

Japan Fund for Joint Crediting Mechanism

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Joint Crediting Mechanism (JCM)

JCM is a new carbon market mechanism that complements the Clean Development Mechanism (CDM).

JCM Projects in DMCs

- i. Enabling GHG emission reduction and removals.
- ii. Using advanced low carbon technologies

Financial and
Technical Assistance

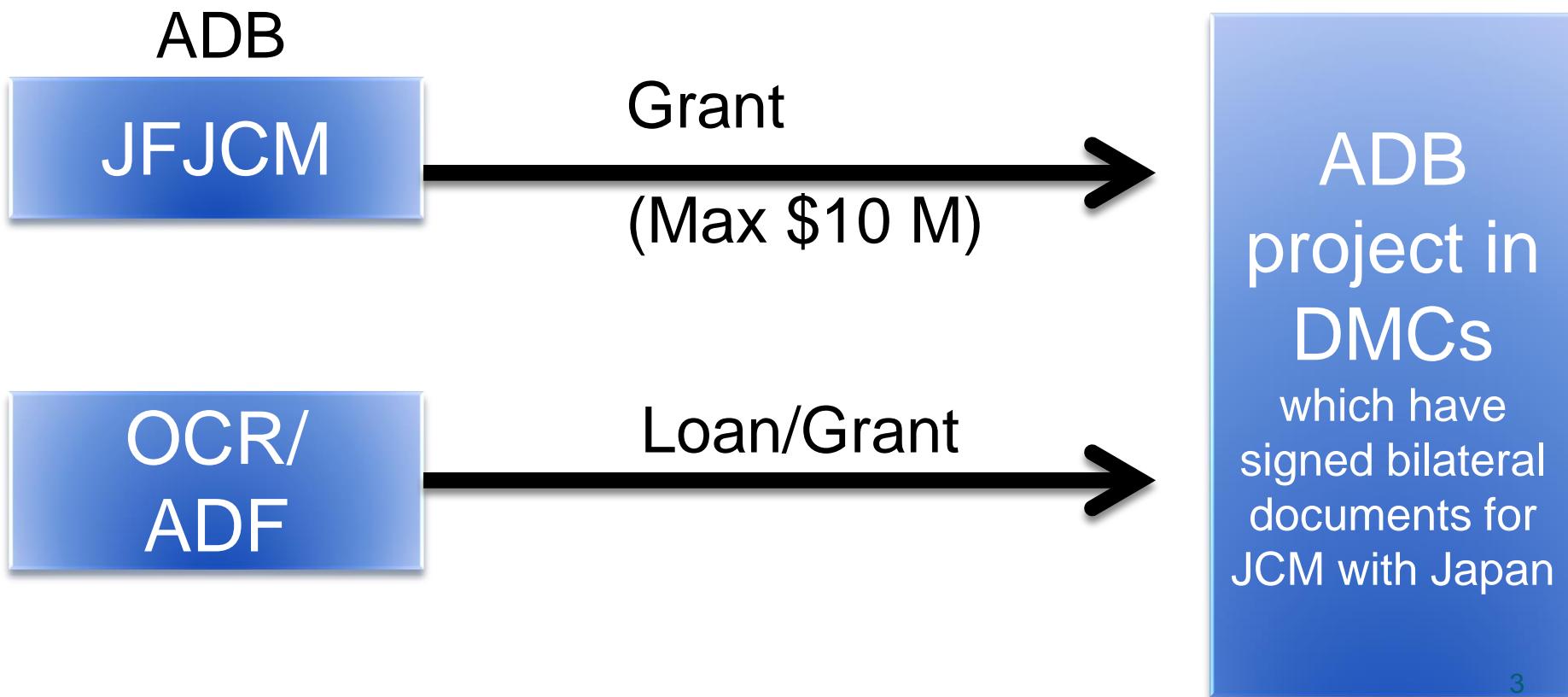


Certified GHG emission
reduction is used for host
country's and Japan's
target

Japan

Japan Fund for Joint Crediting Mechanism (JFJCM)

- JFJCM supports incremental cost of advanced low carbon technology for GHG emission reduction
- \$ 16.6 M (1.8 billion Yen) for 2014 contribution
- Additional \$15 M (1.8 billion Yen) has been contributed on 14 May.
- Further contribution expected in subsequent years.



