



Japan Fund for the Joint Crediting Mechanism (JFJCM)

February 2021





Overview of Asian Development Bank

- Established in 1966
- 68 members, 49 regional members, 41 borrowing members
- 3,000+ employees globally
- 32 offices
- Triple-A credit ratings (Moody's / S&P / Fitch)
- Commitments in 2019:

(\$ million)	Total ADB
Loans, Grants and others*	21,643
Sovereign	18,643
Loan	17,799
Guarantee	-
Grants	844
Nonsovereign	3,000
Loan	2,670
Equity Investment	155
Guarantee	175

* Does not include technical assistance and co-financing



ADB's commitment to tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability: Strategy 2030



Addressing remaining poverty and reducing inequalities



Accelerating progress in gender equality

At least 75% of number of ADB committed operations by 2030



Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability

At least 75% of number of ADB committed operations by 2030, total of \$80 billion from ADB's own resources from 2019 to 2030



Making cities more livable



Promoting rural development and food security



Strengthening governance and institutional capacity



Fostering regional cooperation and integration

Key Approaches



Expanding private sector operations

1/3 of number of ADB committed operations by 2024



Catalyzing and mobilizing financial resources for development

\$1 in private sector operations financing matched by \$2.50 of cofinancing



Strengthening knowledge services



ADB's Carbon Market Program

Mobilizing carbon finance for incentivizing investments in low-carbon technologies

Future Carbon Fund

- Provides financial and technical support for CDM projects by purchasing post-2012 CERs
- **\$115 million** contributed by 4 governments and 2 private sector entities from Europe and Asia
- Contracted **10.45 million CERs** with an investment of \$59.5 million
- Supporting 36 CDM projects in 12 DMCs
- Providing carbon finance support to 1.2 GW renewable energy projects

Japan Fund for the Joint Crediting Mechanism

- Provides grants for advanced low-carbon technologies in ADB-financed and administered projects utilizing the Joint Crediting Mechanism initiated by Japan
- **\$79.29 million** contributed by the Government of Japan
- Supports six mitigation activities in **Maldives, Cambodia, Bangladesh** and **Mongolia**

Article 6 Support Facility

- Provides technical, capacity building, and policy development support to enhance DMC's preparedness to participate in new carbon markets envisaged under the framework of Article 6
- **\$5 million** facility funded by ADB and the governments of Germany and Sweden
- Supports **Bhutan, Indonesia, Mongolia, Pakistan, Philippines, Thailand** and **Viet Nam**.

Climate Action Catalyst Fund

- **New carbon fund** to mobilize carbon finance through post-2020 carbon markets under Article 6 of the Paris Agreement
- **\$100–150 million** to support DMCs in achieving NDC commitments cost effectively and raising ambition over time
- Swedish Energy Agency and the Foundation for Climate Protection and Carbon Offset (KliK), Switzerland have committed to be initial financing partners



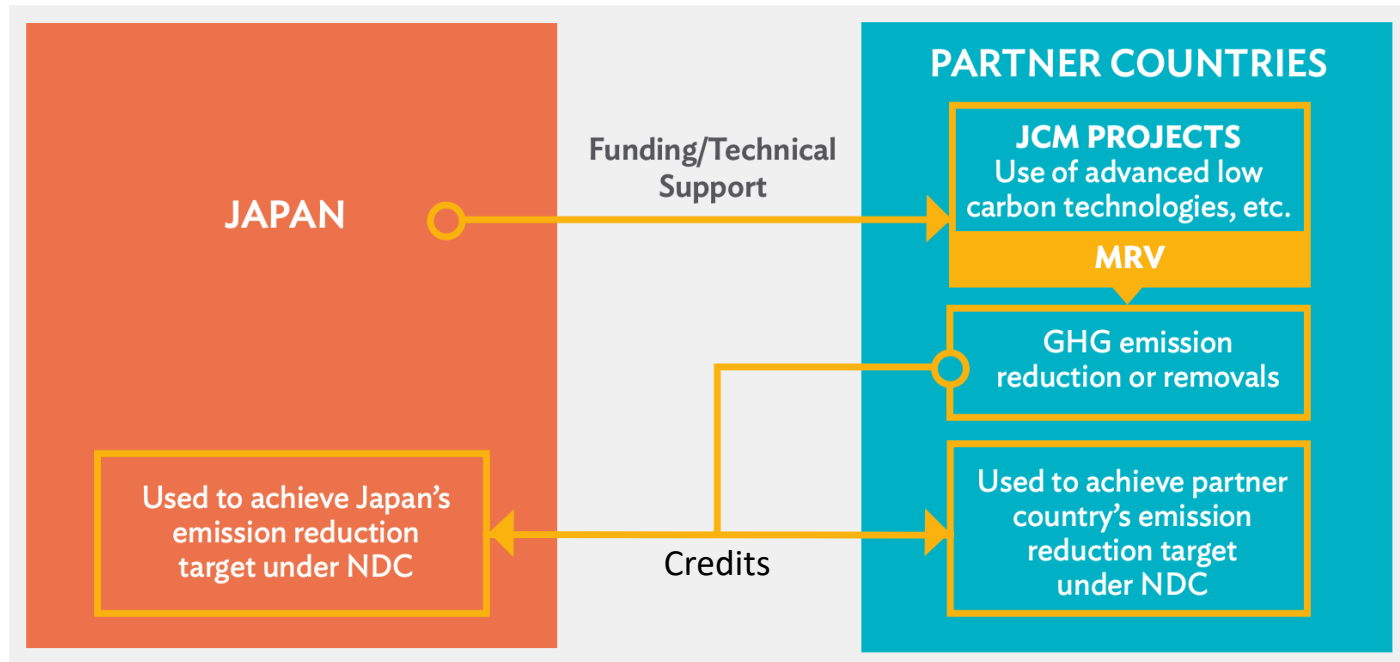
Japan Fund for the Joint Crediting Mechanism

