Development of Projects

Asia-Pacific Climate Week 2018

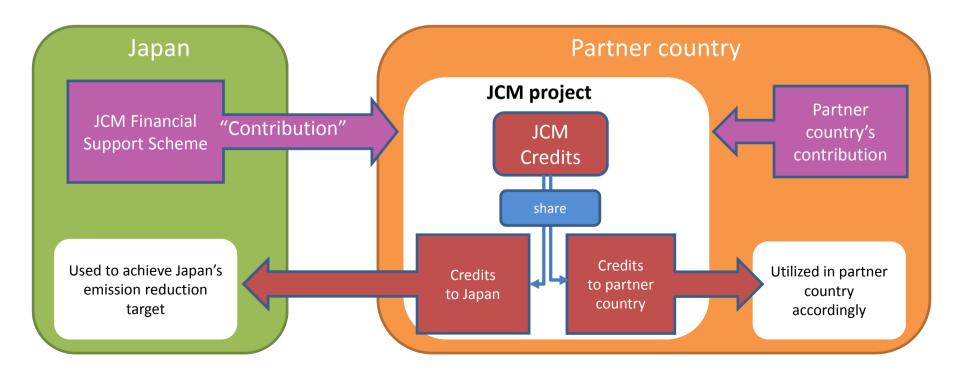
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The Joint Crediting Mechanism (JCM)

- Facilitates greenhouse gas emissions reduction/removal projects by companies, cities, etc. in partner courtiers.
- As a result of emission reductions, "JCM credits" will be issued and utilized to achieve Japan's emission reduction target and may be utilized in partner countries.
- > JCM Financial Support from Japanese government is available.



JCM partner countries



Mongolia
Jan. 8, 2013
(Ulaanbaatar)



Bangladesh Mar. 19, 2013 (Dhaka)



Ethiopia May 27, 2013 (Addis Ababa)



Kenya Jun. 12,2013 (Nairobi)



Maldives Jun. 29, 2013 (Okinawa)



<u>Viet Nam</u> Jul. 2, 2013 (Hanoi)



Lao PDR Aug. 7, 2013 (Vientiane)



Indonesia Aug. 26, 2013 (Jakarta)



Costa Rica Dec. 9, 2013 (Tokyo)



Palau Jan. 13, 2014 (Ngerulmud)



Cambodia
Apr. 11, 2014
(Phnom Penh)



Mexico Jul. 25, 2014 (Mexico City)



Saudi Arabia May 13, 2015



Chile May 26, 2015 (Santiago)



Myanmar Sep. 16, 2015 (Nay Pyi Taw)



Thailand Nov. 19, 2015 (Tokyo)



the Philippines
Jan. 12, 2017
(Manila)

JCM Projects in operation (examples)



Waste heat recovery in Cement Industry, JFE engineering, Indonesia



Eco-driving with Digital Tachographs, NITTSU, Vietnam



Energy saving at convenience stores, Panasonic, Indonesia



High efficiency airconditioning and process cooling, Ebara refrigeration equipment & systems, Indonesia



High-efficiency Heat only Boilers, Suuri-Keikaku, Mongolia



Upgrading air-saving loom at textile factory, TORAY etc., Indonesia, Thai, Bangladesh



Installing solar PV system, PCKK, Palau Maldives



Amorphous transformers in power distribution, Hitachi Materials, Vietnam



Co-generation system at factory, Toyota, Nippon Steel & Sumikin Engineering, Indonesia, Thai



High efficiency airconditioning system, Hitachi. Vietnam



High efficiency airconditioning system, Daikin. Vietnam



Waste to Energy Plant, JFE engineering, Myanmar



High efficient refrigerator, Mayekawa MFG. Indonesia



Regenerative Burners in industries, Toyotsu Machinery, Indonesia



LED street lighting system with wireless network control, MinebeaMitsumi, Cambodia