Eligible Countries

- Japanese government has signed up 12 countries in the world as of Jan, 2015 and 8 countries are in Asia and Pacific.
 - **Bangladesh, Cambodia, Indonesia, Lao PDR, Maldives, Mongolia, Palau, and Viet Nam**
- Targeted to reach at least 16 countries in 2016.

Use of JFJCM

Sovereign Projects

- ***Max : (i) about \$5 million (project cost < \$ 50M)***
- ***(ii) Smaller of 10% of the project cost and \$10 million***
- **Grant for incremental cost of adopting advanced low carbon technologies from “business as usual”**

Non-sovereign projects

- ***Max: Smaller of 10% of the project cost and \$10 million***
- **Support margin component of the interest rate of the ADB loan**

Eligible projects and technologies

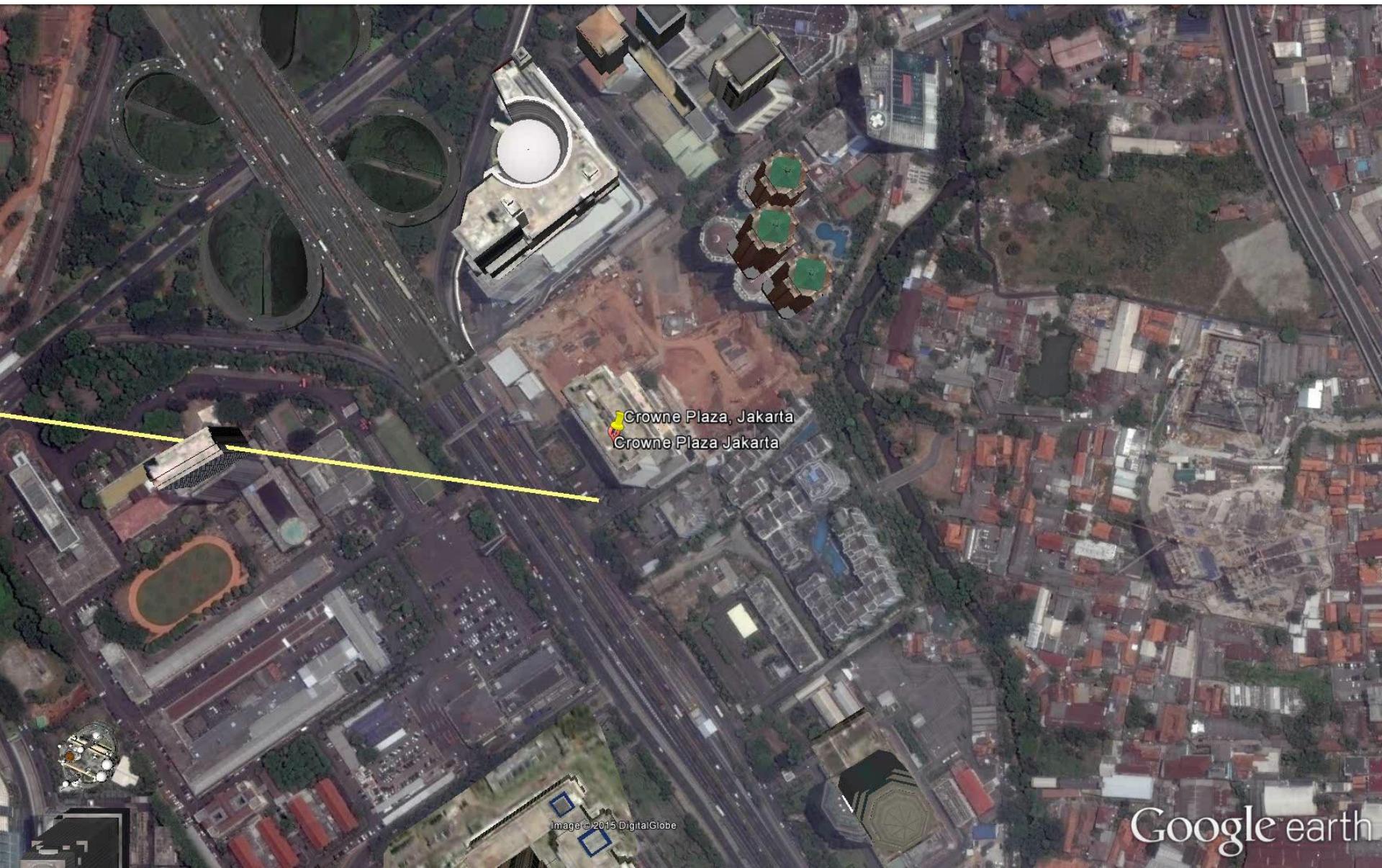
Eligible Projects

- A project co-financed with an ADB or ADB administered funds
- Additional financing to ADB ongoing project is applicable