- Established in June 2014 as one of ADB's trust funds
- Contribution by Government of Japan: **\$79.3M** (2014-2020)
- 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

* JCM is a bilateral carbon market mechanism initiated by the government of Japan



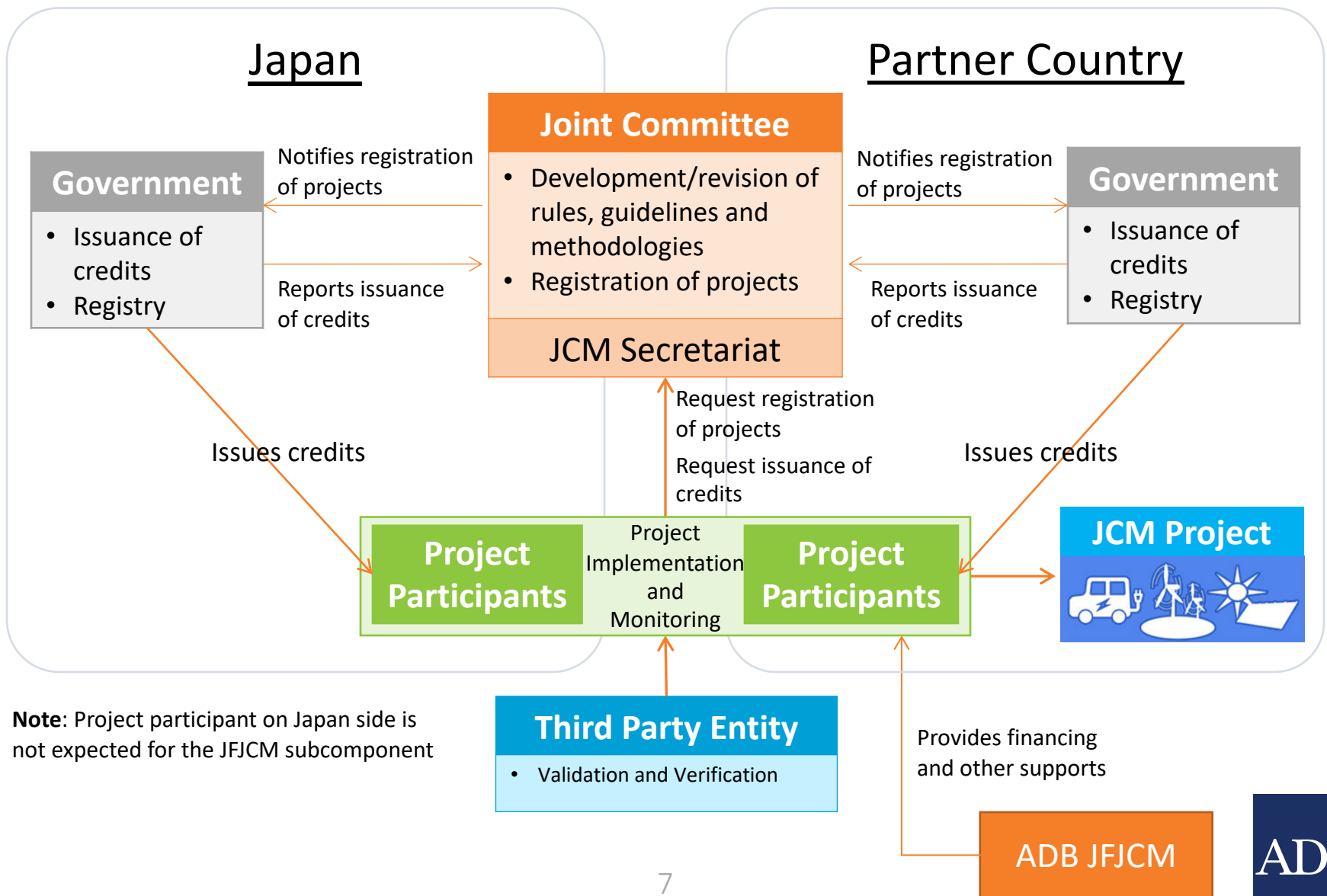
Concept of the JCM



- **Project-based bilateral offset crediting mechanism** managed by Japan and a partner country
- Facilitates the diffusion of **low-carbon technologies** that lead to GHG emission reductions that are **measurable, reportable & verifiable**
- Contributes to sustainable development of partner countries
- Carbon credits from JCM projects will be shared among the countries and used to achieve their emission reduction targets
- JFJCM provides support for ADB-financed projects to be JCM projects