JCM Financing programme by MOEJ (FY2013~2018) as of June 25, 2018

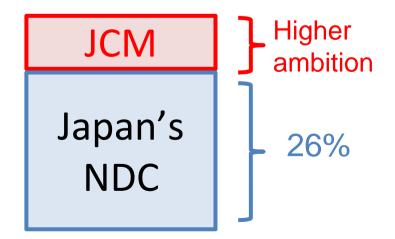
Thailand: 26 projects OEnergy Saving at Convenience Store OUpgrading Air-saving Loom OCo-generation in Motorcycle Factory OEnergy Saving at Convenience Store OCentrifugal Chiller & Compressor OCENTRIFUGAL Chiller in Tire Factory	Mongolia:7 projects Heat Only Boiler (HOB)** 8.3MW Solar PV in Farm 10MW Solar PV* 21MW Solar PV 220MW Solar PV 21MW Solar PV
OAir Conditioning System & Chiller ○ Ion Exchange Membrane Electrolyzer ○ Chilled Water Supply System ○ LED Lighting to Sales Stores ○ 12MW Waste Heat Recovery in Cement Plant ○ Co-generation System ○ Refrigerator and Evaporator ○ 1.5MW Solar PV and EMS in Paint Factory ○ 3.4MW Solar PV ○ Heat Recovery Heat Pump ○ 5MW Floating Solar PV ○ 27MW Solar PV ○ Boiler System in Rubber Belt Plant ○ Air-conditioning Control System ○ Biomass Co-generation System ○ Energy Saving Equipment in Port ○ Co-generation in Textile Factory ○ 25MWSolar PV in Industrial Park ○ 3.4MW Solar PV	Viet Nam:18 projects Digital Tachographs* Air-conditioning in Hotel* Container Formation Facility Amorphous transformers 2 Electricity Kiln High Efficiency Water Pumps Energy Saving Equipment in Lens Factory Amorphous transformers 3 Energy Saving Equipment in Wire Production Factory Amorphous transformers 4 Energy Saving Equipment in Brewery Factory Modal Shift with Reefer Container Inverters for Raw Water Intake Pumps
Bangladesh:5 projects Centrifugal Chiller Contrifugal Chiller Contrifugal Chiller* Saudi Arabia:1 projects Electorolyzer in Chlorine	Laos:3 projects REDD+ through controlling slush-and-burn Amorphous transformers 14MW Floating Solar PV Mexico:5 projects 4.8MW Power Generation with Methane Gas Recovery System Once-through Boiler and Fuel Switching 64MW Wind Farm 20MW Solar PV 30MW Solar PV
Production Plant Ethiopia:1 projects OBiomass CHP Plant	Cambodia:6 projects OLED Street Lighting OSolar PV & Centrifugal Chiller Battambang Wastewater Treatment Project OLED Street Lighting
Kenya:2 projects OBMW Hydropower Generation IMW Solar PV at Salt Factory	Palau:4 projects 370kW Solar PV for Commercial Facilities* 150kW Solar PV for School* 440kW Solar PV for Commercial Facilities II*
Myanmar:6 projects 700kW Waste to Energy Plant Brewing Systems to Brewery Factory Once-through Boiler in Instant Noodle Factory 1.8MW Rice Husk Power Generation Refrigeration System in Logistics Center 8.8MW Waste Heat Recovery in Cement Plant	O.4MW Solar PV for Supermarket Phillipines:8 projects
Maldives:2 projects	
 Model Project in FY 2013 (7 projects in 3 countries) Model Project in FY 2014 (12 projects in 5 countries) ■ ADB Project in FY 2014 (1 project in 1 country) Model Project in FY 2015 (33 projects in 10 countries) Model Project in FY 2016 (35 projects in 10 countries) ■ REDD+ Model Project (2 projects in 2 countries) ■ Model Project in FY 2017 (19 projects in 8 countries) ■ ADB Project in FY 2017 (1 Project in 1 country) ■ Gas Co-get (2.8MW Scott) ■ ADB Project in FY 2018 (17 Projects in 9 countries) ■ 2.8MW Scott 	Cold Corrugated Cartons Process*

The Plan for Global Warming Countermeasures

- 3. Polices and measures for achieving targets
 - JCM Chapter 3, Section 2, 2 (2)(e) Excerpt
 - The government of Japan establishes and implements the "Joint Crediting Mechanism (JCM)" in order both to appropriately evaluate Japan's contributions to GHG emission reductions or removals in a quantitative manner achieved through the diffusion of low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions in developing countries, and to use them to achieve Japan's emission reduction target.
 - ➤ Apart from contributions achieved through the projects by private companies, accumulated emission reductions or removals by FY2030 through governmental JCM programs to be undertaken within the government's annual budget are estimated to be ranging from 50 to 100 million t-CO₂

Japan's NDC and JCM

- As stated in Japan's NDC, the 26% reduction target is set based on the amount of domestic emission reductions and removals assumed to be obtained. It is therefore anticipated that Japan will achieve the target through domestic emission reductions and removals without using international reductions and removals (credits).
- The amount of emission reductions and removals acquired by Japan under the JCM will be appropriately counted as Japan's reduction.



How do we scale up emission reductions by the JCM?

- ➤ "Scale up" for the sake of scale up, is not in line with the Paris Agreement goal.
- ➤ "Scale up" by taking low hanging fruits, will be not an option for host countries under the Paris Agreement.
- ➤ "Scale up" by aiming sectoral approach is technically not an option for crediting mechanisms.
- ➤ Promoting and identifying emission reductions induced by the JCM will be the most important.
 - ✓ For host countries, sustainable development will be promoted.
 - ✓ For investing countries, technologies will be disseminated.
 - ✓ For the global environment, additional emission reductions will be promoted.