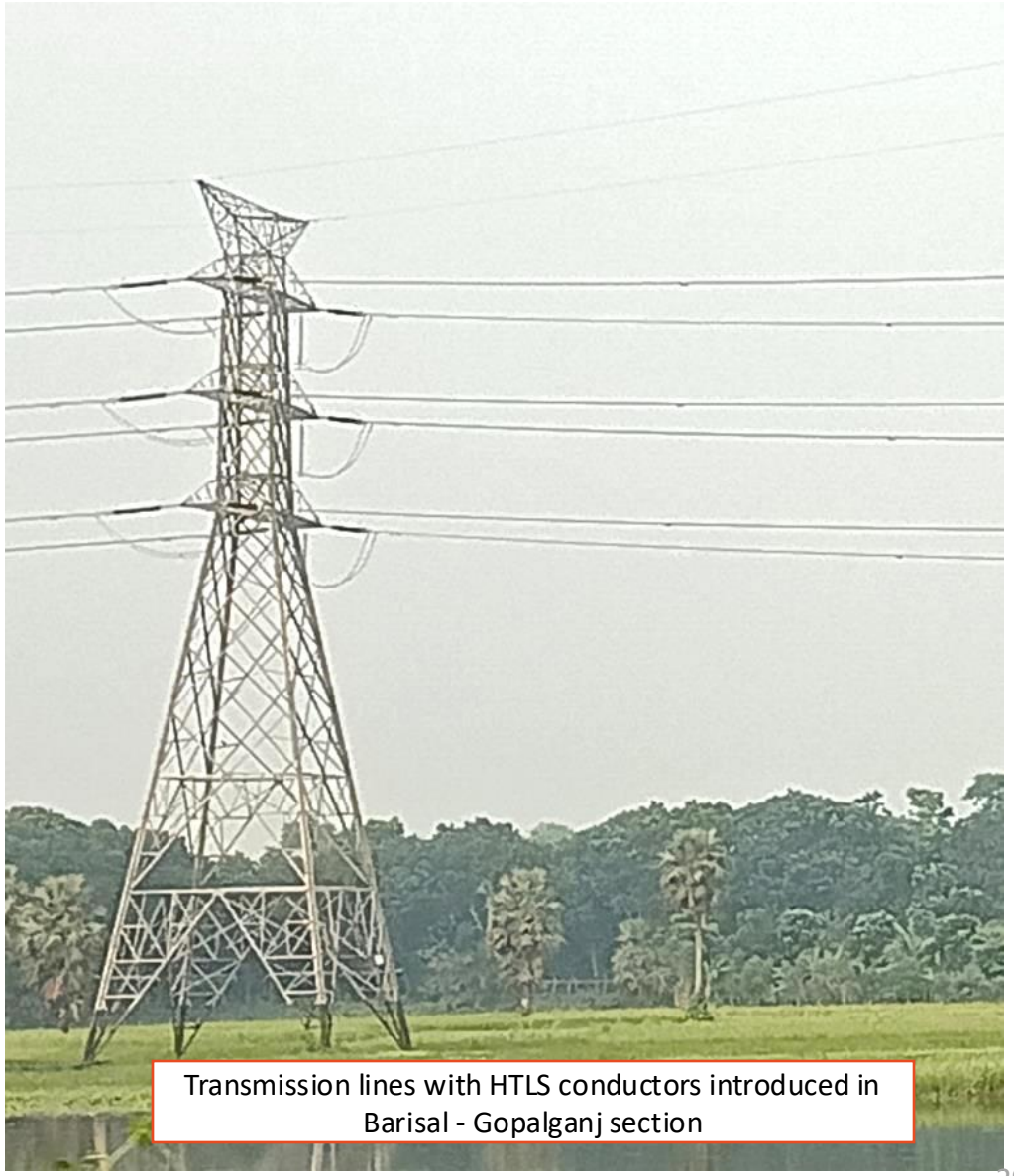
BESS at the project site


Training local staff for EMS operation


Solar PV at the project site

Case study 2: Energy efficient transmission lines in Bangladesh

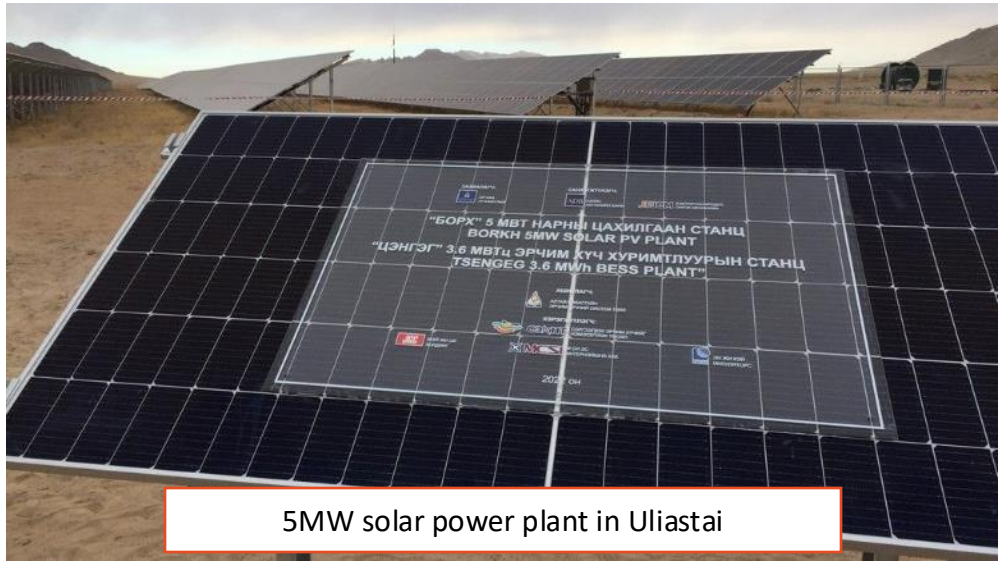
Project name	Southwest Transmission Grid Expansion Project
JFJCM / Total project cost	$7 million / $532 million
Technology supported	Energy efficient transmission lines
Description	Energy efficient transmission lines will increase high-voltage network capacity while reducing transmission losses and emissions 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) conductors, 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_2e/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 / Total project cost	$6 million / $66.22 million