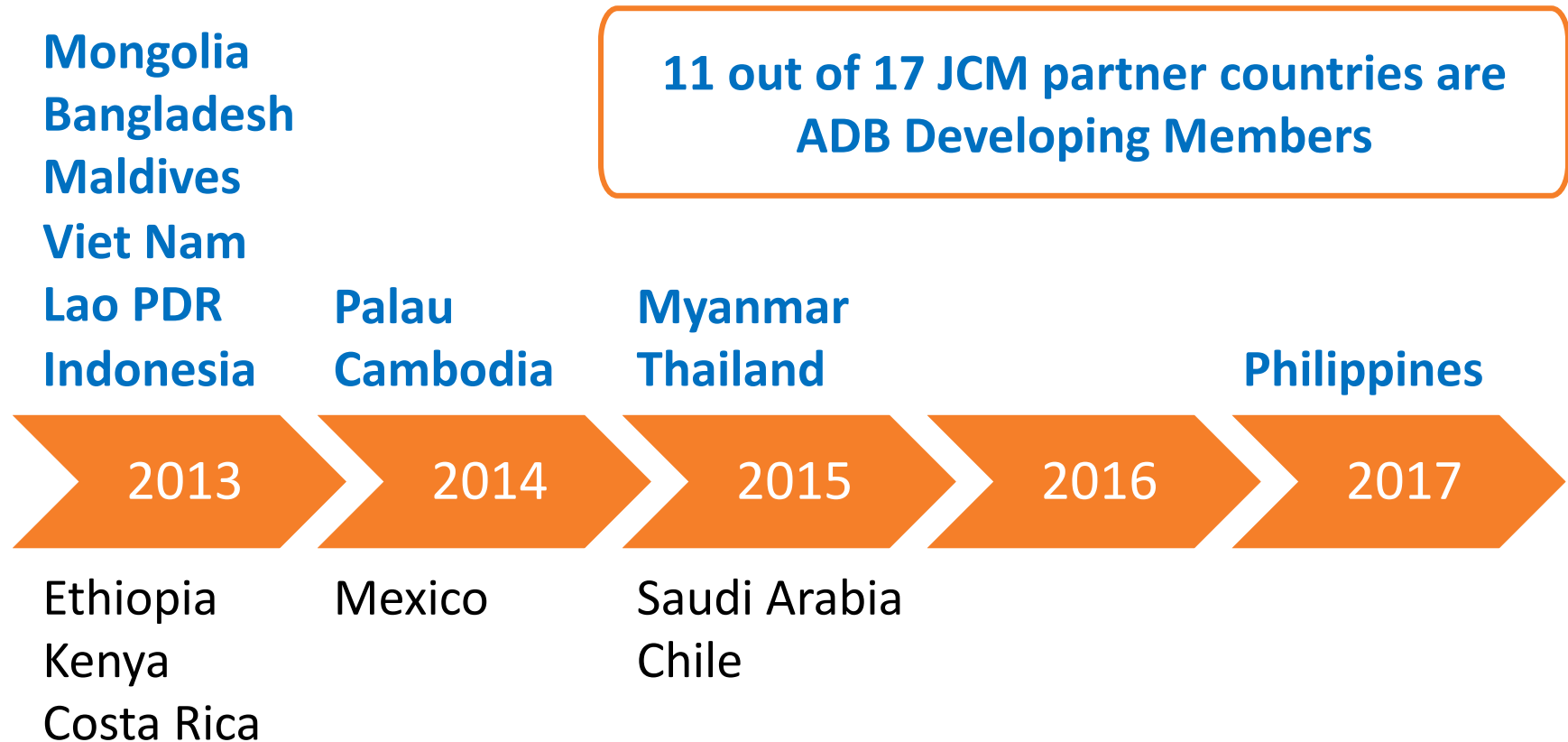


Roles of key entities in JCM projects





JFJCM eligible countries





Eligible projects and technologies

Eligible Project

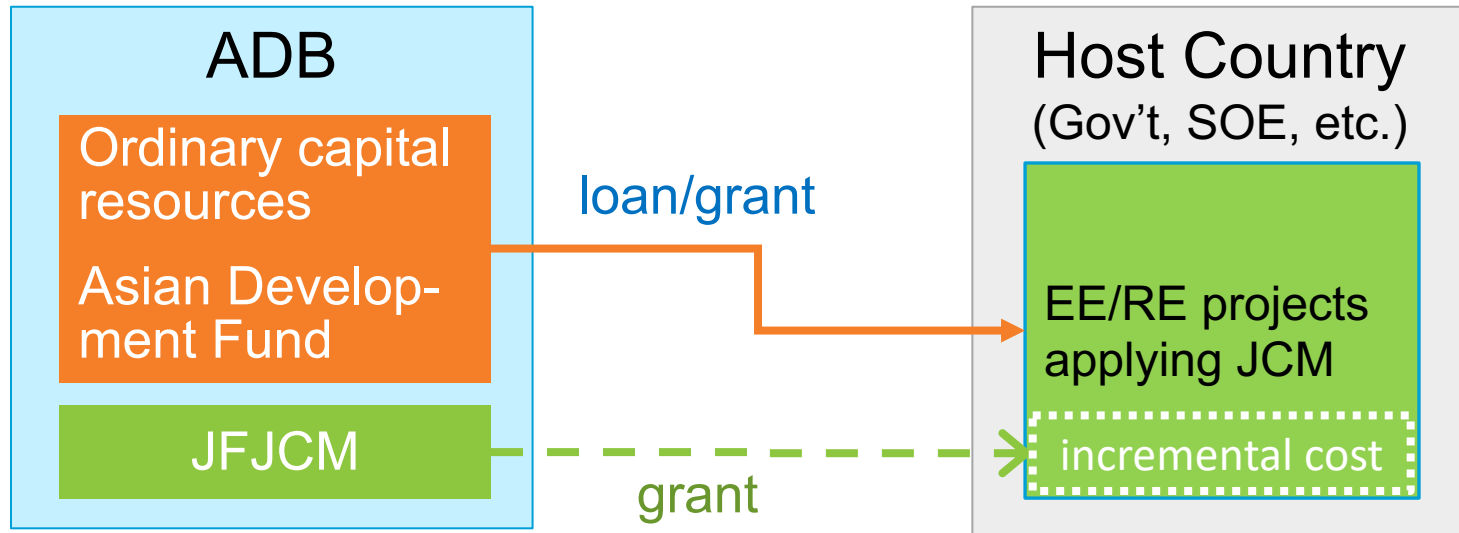
- Project co-financed with an ADB or ADB administered funds.
 - * Can be used for additional financing to ongoing ADB project.

