

Japan Fund for the Joint Crediting Mechanism (JFJCM) and low carbon technology

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Outline

1. ADB's climate change program
2. The Japan Fund for the Joint Crediting Mechanism (JFJCM)
3. JFJCM financed low-carbon projects
4. Advanced low-carbon technologies

ADB's Contribution to Climate Finance, (2014)

Sources	\$ billion
Public	148 (38%)
-National DFIs	66
-Multilateral DFIs, including MDBs	47 (12%)
-Bilateral DFIs	17
-Climate funds	2
-Governments and Agencies	15
- Others	1
Private	243 (62%)
Total	391

ADB Climate Finance based on Joint MDB Approach

Area	ADB Resources \$ million	External Resources \$ million	Total \$ million
Mitigation	1,711	426	2,137
Adaptation	665	54	719
Total	2,376	480	2,856

Source: 2014 Joint Report on Multilateral Development Bank's Climate Finance (June 2015)

Approaches to Finance Mobilization in ADB

Deploying concessional resources

Internally-managed funds

- Clean Energy Financing Partnership Facility (CEFPPF)
- Climate Change Fund (CCF)
- Others with bilaterals

Externally-managed funds

- Climate Investment Funds (CIFs)
- Global Environment Facility (GEF)
- the Green Climate Fund (GCF)

Maximizing market mechanisms

- **Carbon finance**
 - ✓ Asia Pacific Carbon Fund (closed in 2014)
 - ✓ Future Carbon Fund
- **Carbon Market Technical Support Facility**
 - ✓ CDM support
 - ✓ domestic emissions trading
- Supporting **other market mechanisms**
 - ✓ **Japan Fund for the Joint Crediting Mechanism**
 - ✓ Renewable energy credits; feed in tariffs

Catalyzing private capital

- **Direct project finance (lending, guarantees, syndications), and equity investment**
- **Public private partnerships: (PPPs)** working with client DMCs across stages of PPPs

Japan Fund for the Joint Crediting Mechanism (JFJCM)

- JFJCM was established and announced by the Minister of the Environment, Japan and the President, Asian Development Bank on 25 June 2014.



Japan Fund for the Joint Crediting Mechanism (JFJCM)

- **\$ 16.6 M** (2014) and **\$15 M** (2015) have been contributed by MOEJ
- The JFJCM provides financial incentives for adoption of advanced low-carbon technologies in ADB-financed projects.

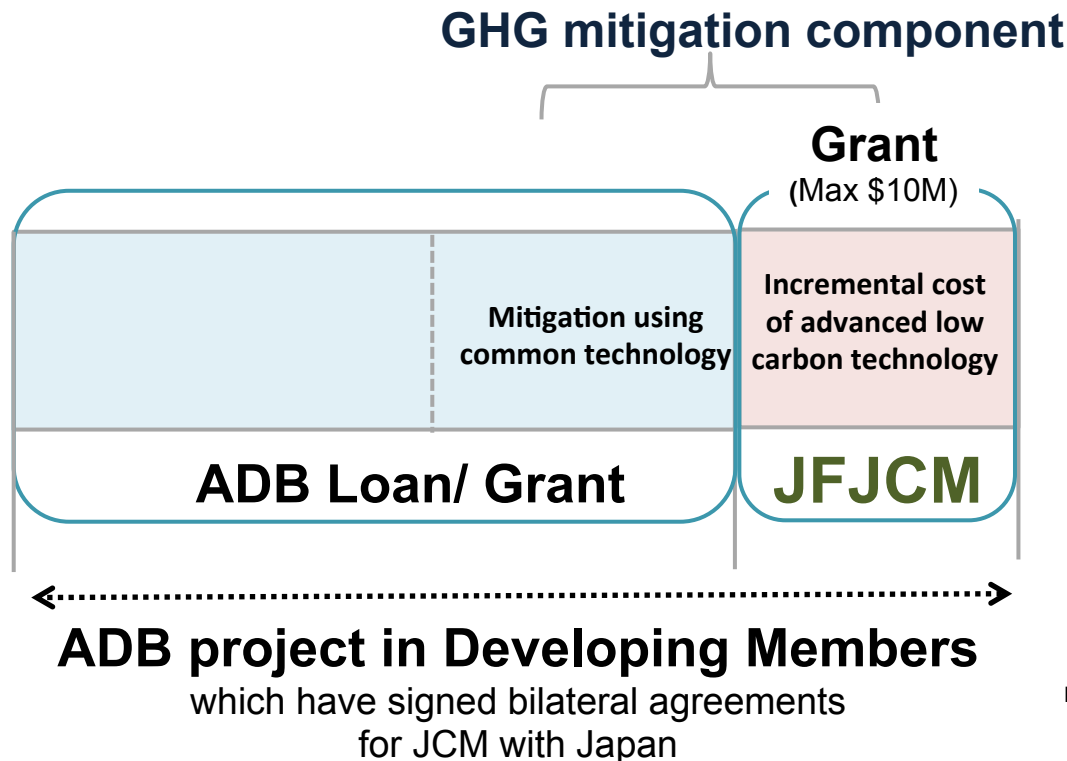
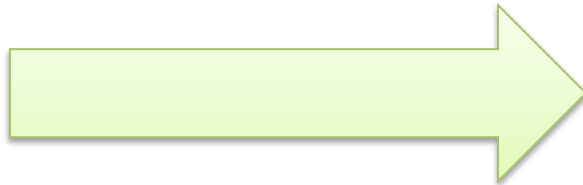