Technologies 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_2e/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 / Total project cost	$3.48 million / $80.44 million
Technologies 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_2e/year (estimate)

Project site for a family health center with GSHP

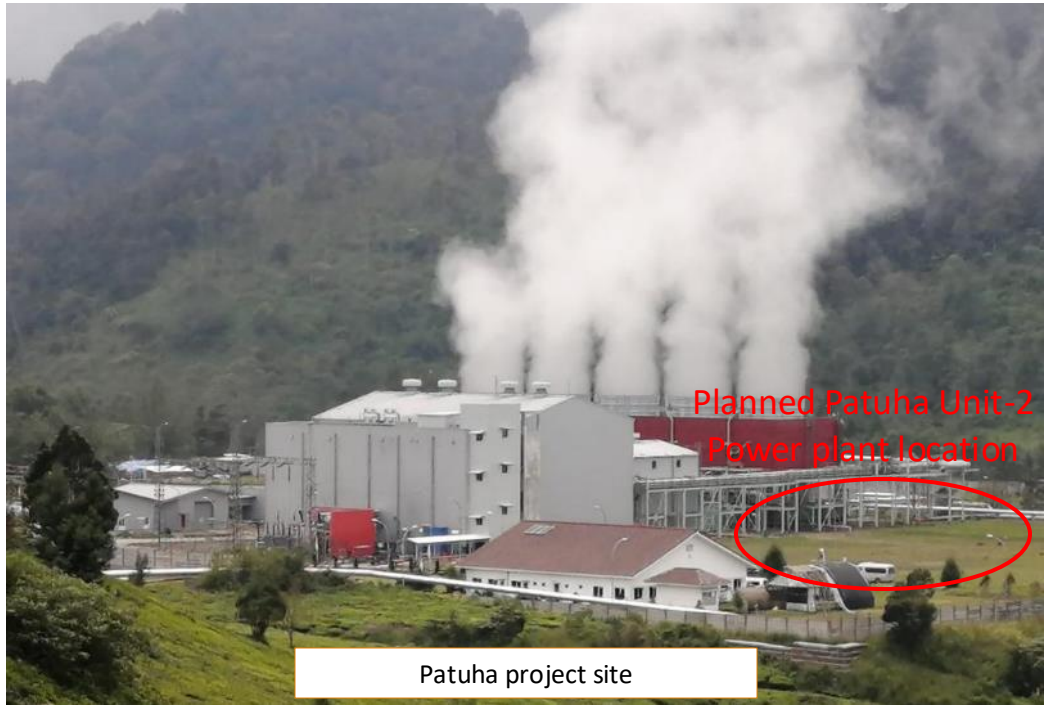
Test drilling for GSHP

Case study 5: Waste to Energy in Maldives

Project name	Greater Male Waste to Energy Project
JFJCM / Total project cost	$10 million / $151.13 million
Technologies 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 / Total project cost	$10 million / $479.2 million
Technologies 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 / Total project cost	$6.2 million / $ 100.47 million
Technologies 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 tCO_2e/year (estimate) *Average of emission reductions for 20 years