Eligible Technology

- **Advanced low carbon technologies** that reduce greenhouse gas (GHG) emission including CO₂ from energy source.
- The technologies must have a proven implementation and operation record of its technical effectiveness.



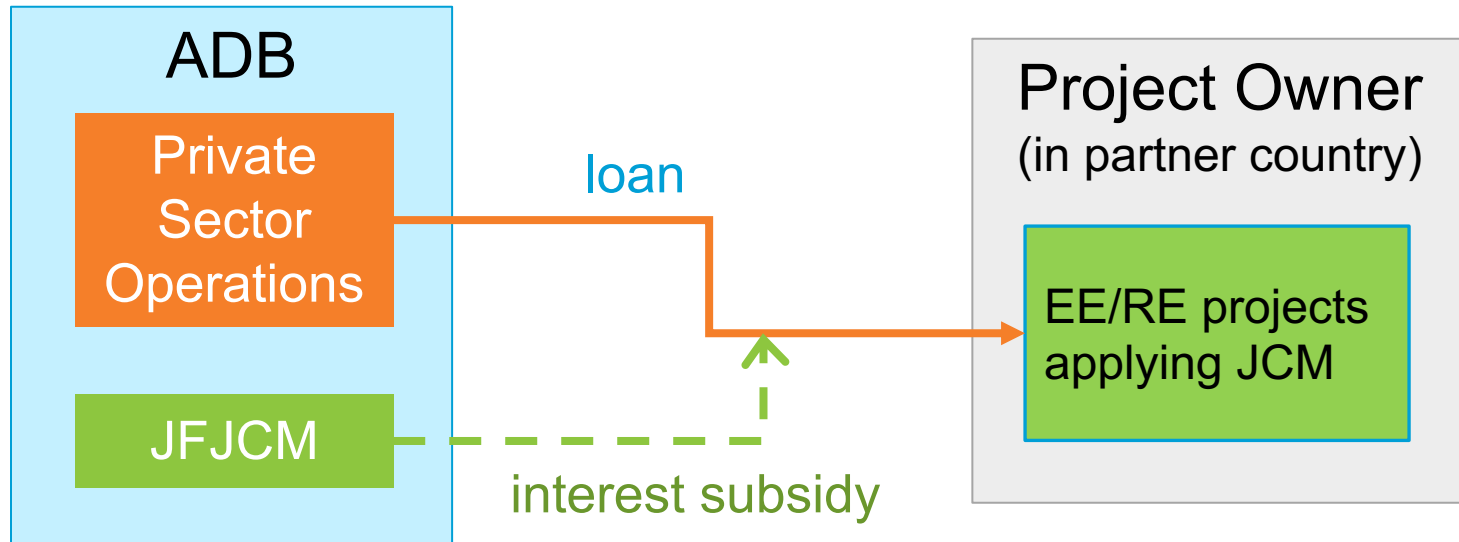
JFJCM support to ADB projects (sovereign)



- 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



JFJCM support to ADB projects (nonsovereign)

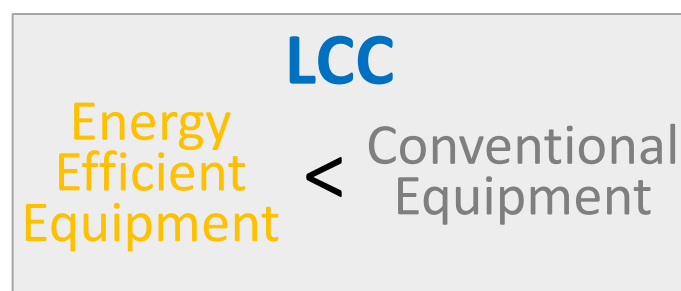
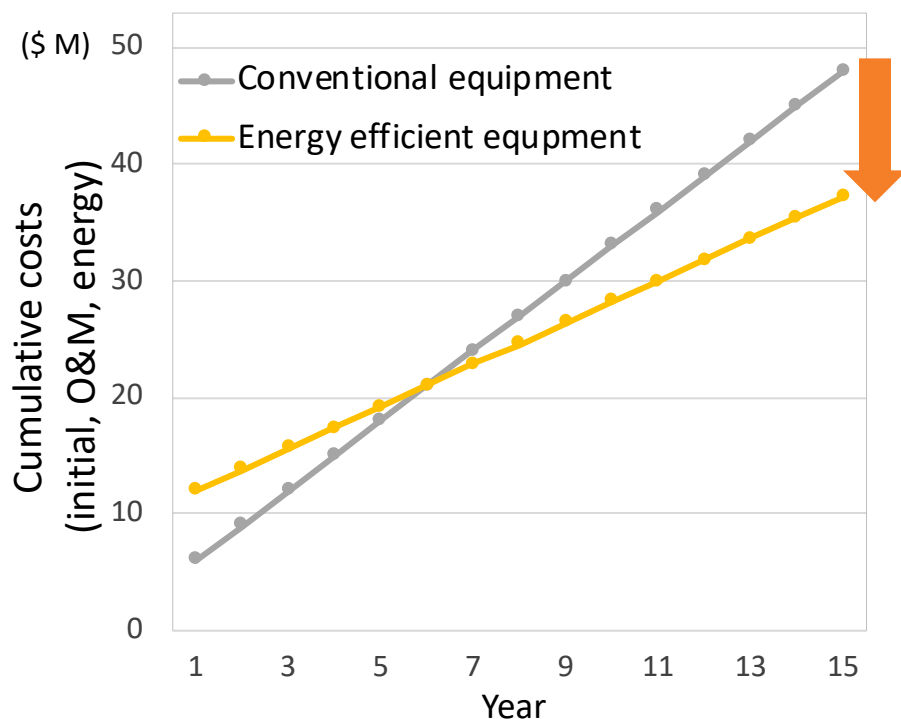