Illustration adapted from The Overseas Environmental Cooperation Center, Japan (2015)

Support to Sovereign and Non-Sovereign Projects

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



Reduce interest margin of ADB-financed loans

Non-Sovereign Projects

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

JFJCM eligible countries

- As of November 2015, the Government of Japan has signed up 16 countries for the development of the Joint Crediting Mechanism (JCM), **10 of which are ADB Developing Members.**



Source: <http://gec.jp/jcm/>

JFJCM financed low carbon projects

Solar Power Project in Maldives

- Additional financing approved by ADB in March, 2015
- Install advanced battery system and energy management system (EMS) for smart micro-grid system

Distribution Project for CHP in Mongolia

- Fund allocation approved by MOEJ in November, 2015
- Install energy efficient transformers

Pipelines of the JFJCM (Under discussion)

- Waterworks and wastewater projects in Cambodia and Viet Nam
- Agribusiness projects in Cambodia, Lao PDR, and Myanmar
- Lease financing scheme by the private sector in Indonesia and Thailand

Advanced low carbon technologies

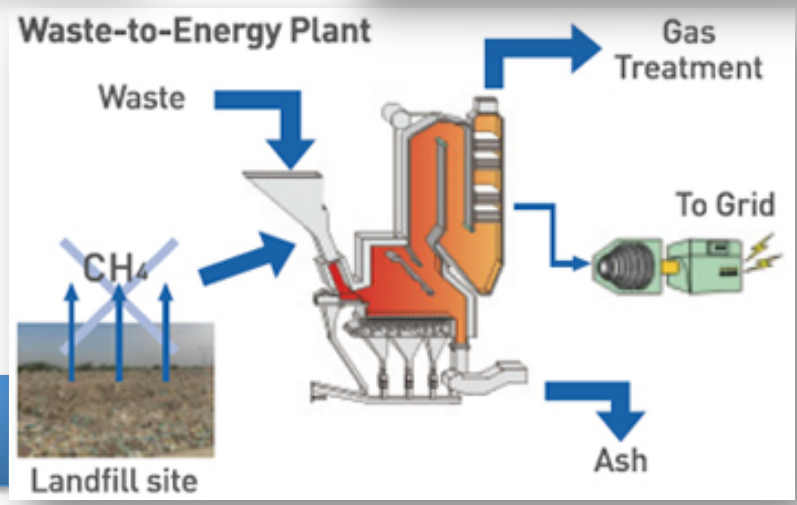