Renewable Energy Installation in Maldives

Case study 8: Low Carbon Financing Intermediation in Palau

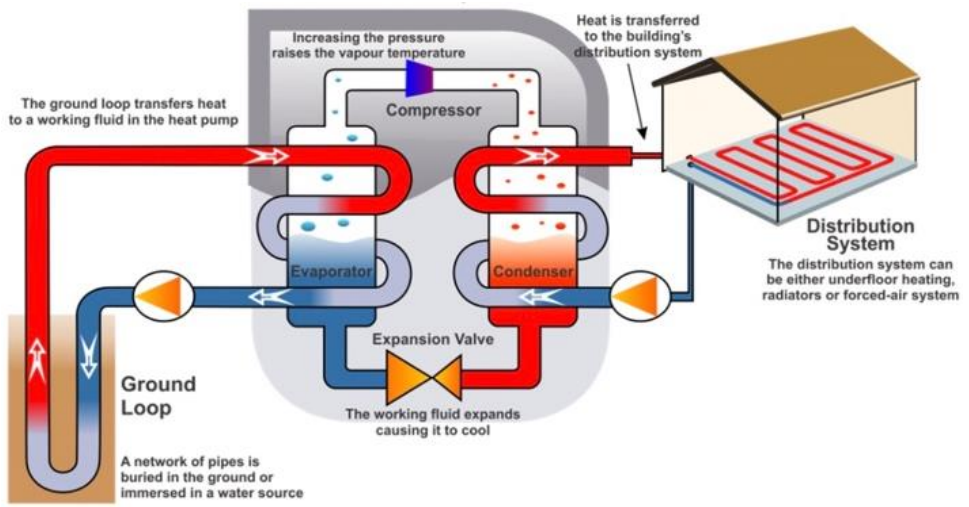
Project name	Disaster Resilient Clean Energy Financing (DRCEF) - Additional Financing
JFJCM / Total project cost	$5 million / $9 million
Technologies supported	Cycle 1: Roof-top solar photovoltaic (PV) with battery energy storage systems (BESS) Cycle 2: clean energy technologies to be identified at the 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.

To be approved by ADB

Case study 9: Low-carbon Heating in the Kyrgyz Republic

Project name	Bishkek Low-carbon Municipal Building Upgrading Pilot under the Multisector Activities Support Facility 2025–2030
JFJCM / Total project cost	$5 million / $8 million
Technologies 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)



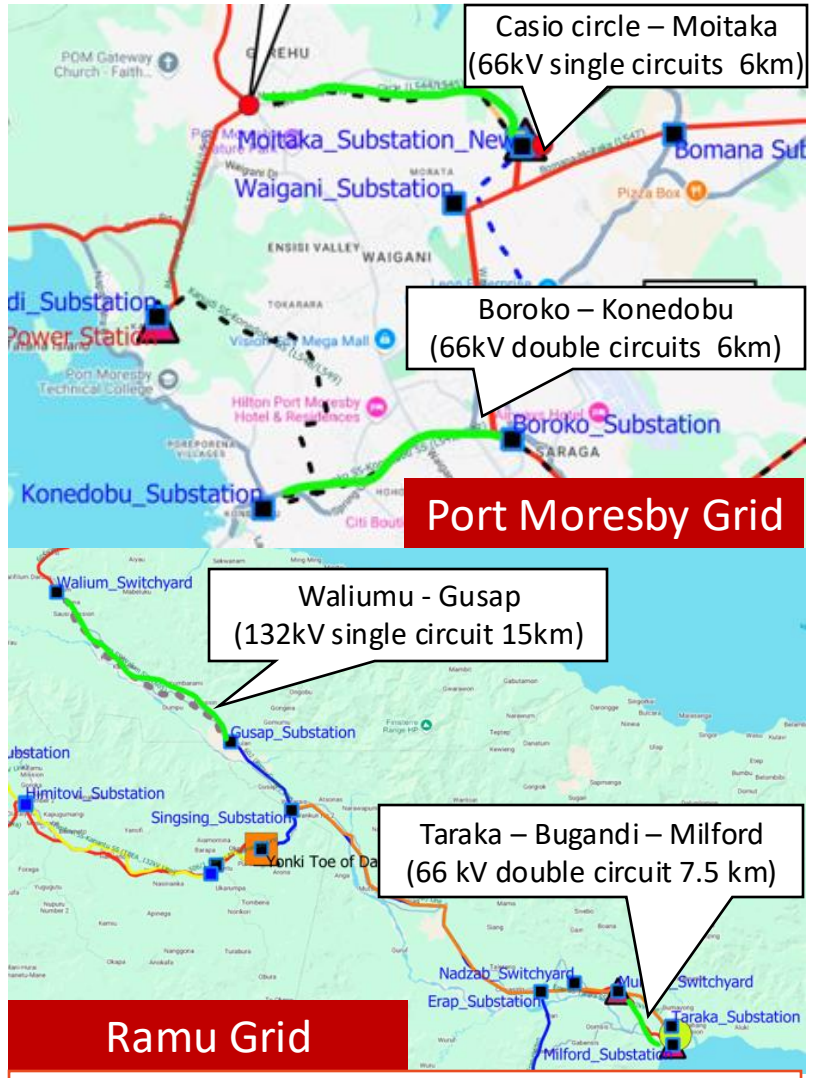
Source: Niessink, R.J.M. 2019. Ground-source Heat Pump (GSHP) – Households. Energy.nl