- JFJCM provides grant as an interest subsidy to **ADB's loan** to energy efficiency / renewable energy projects applying the JCM
- The borrower will repay the loan with reduced interest, instead of receiving the grant itself.
- Maximum amount of interest subsidy:
10% of total project cost (capped to \$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.





Requirements for JCM application

JCM Application

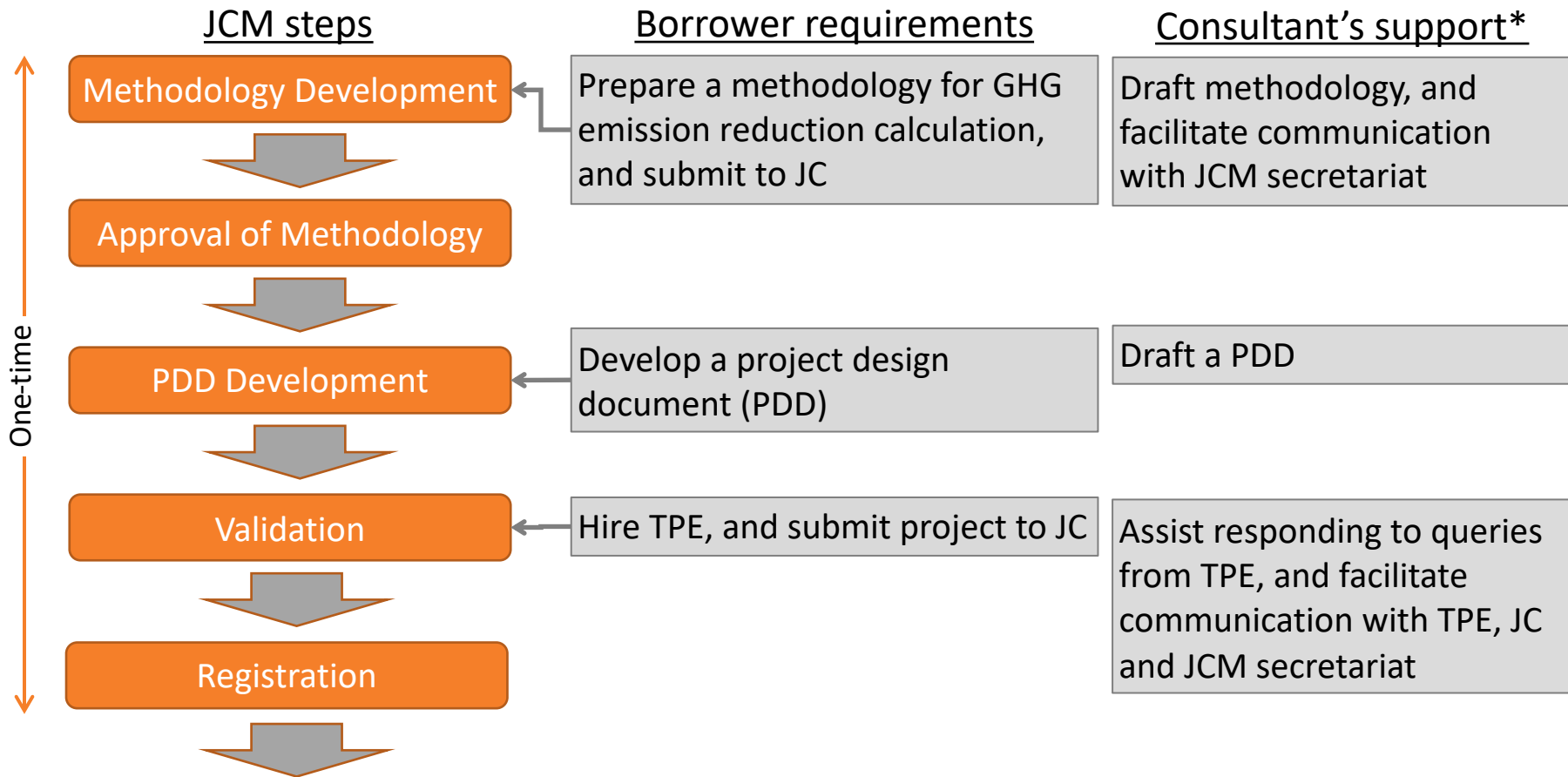
- Preparation and approval of **JCM Methodology**
- Preparation of **Project Design Documents (PDD)**
- **Validation** by Third Party Entities (TPEs), and **registration** of the project
- **Monitoring, reporting and verification** of GHG emission reduction
- **Issuance** of the JCM credits and delivery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

