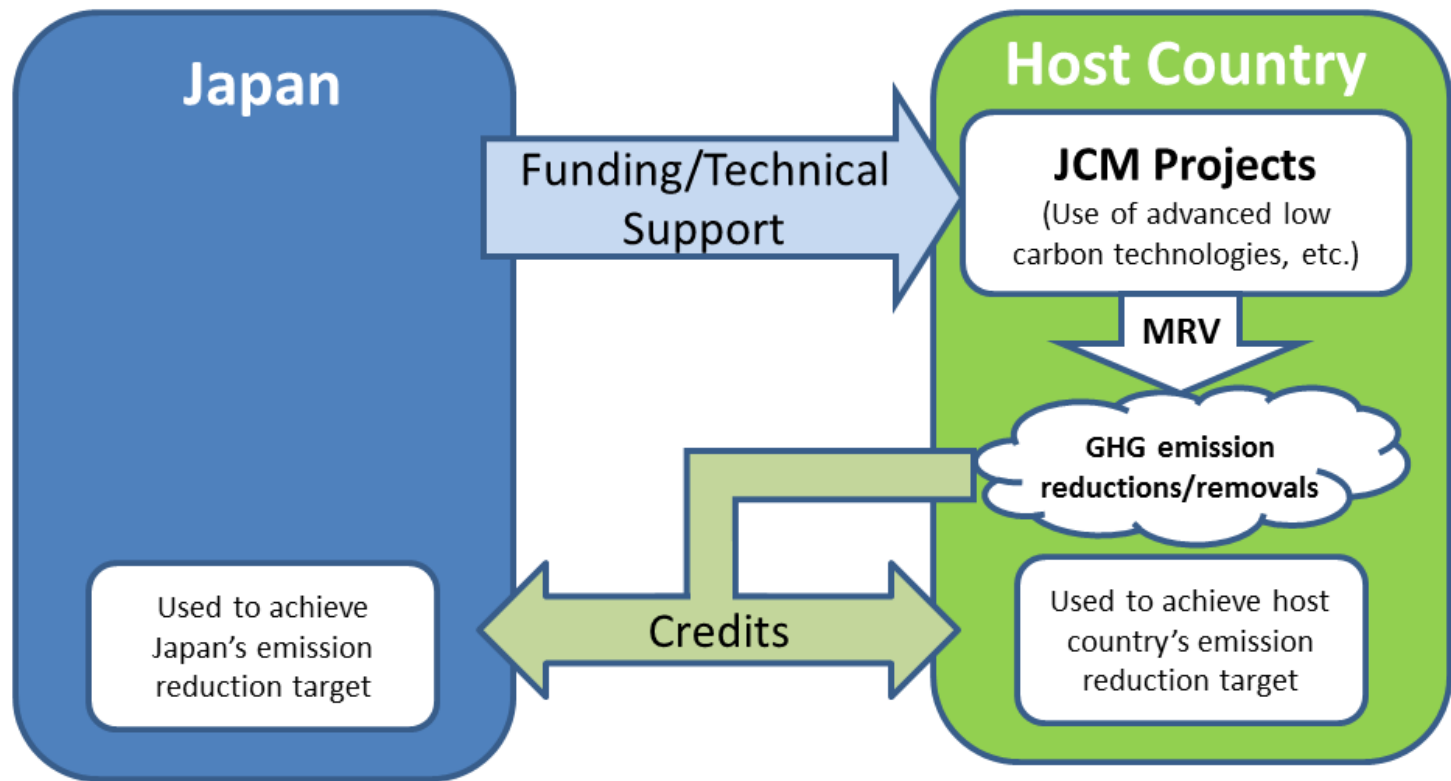


Japan Fund for the Joint Crediting Mechanism (JFJCM)