How closed-loop ground-source heat pumps work

Existing coal-fired boilers in a targeted school

Case study 10: Energy Efficient Transmission Lines in PNG

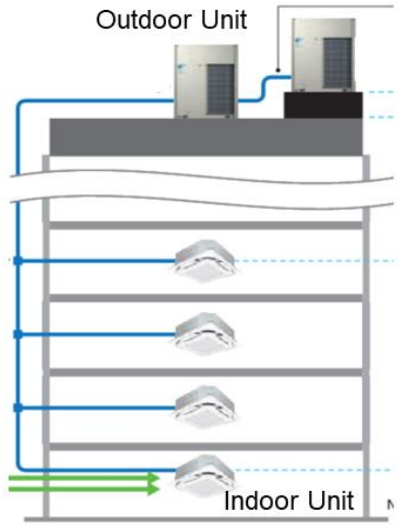
Project name	Sustainable Energy Sector Development Program – Subprogram 1
JFJCM / Total project cost	$10 million / $110 million
Technology supported	Energy efficient transmission lines
Description	High-efficiency transmission lines, known as high-temperature low-sag (HTLS) conductors, will be installed. This is the first-of-its-kind technology in PNG, offering key advantages such as reduced sag at high temperatures, lower resistance (i.e., reduced transmission losses), and a higher current-carrying capacity compared with conventional aluminum conductor steel reinforced (ACSR) conductors commonly used in the country. Using strong cores made of steel alloys, composite-reinforced metals, or carbon fiber, HTLS conductors can hold more aluminum conductor, delivering the performance benefits noted above.
Location	Port Moresby Grid: Boroko - Konedobu and Casio Circle - Moitaka Ramu Grid: Waliumu - Gusap and Taraka - Bugandi - Milford
Emission reductions	6.0 thousand tCO_2e/year (estimate)



Transmission lines with HTLS conductors to be upgraded in Port Moresby Grid and Ramu Grid (Green lines)

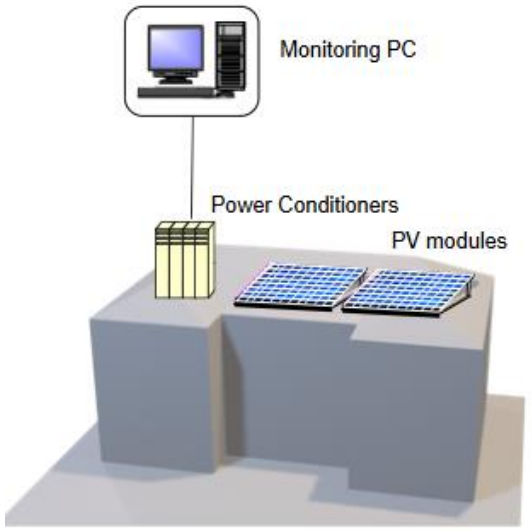
Case study 11: Energy Efficient Health Facilities in the Philippines

Project name	Accelerating Expansion and Sustainability of Health Services for Universal Health Care (ACCESS-UHC) Project
JFJCM / Total project cost	$3.5 million / $514 million
Technologies supported	Energy-efficient air conditioning systems with advanced monitoring and control systems, and rooftop solar PVs, and pilot building-integrated PV system
Description	The project aims to strengthen the Philippine health sector's climate resilience by improving access to climate-smart health services and interventions. This will introduce variable refrigerant flow (VRF), building-integrated PV (BIPV), and rooftop solar PV systems, which aim to reduce energy use and carbon emissions across 10 health facilities in the Philippines. This will also serve as a model project that could be expanded to hundreds of public health facilities nationwide.
Location	Across the different regions in the Philippines, i.e. Ilocos, Bicol, Visayas, and Southern Mindanao
Emission reductions	4.8 thousand tCO2e/year (estimate)



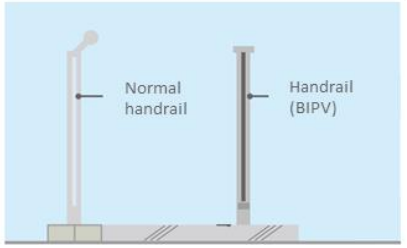
Source: Daikin

Variable Refrigerant Flow (VRF)



Rooftop solar PVs

building-integrated PV power system (BIPV)



Source: Kaneka

Building-integrated PV system (BIPV)

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Thank you.