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

Reference: [Handbook for Developing JCM Projects](#)



JCM project cycle and requirements (1)

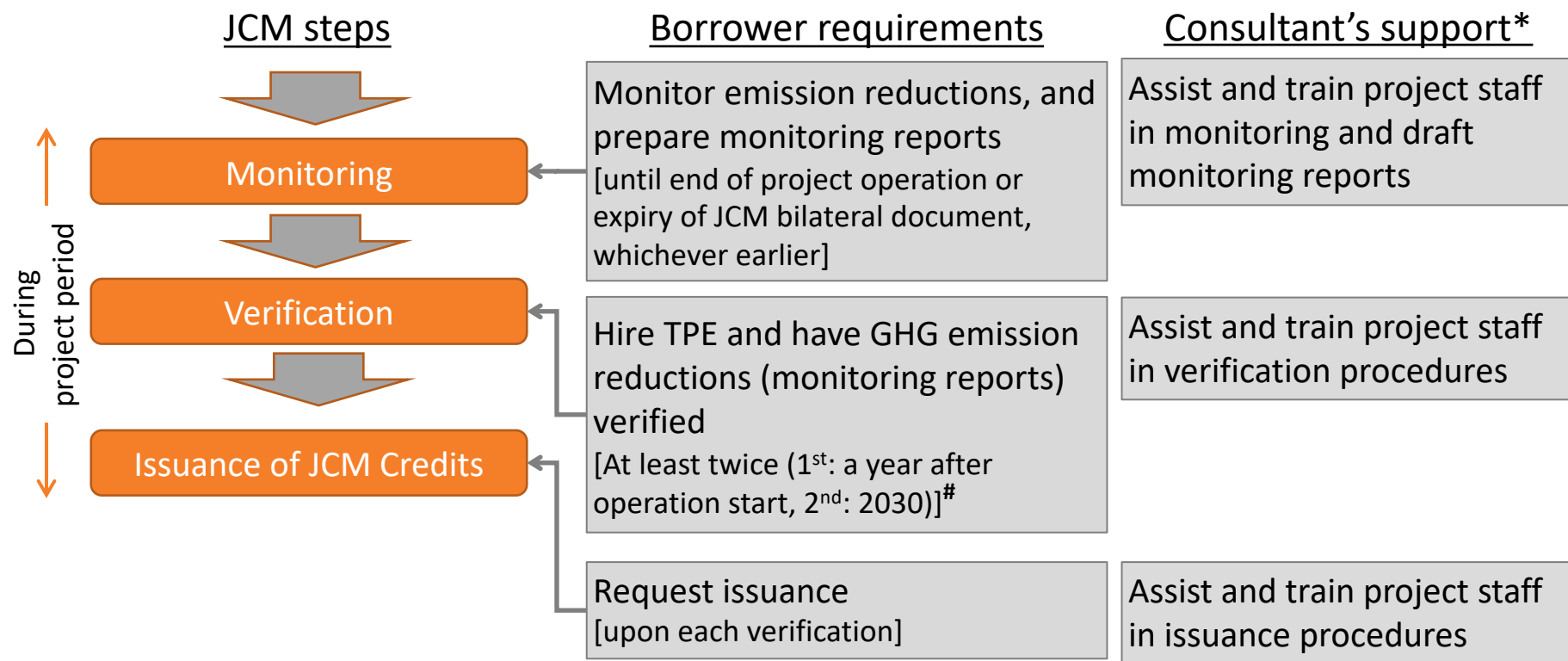


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* Support to be provided by consultants hired under the grant



JCM project cycle and requirements (2)



[#] Cost for TPE will be borne by Borrower for the verification to be done after implementation period.

* Support to be provided by consultants hired under the grant or loan



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 and better access to basic infrastructure.

