



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



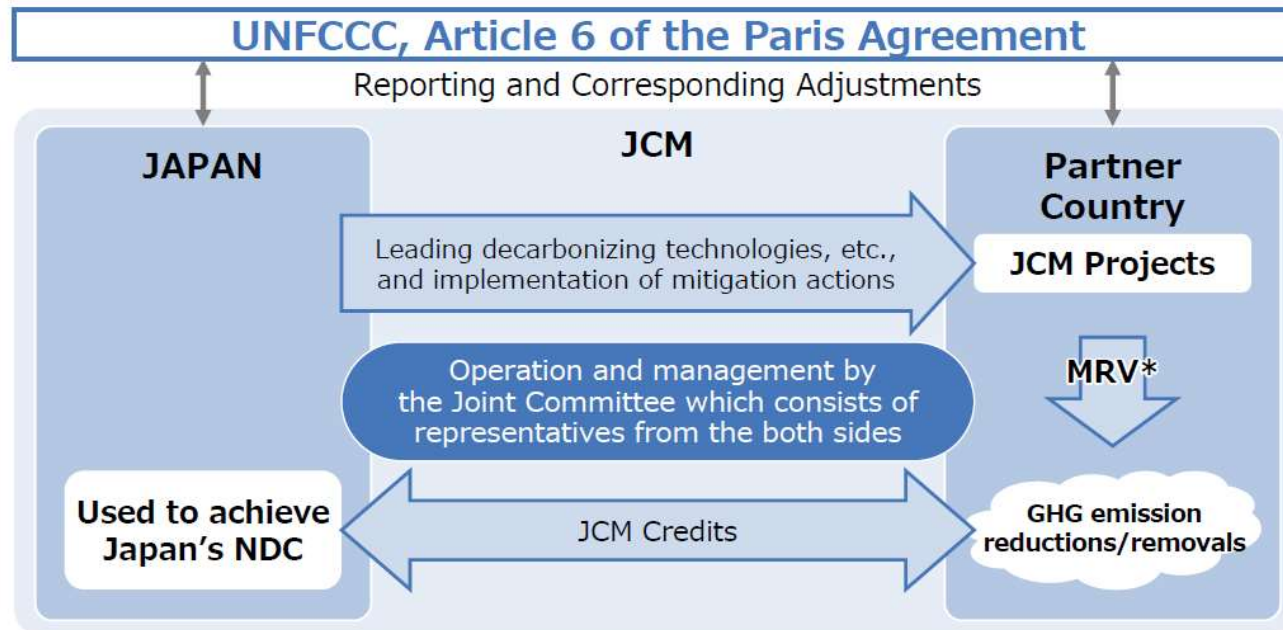
UNIDO-JCM (Joint Crediting Mechanism)

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Basic Concept of the JCM

- Facilitate diffusion of leading decarbonizing technologies and infrastructure, etc., through investment by Japanese entities, thereby contributing to GHG emission reductions or removals and sustainable development in partner countries.
- Contribute to the achievement of both countries' NDCs while ensuring the avoidance of double counting through corresponding adjustments.
- Implement the JCM consistent with the guidance on cooperative approaches, referred to in Article 6, paragraph 2 of the Paris Agreement.



*measurement, reporting and verification

Energy Efficiency



Air Cooled Chiller (Vietnam)
Hitachi-Johnson Controls Air Conditioning, Inc.



Thermal Oil Heater System (Indonesia)
Fumakilla Limited



Autoclave (Indonesia)
Otsuka Pharmaceutical Factory, Inc.



Boiler (Thailand)
The Kansai Electric Power Co., Inc.

Energy Efficiency



Once Through Boiler (Thailand)
Osaka Gas Co., Ltd.



LED Lighting (Vietnam)
Endo Lighting Corporation

Effective Use of Energy



Waste Heat Recovery (Myanmar)
Global Engineering Co., Ltd.



Gas Co-generation System & Chiller (Thailand)
The Kansai Electric Power Co., Inc.

Renewable Energy



Binary Geothermal Power Generation (Philippines)
Mitsubishi Heavy Industries, Ltd.



Mini Hydro Power Plant (Indonesia)
Volth Fuji Hydro K.K.



Biomass Boiler (Vietnam)
Daichi Jitsugyo Co., Ltd.



Biomass Boiler (Vietnam)
Marubeni Corporation

Renewable Energy



Solar Power (Indonesia)
Alamport Inc.