24 August 2016

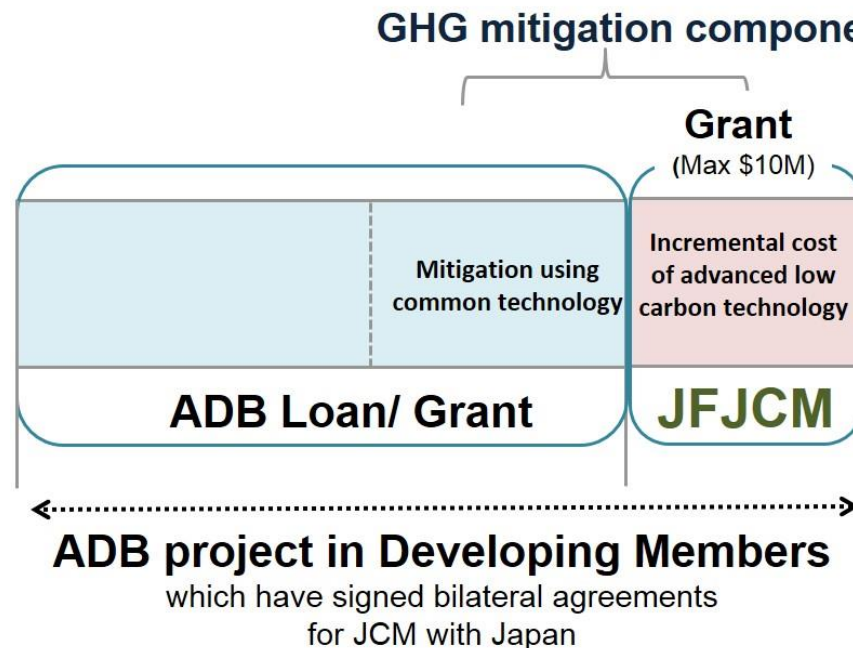
Joint Crediting Mechanism (JCM)

- JCM is a bilateral carbon market mechanism to promote use of **low carbon technology** in host countries.



Japan Fund for the Joint Crediting Mechanism

- JFJCM was established and announced by the Minister of the Environment, Japan and the President, Asian Development Bank on 25 June 2014.
- **\$42.6 M** have been contributed by MOEJ in 2014-2016
- The JFJCM provides financial incentives for adoption of advanced low-carbon technologies in ADB-financed projects.



ADB project in Developing Members

which have signed bilateral agreements
for JCM with Japan

JFJCM Eligible Countries

- 16 countries for the development of the Joint Crediting Mechanism (JCM), 10 of which are ADB Developing Members.
- **Mongolia** was the first country to sign the bilateral document for the introduction of the JCM on 8 January 2013.



Use of JFJCM

JFJCM



Grant for Incremental cost of advanced low-carbon technologies

Sovereign Projects

- Finance to the **governments** and **public sector entities**, such as state-owned enterprises



Interest subsidy to ADB-financed loans

Non-Sovereign Projects

- Direct financial assistance to **private sector projects** to leverage a large amount of finances from commercial sources

Use of JFJCM

Sovereign Projects

- Used for equipment, training for operation of advanced technology, civil works
- maximum of:
 - (i) \$10 million or 10% of the project cost, whichever is lower; and
 - (ii) \$ 5 million if the project cost < \$50 million.

Non-sovereign Projects

- Used for reduction of interest rate of ADB's loan
- \$10 million or 10% of the project cost, whichever is lower

Eligible Projects and Technologies

Eligible Project

- Project co-financed with an ADB or ADB administered funds.
- Additional financing to ADB ongoing 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 Approved Projects

Solar Power Project in Maldives

- ⑩ Additional financing of \$5M Grant to Addu atoll subproject
- ⑩ Install advanced battery system and energy management system (EMS) for smart micro-grid system

Distribution Project for CHP in Mongolia

- ⑩ \$10M approved by MOEJ in November 2015
- ⑩ Install energy efficient transformers

Regional-Capacity Development Technical Assistance

- ⑩ \$1.5M Supporting the Adoption of Low Carbon Technologies in Developing Member Countries