➤ Cost effectiveness*

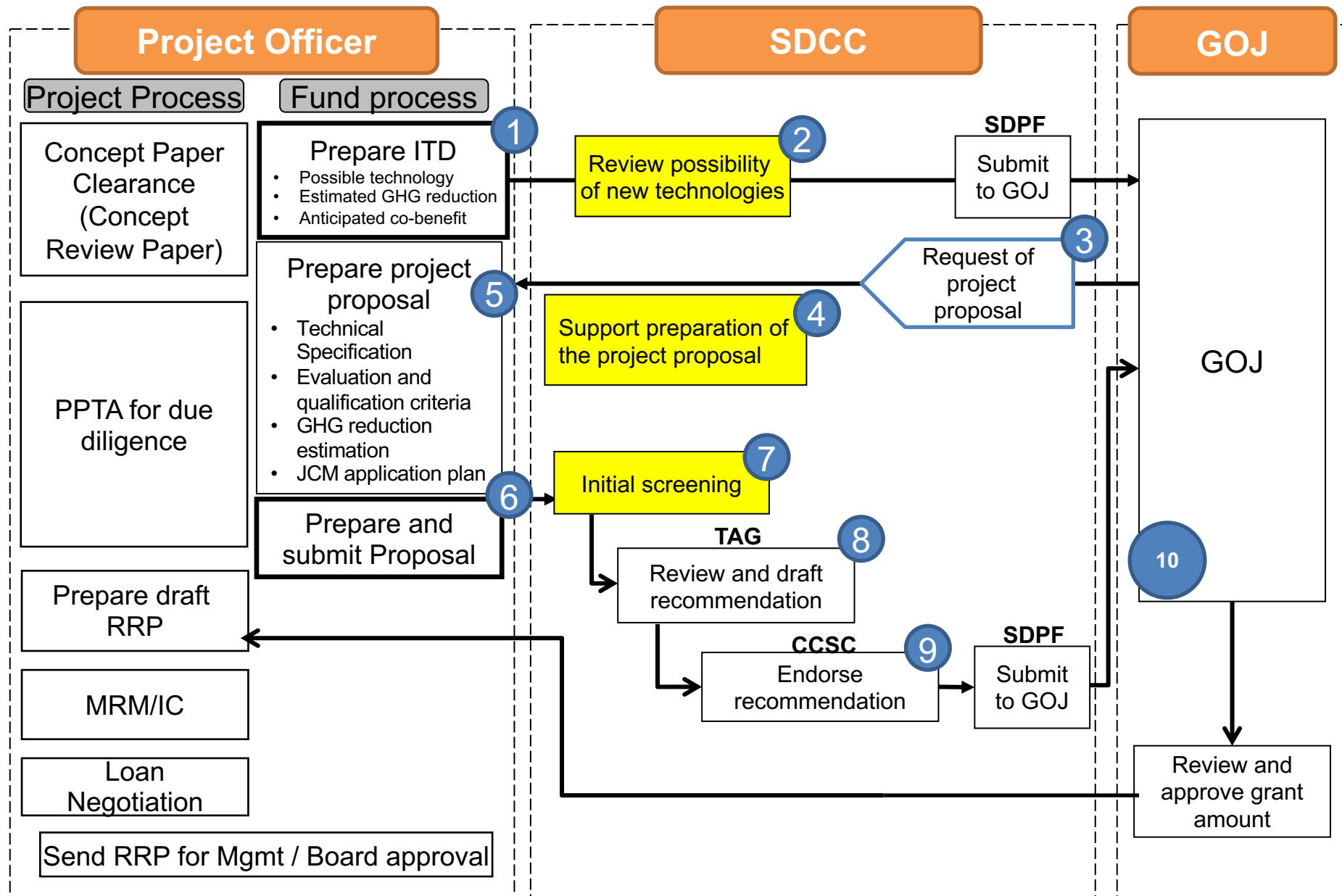
- Cost of reducing $1\text{tCO}_2\text{e} \leq \40

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

➤ Others

- The JFJCM subcomponents cannot apply for other international carbon market mechanisms (e.g. Clean Development Mechanism)
- The JFJCM cannot be used together with Financing Program for JCM Model Project under the Ministry of the Environment Japan.

JFJCM application process



*Yellow part will be done by the fund manager and secretariat who is in charge of this fund

ITD = Initial Title and Description, TAG = Technical Advisory Group, CCSC = Climate Change Steering Committee; IC= Investment Committee



JFJCM approved projects

#	Project	Country	JFJCM grant	Approval	Technologies supported
1	Preparing Outer Islands for Sustainable Energy Development Project (POISED)	Maldives	\$5 million	Mar 2015	Advanced battery system and energy management system (EMS)
2	Provincial Water Supply and Sanitation Project	Cambodia	\$10 million	Dec 2017	Energy efficient wastewater treatment system
3	Southwest Transmission Grid Expansion Project	Bangladesh	\$7 million	Jul 2018	Energy efficient transmission lines
4	Upscaling Renewable Energy Sector Project	Mongolia	\$6 million	Sep 2018	Solar PV with advanced battery system and EMS
5	Improving Access to Health Services for Disadvantaged Groups Investment Program	Mongolia	\$3.48 million	Oct 2019	Energy efficient HVAC, high insulation window, rooftop solar PV and ground source heat pump
6	Greater Male Waste to Energy Project	Maldives	\$10 million	Aug 2020	Waste to energy plant (incineration)
			\$41.48 million		



Case study 1: micro-grid technology in Maldives

Project name	Preparing Outer Islands for Sustainable Energy Development Project
JFJCM grant	\$5 million
Technology supported	Advanced battery system and energy management system
Description	<p>On top of 1.6 MW of solar PV installed under the project, battery storage and EMS supported by JFJCM will:</p> <ul style="list-style-type: none"> ➤ Smooth out the fluctuation of solar PV generation ➤ Optimize diesel generator operation ➤ Integrate large amounts of renewables to the grid
Location	Addu, Maldives
Emission reductions	1.3 thousand tCO ₂ /yr (estimate)