Waste Handling and Disposal



Power Generation with Methane Gas Recovery System (Mexico)
NTT Data Institute of Management Consulting, Inc.



Waste to Energy Plant (Myanmar)
JFE Engineering Corporation

Transportation



CNG-Diesel Hybrid Public Bus (Indonesia)
Hokusan Co., Ltd.

Total 232 projects (27 partner countries)

152 underlined projects have been started operation.

71 projects with* have been registered as JCM projects.

● Model Projects : 219 projects (including Eco Lease : 7 projects), ● JFJCM : 6 projects, ● UNIDO : 1 project, ● REDD+ : 2 projects, ● F-gas : 4 projects

Cambodia : 5 projects

- LED Street Lighting*
- Solar PV & Centrifugal Chiller
- 0.9MW Solar PV
- 200kW Solar PV at International Schools*
- Inverters for Distribution Pumps*

Myanmar : 8 projects

- 700kW Waste to Energy Plant*
- 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
- Brewing Systems and Biogas Boiler to Brewery Factory
- Brewing Systems to Brewery Factory
- 4.3MW Solar PV

Bangladesh : 5 projects

- Centrifugal Chiller
- 3.15kW PV-diesel Hybrid System*
- Centrifugal Chiller*
- Loom at Weaving Factory*
- High Efficiency Transmission Line

Saudi Arabia : 3 projects

- Electrolyzer in Chlorine Production Plant
- 400MW Solar PV
- 100MW Solar PV

Maldives : 3 projects

- 186kW Solar Power on School Rooftop*
- Smart Micro-Grid System
- Greater Male Waste to Energy Project

Ethiopia : 1 project

- 120MW Solar PV

Kenya : 5 projects

- 1MW Solar PV at Salt Factory*
- 3.1MW Solar PV
- 2.3MW Solar PV
- 1.6MW Solar PV
- 230kW Solar PV and Storage Battery

Laos : 6 projects

- REDD+ through controlling slush-and-burn
- Amorphous transformers*
- 11MW Solar PV*
- Amorphous transformers2
- 14MW Floating Solar PV*
- 19MW Solar PV

Thailand : 51 projects

- Energy Saving at Convenience Store
- Centrifugal Chiller & Compressor*
- Air Conditioning System & Chiller*
- Chilled Water Supply System
- 12MW Waste Heat Recovery in Cement Plant*
- Refrigerator and Evaporator
- 5MW Floating Solar PV*
- Biomass Co-generation System
- 17.8MW Solar PV in Industrial Park
- F-gas Recovery and Destruction Scheme
- Heat Exchanger in Fiber Factory
- 5MW Solar PV
- 2.6MW Solar PV
- 32MW Solar PV and Floating Solar PV
- 35MW Solar PV and Storage Battery
- 1.3MW Solar PV (Eco Lease)
- ORC Waste Heat Recovery
- Methane Avoidance and Biomass boiler in Fruit Processing Factory
- 1MW Solar PV on Factory Rooftop*
- Centrifugal Chiller in Tire Factory
- Refrigeration System*
- LED Lighting to Sales Stores
- Co-generation System PV
- Heat Recovery Heat Pump*
- Boiler System in Rubber Belt Plant
- Co-generation in Fiber Factory
- 3.4MW Solar PV
- 8.1MW Solar PV
- 2MW Solar PV2
- 23MW Solar PV
- Boiler, Chiller and PV
- 0.13MW Solar PV (Eco Lease)
- 4MW Solar PV
- Upgrading Air-saving Loom*
- Co-generation in Motorcycle Factory*
- Ion Exchange Membrane Electrolyzer
- 2MW Solar PV1
- 3.4MW Solar PV*
- 30MW Solar PV*
- Air-conditioning Control System
- Biomass Boiler
- 0.8MW Solar PV and Centrifugal Chiller
- 37MW Solar PV and Melting Furnace
- Centrifugal Chiller to Machinery Factory
- 27MW Solar PV with Blockchain Technology
- Once-through Boiler in Garment Factory
- 2MW Solar PV3
- Gas Co-generation System & 22MW Solar PV
- 2.9MW Solar PV
- 1.6MW Solar PV (Eco Lease)
- 1MW Solar PV

Mongolia : 9 projects

- Heat Only Boiler (HOB)**
- 15MW Solar PV1*
- Improving Access to Health Services
- 2.1MW Solar PV in Farm*
- Upscaling Renewable Energy Sector
- 15MW Solar PV2
- 10MW Solar PV*
- Fuel Conversion by Introduction of LPG Boilers
- 8.3MW Solar PV in Farm*