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

First Project of JFJCM



Crowne Plaza, Jakarta
Crowne Plaza Jakarta

Image © 2015 DigitalGlobe

Google earth

First Project of JFJCM

Preparing Outer Islands for Sustainable Energy Development (POISED) Project in Maldives

- Total 110 M\$ project (including co-finance)
- Install Solar PV with smart grid systems in 130 islands.

Background of the project

- The Maldives - 26 atolls and land area of about 300 km² with a population of 340 thousands.
- **100% access to electricity by 250 MW of diesel generation**
- **30–70 cents per kilowatt-hour** for diesel power
- Spent over \$470 million on oil imports, mainly for electricity generation.
- Government goal – **Carbon neutral by 2020**

First Project of JFJCM

Additional financing by JFJCM

- 5 M\$ Grant to Addu atoll subproject
- Install advanced battery system with energy management system (EMS)
- Increase Solar PV penetration level in the island (33% ➔ 54%)



The example of the advanced low carbon technology

Energy Sector



Transport Sector



Urban and Water Sector

The example of the advanced low carbon technology

Sector	Category	Technology
Energy	Renewable Energy	Floating type offshore wind power generation Highly efficient biomass power generation Highly efficient geothermal power generation Highly efficient small hydro-power generation
	Energy Efficiency	Highly efficient devices with inverter such as pump, air conditioner, and fan energy distribution technology such as conductor, transformer
		Low carbon building with design, insulation, energy saving facilities.
		Efficient and fast charging battery storage
Smart Grid		EMS for the distribution (Community Energy Management System (CEMS))
		Building Energy Management System (BEMS)
Transport		Highly efficient train, ship
		Electric-bus and/or taxi
Water		Highly efficient devices with inverter such as pump
		Highly efficient wastewater treatment equipment
		Demand side water saving technology
Urban		Waste to energy

This is the example of the advanced low carbon technology but not limit to this list

Other Eligibility Criteria and Requirement

JCM Application

- Methodology for measurement, reporting and verification (MRV)
- Project Design Documents (PDD);
- Validation and registration of the JCM project;
- monitoring of data, and verification of reduction in GHG emission;