Case study: Maldives

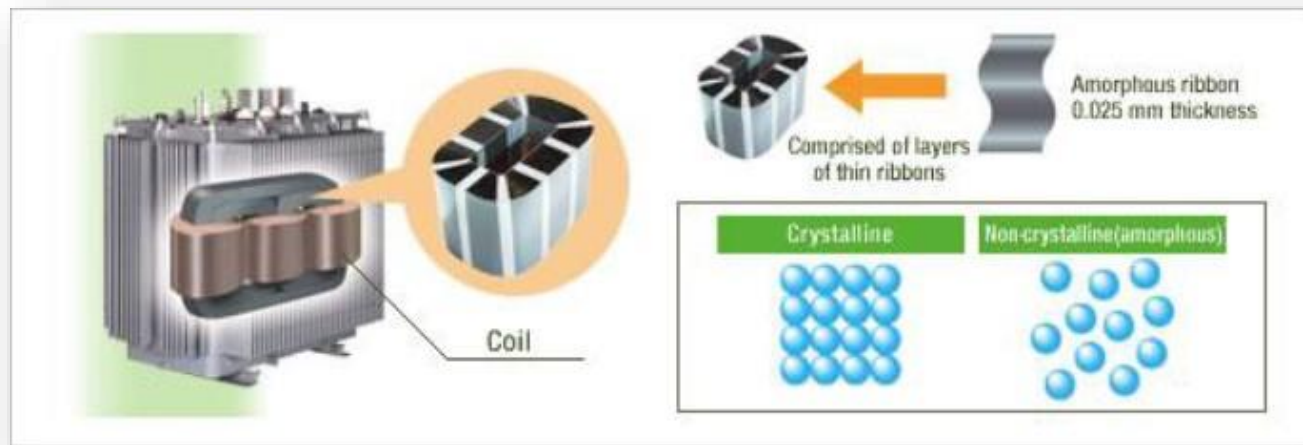
- Install **smart micro-grid technology** with advanced battery system and energy management system (EMS)



- Increase Solar PV penetration Capacity in the island
 - ✓ Suppress PV and load fluctuations
 - ✓ Optimize diesel generator operation



Case study: Mongolia



Amorphous Transformer (AMT)

- widely used in distribution network system in developed countries
- Reduces power loss (no-load loss) and improves energy efficiency of transformers

https://www.jcm.go.jp/vn-jp/methodologies/24/attached_document1

Other Eligibility Criteria and Requirements

JCM Application

- Defining the JCM Methodology;
- Preparation of the Project Design Documents (PDD);
- Validation by Third Party Entities (TPEs);
- Registration of the Project with the JCM;
- Monitoring and verification of GHG emission reduction;
- Issuance of the JCM credits and delivery to both governments

Life cycle cost consideration on the bidding

- The evaluation and qualification criteria will incorporate the technical performance related criteria which may affect life cycle costs.
- Example: fuel cost, energy loss amount as operation cost, cost of spare parts or replacement of the equipment.