Energy Sector

Transport Sector

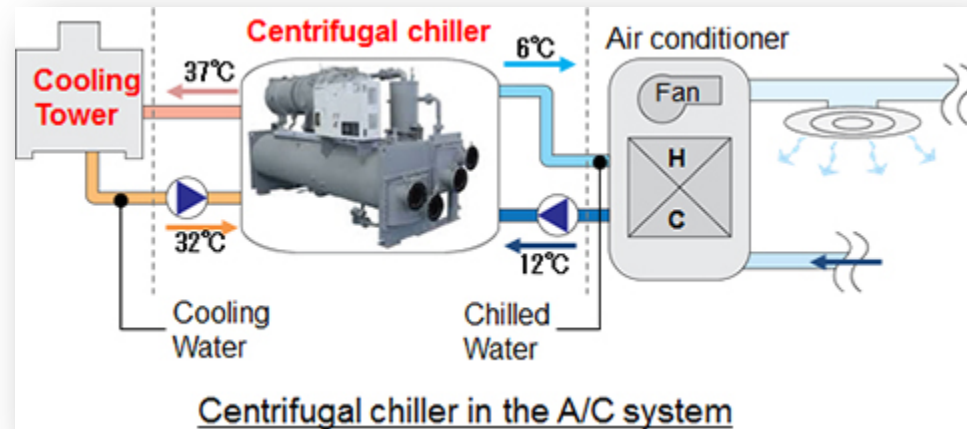


Urban Sector

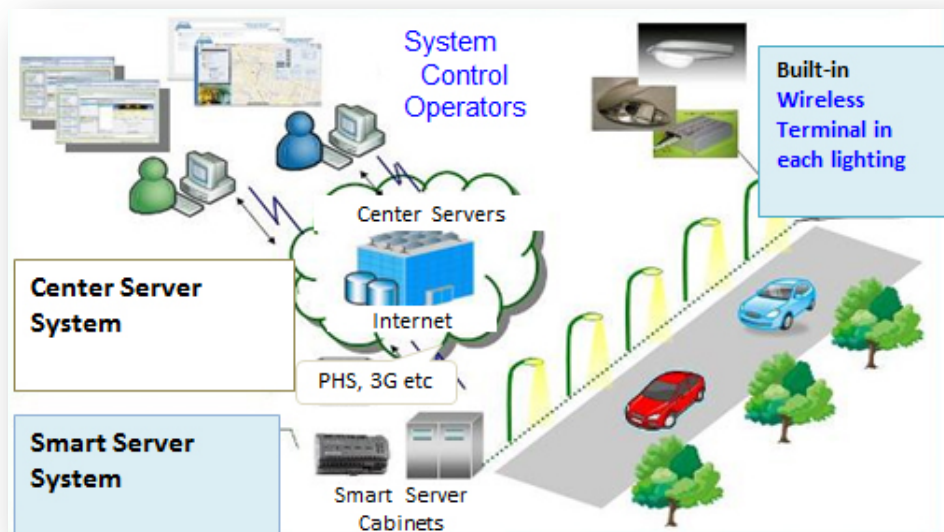


Advanced low carbon technologies

Energy Saving for Air-Conditioning at Shopping Mall with High Efficiency Centrifugal Chiller



High Efficiency LED Lighting Utilizing Wireless Network



Technology on JFJCM project

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

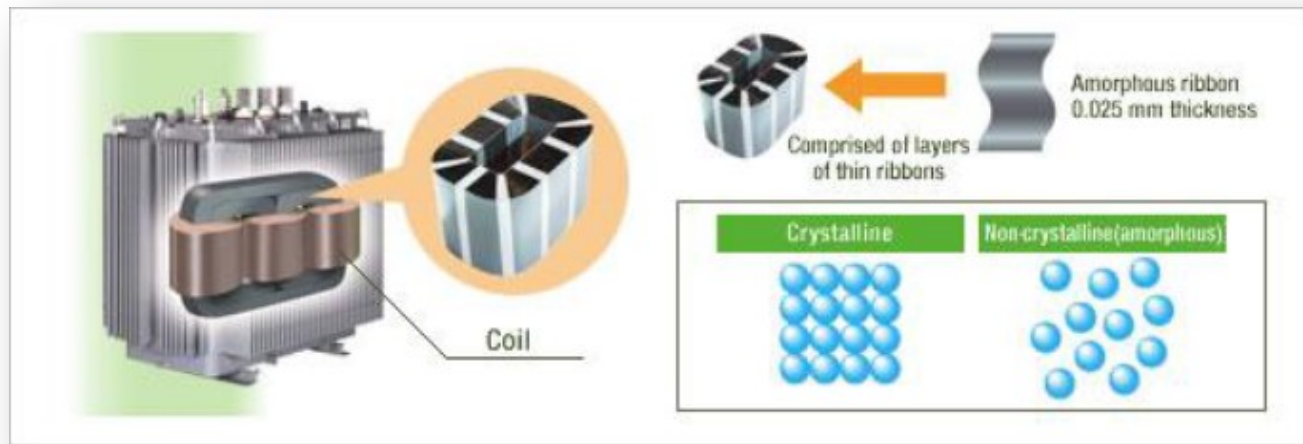


- Increase Solar PV penetration Capacity in the island

- ✓ Suppress PV and load fluctuations
- ✓ Optimize Diegel Generation's operation



Technology on JFJCM project



Amorphous Transformer (AMT)

- widely used in distribution network system in developed countries
- Applies “an amorphous core” which is an alloy of iron with boron, silicon, and phosphorus with a random and non-crystalline structure in the form of thin metal
- Improve inductance and resistance and reduces energy loss up to 75% in non-load loss and 21% in load loss

Thank you!

For further information about JFJCM, please refer to
<http://www.adb.org/site/funds/funds/japan-fund-for-joint-crediting-mechanism>

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