Life cycle cost consideration on the bidding

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

Life cycle cost consideration on the bidding

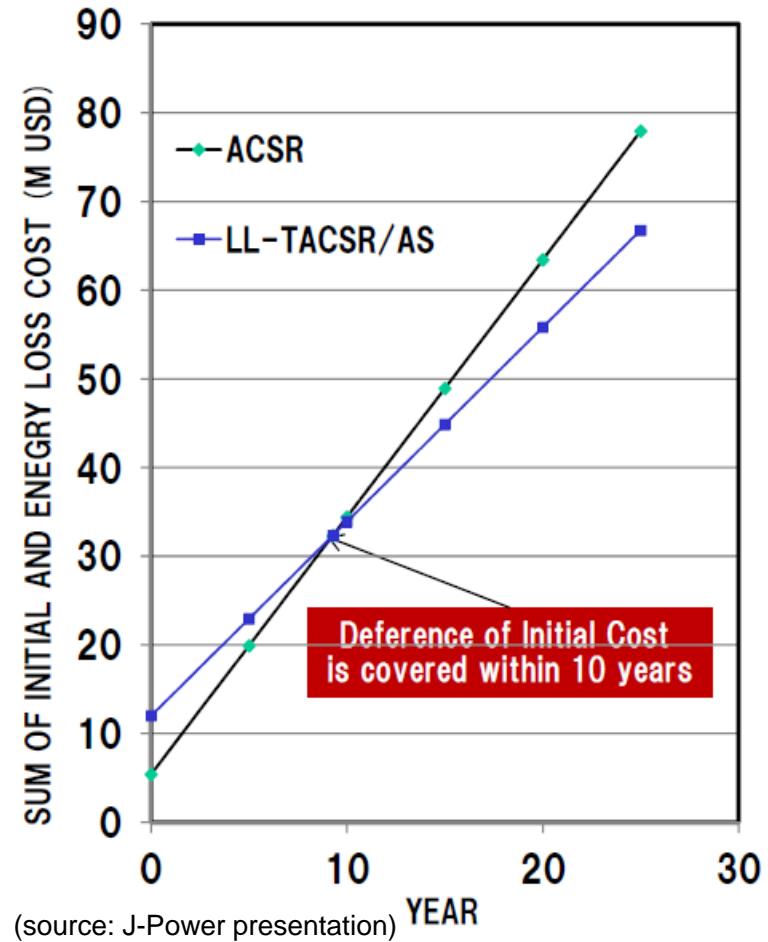
Efficient transformer
and conductor



Reduce the power loss



Reduce electricity
generation amount and
cost



(source: J-Power presentation)

Index =

(Initial Cost) + (Electricity Loss Cost / Year) × (Year)

