Japan Fund for the Joint Crediting Mechanism (JFJCM)

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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.

![Diagram of JFJCM mechanism]

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.

Source: http://gec.jp/jcm/
**Use of JFJCM**

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

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

**JFJCM**
- **Grant** for Incremental cost of advanced low-carbon technologies
- **Interest subsidy** to ADB-financed loans
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 CO$_2$ 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**
- Additional financing of $5M Grant to Addu atoll subproject
- Install advanced battery system and energy management system (EMS) for smart micro-grid system

**Distribution Project for CHP in Mongolia**
- $10M approved by MOEJ in November 2015
- Install energy efficient transformers

**Regional-Capacity Development Technical Assistance**
- $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

Addu has a population of over 23,000 inhabitants, the second largest inhabited island in Maldives.
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

**Index** = (Initial Cost) + (Electricity Loss Cost / Year) × (Year)

(Source: J-Power presentation)
**Fund Process of ADB Projects**

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<th>ADB Project Process</th>
<th>Fund Process</th>
<th>Required information and action</th>
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| 1. Concept Paper Clearance (Concept Review Paper) | Submit ITD for GOJ | - Overview of project  
- Anticipated low carbon technology  
- Rough estimate of CO2 reduction amount |
| 2. PPTA for due diligence | Prepare project proposal | - Technical Specification  
- Specific or anticipated technology provider  
- Evaluation and qualification criteria (for ICB)  
- GHG reduction estimation  
- Summary of draft JCM methodology  
- JCM application plan |
| 3. Prepare draft RRP | Submit Proposal to GOJ through ADB's internal review | - JCM methodology  
- Project Design Document (PDD)  
- Validation of PDD by Third party entities  
- Registration to Joint Committee of JCM |
| 4. Board Approval | Get fund approval from GOJ (total around 5 week) | - Operation data and others required in PDD  
- Verification data and CO2 emission reduction by Third party entities  
- Request of issue of JCM credit |
| Implementation | Develop financial plan with co-financing | - Prepare the JCM application  
- Install equipment Monitoring by JCM methodology |

GOJ = Government of Japan, ITD = Initial Project Title and Description, ICB = International Competitive Bidding.
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