Life Cycle Cost Consideration on Bidding

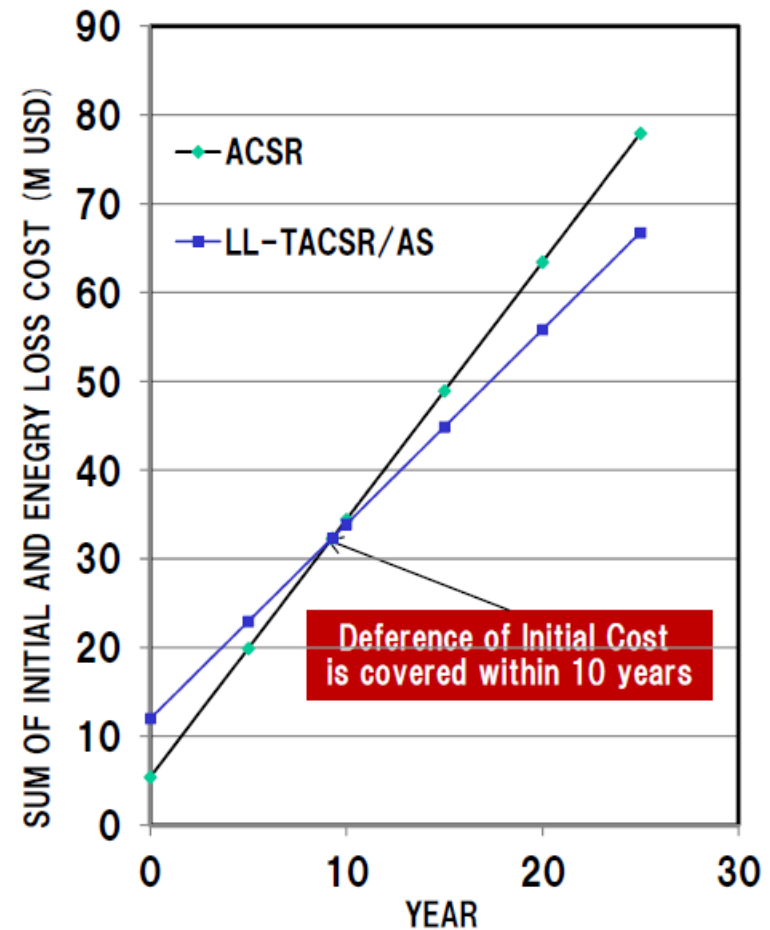
Efficient transformer and conductor



Reduce the power loss



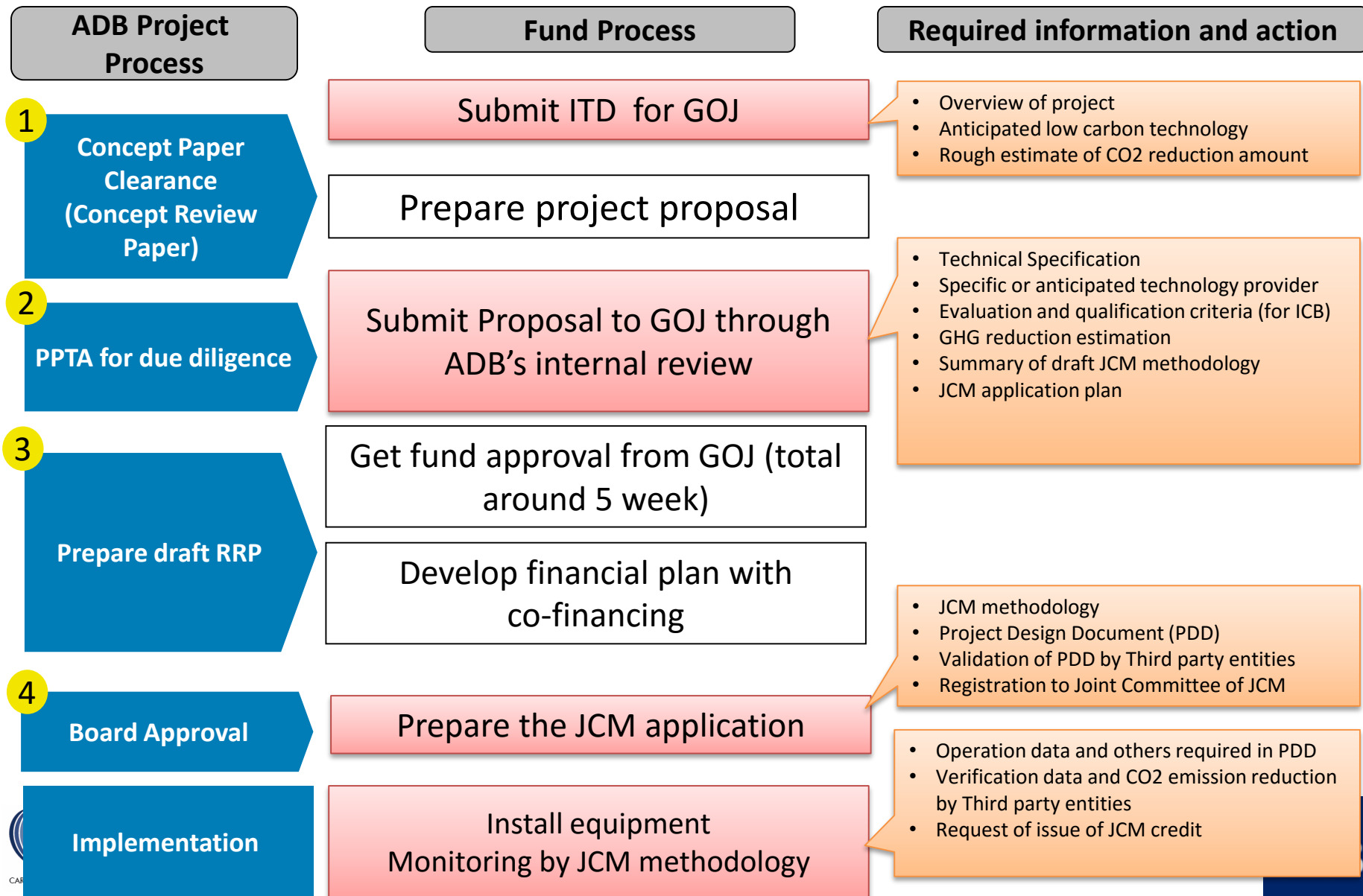
Reduce electricity generation amount and cost



(Source: J-Power presentation)

$$\text{Index} = (\text{Initial Cost}) + (\text{Electricity Loss Cost} / \text{Year}) \times (\text{Year})$$

Fund Process of ADB Projects



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