Life cycle cost consideration on the bidding

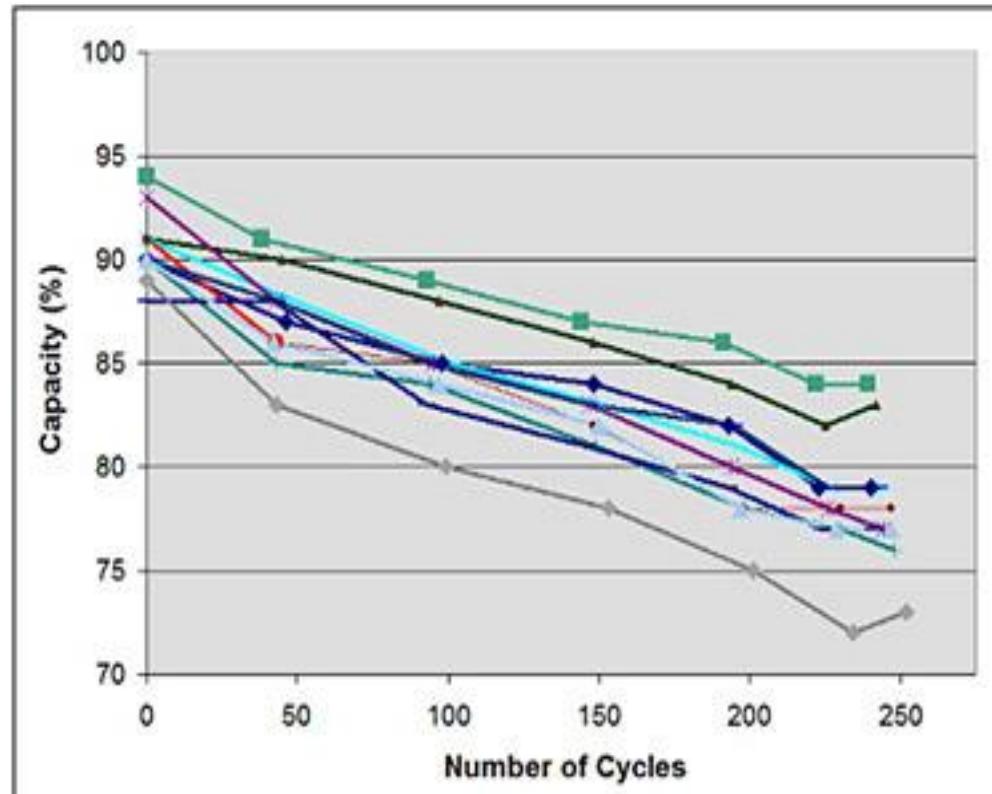
Long life Battery



Reduce replacement time



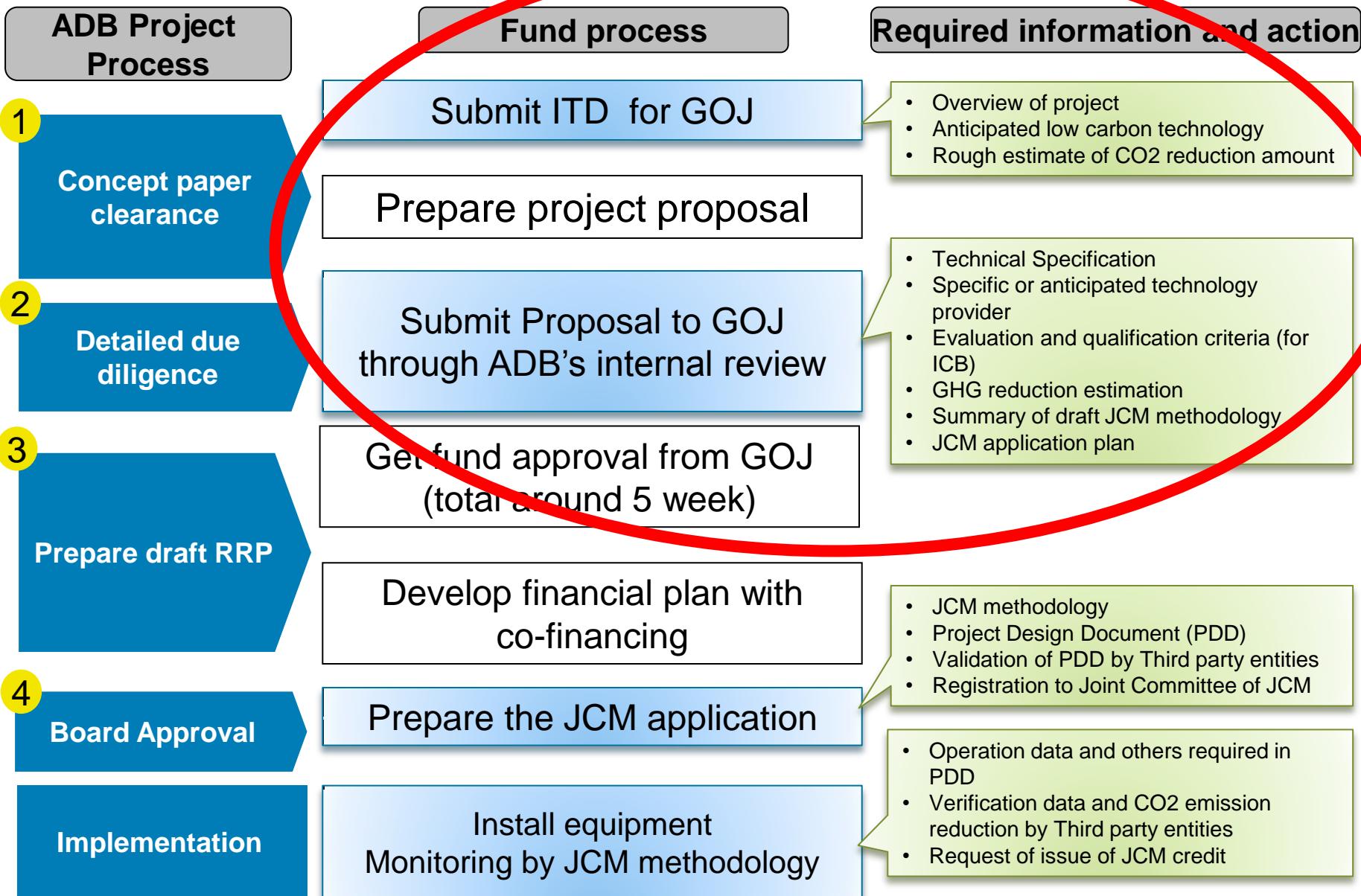
Reduce maintenance cost



(Battery university) http://batteryuniversity.com/learn/article/how_to_prolong_lithium_based_batteries

$$\text{Index} = (\text{Initial Cost}) \times \frac{(\text{Cycles of advanced battery})}{(\text{standard cycles})}$$

The fund process of ADB project



The fund process of ADB project

Fund process

Submit ITD for GOJ

Prepare project proposal

Submit Proposal to GOJ
through ADB's internal
review

Get fund approval from
GOJ (total around 5 week)

Required information and action

- Overview of project
- Anticipated low carbon technology
- Rough estimate of CO2 reduction amount

- Technical Specification
- Specific or anticipated technology provider
- Evaluation and qualification criteria (for ICB)
- GHG reduction estimation
- Summary of draft JCM methodology
- JCM application plan

- JCM methodology
- Project Design Document (PDD)

Thank you!

- If you have any question, please contact us.
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