Signing ceremony for the contract on battery system and EMS



Project Site / Source: Ministry of Environment and Energy, Maldives

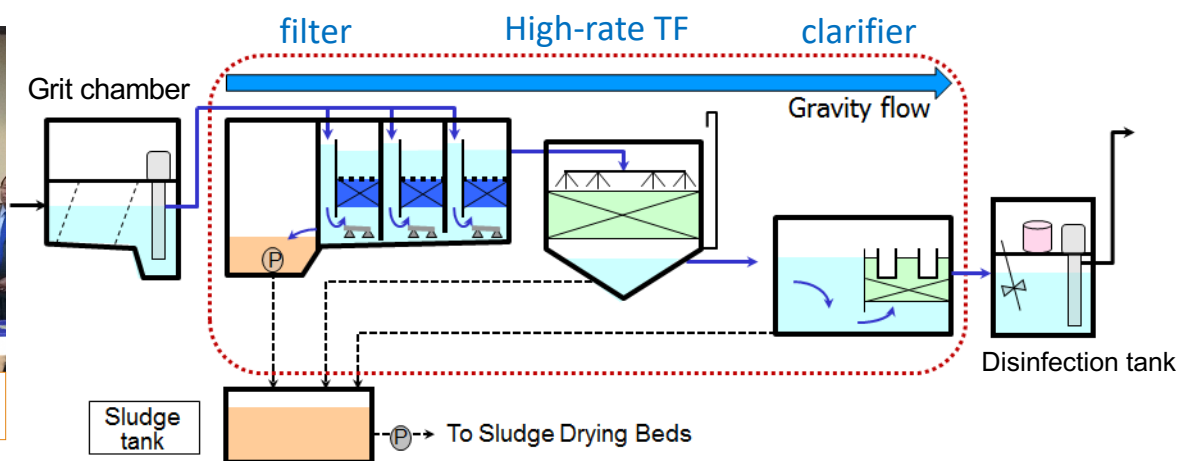


Case study 2: wastewater treatment in Cambodia

Project name	Provincial Water Supply and Sanitation Project
JFJCM grant	\$10 million
Technology supported	Energy efficient wastewater treatment
Description	Existing lagoon system will be replaced by a system consisting of high-rate trickling filter combined with filters and clarifiers, requiring a small area of land and less than 0.1 kWh/m ³ of power for treatment
Location	Battambang, Cambodia
Emission reductions	6.4 thousand tCO ₂ /yr (estimate)



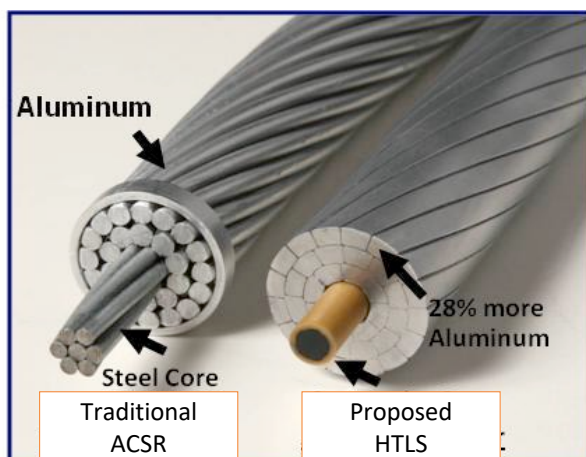
Signing ceremony for ADB financing agreement





Case study 3: Advanced transmission lines in Bangladesh

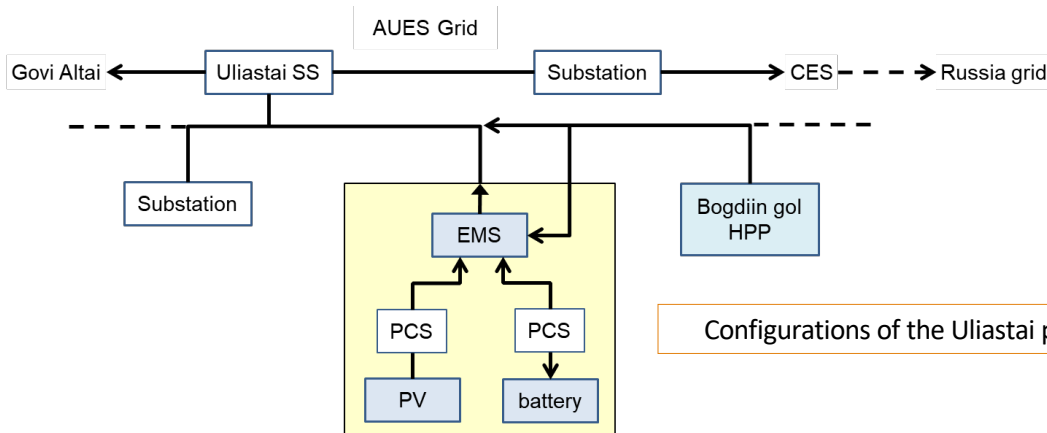
Project name	Southwest Transmission Grid Expansion Project
JFJCM grant	\$7 million
Technology supported	Energy efficient transmission lines
Description	Energy efficient transmission lines will increase high-voltage network capacity while reducing transmission losses and emissions including carbon dioxide. The key technology is high-temperature low-sag (HTLS) conductors.
Location	Between Gopalganj and Barisal, Bangladesh
Emission reductions	23.1 thousand tCO ₂ /yr (estimate)





Case study 4: Upscaling renewables in Mongolia

Project name	Upscaling Renewable Energy Sector Project
JFJCM grant	\$6 million
Technology supported	5MW solar PV system, advanced battery system of 3.6 MWh and energy management system
Description	This solar power plant with battery 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.
Location	Uliastai, Mongolia
Emission reductions	6.4 thousand tCO ₂ /yr (estimate)





Case study 5: 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 HVAC system, high insulation window, rooftop solar PV and ground source heat pump (GSHP)
Description	New building as expansion of existing hospital in UB will be constructed with adoption of low carbon technologies including HVAC system, high insulation windows 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 /yr (estimate)

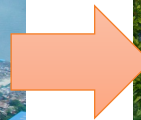


Case study 6: Waste to Energy in Maldives

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 with up to 12 MW power generation.
Location	Thilafushi, the Maldives
Emission reductions	40.4 thousand tCO ₂ /yr (estimate) *Average of emission reductions for 20 years



Current dump site



Planned WtE plant

Future



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Thank you.