Vietnam : 44 projects

- Digital Tachographs*
- Container Formation Facility*
- Air-conditioning Control System
- Energy Saving Equipment in Lens Factory*
- Amorphous transformers 4
- Modal Shift with Reefer Container
- F-gas Recovery and Dedicated Destruction Scheme
- 49MW solar PV
- Air-conditioning in Hotel2
- 1.2MW Solar PV
- F-gas Recovery and Mixed Combustion Scheme
- 7.9MW Solar PV
- 1.8MW Solar PV
- Amorphous transformers1*
- 320kW Solar PV in Shopping Mall*
- Electricity Klin
- Amorphous transformers 3*
- Energy Saving Equipment in Brewery Factory
- Inverters for Raw Water Intake Pumps
- Biomass Boiler to Chemical Factory
- 42MW solar PV
- 2MW Solar PV
- 9.8MW Solar PV
- 20MW Biomass Power Plant
- 0.4MW Solar PV (Eco Lease)
- 0.8MW Solar PV
- Air-conditioning in Hotel1*
- Amorphous transformers 2*
- High Efficiency Water Pumps*
- Energy Saving Equipment in Wire Production Factory*
- High Efficiency Chiller
- Air Cooled Chillers
- Once-through Boiler to Food Factory
- Waste to Energy
- 5.8MW Solar PV
- 16MW Mini Hydro Power Plant
- 5.7MW Solar PV
- Air-conditioning in Lens Factory*
- Biomass Boiler
- LED Lighting to Office Building
- 23MW Solar PV
- 48MW Offshore Wind Power
- 9MW Solar PV
- Chiller and LED

Philippines : 17 projects

- 1.53MW Rooftop Solar PV*
- 2MW Solar PV*
- 29MW Binary Geothermal Power Generation
- 20MW Flash Geothermal Power Plant
- 28MW Binary Geothermal Power Generation
- 14.5MW Mini Hydro Power Plant
- 0.8MW Solar PV (Eco Lease)
- 6MW Waste Heat Recovery in Cement Plant
- 1.2MW Solar PV (Eco Lease)
- 1MW Rooftop Solar PV
- 9.6MW Solar PV
- F-gas Recovery and Destruction Scheme
- 9MW Solar PV
- 5.6MW Binary Geothermal Power Generation
- 27MW Solar PV
- 1.2MW Rooftop Solar PV*
- Biogas Power Generation and Fuel Conversion

Mexico : 5 projects

- 1.2MW Power Generation with Methane Gas Recovery System
- Once-through Boiler and Fuel Switching
- 30MW Solar PV1
- 0.5MW Solar PV (Eco Lease)
- Energy Efficient Distillation System

Palau : 5 projects

- 370kW Solar PV for Commercial Facilities*
- 155kW Solar PV for School*
- 445kW Solar PV for Commercial Facilities B*
- 0.4MW Solar PV for Supermarket*
- 1MW Solar PV for Supermarket

Indonesia : 50 projects

- Centrifugal Chiller at Textile Factory*
- Refrigerants to Cold Chain Industry**
- Centrifugal Chiller at Textile Factory 2*
- 500kW Solar PV and Storage Battery*
- Centrifugal Chiller at Textile Factory 3*
- Upgrading to Air-saving Loom*
- Smart LED Street Lighting System
- Gas Co-generation System*
- 1.6MW Solar PV in Jakabarin Sport City*
- 10MW Hydro Power Plant1
- Industrial Wastewater Treatment System
- Absorption Chiller*
- Rehabilitation of Hydro Power Plant
- Boiler to Carton Box Factory
- 6MW Hydro Power Plant2
- 8MW Mini Hydro Power Plant
- 6MW Hydro Power Plant3
- Once-through Boiler in Chemical Factory
- 2.1MW Solar PV
- 55MW Geothermal Power Generation
- Energy Saving at Convenience Store*
- Double Bundle-type Heat Pump*
- 30MW Waste Heat Recovery in Cement Industry*
- Regenerative Burners*
- Old Corrugated Cartons Process*
- Centrifugal Chiller in Shopping Mall*
- Once-through Boiler System in Film Factory*
- Once-through Boiler in Golf Ball Factory*
- REDD+ through controlling slush-and-burn
- Looms in Weaving Mill*
- 0.5MW Solar PV*
- High Efficiency Autoclave1
- Injection Molding Machine
- 10MW Hydro Power Plant2
- 5MW Hydro Power Plant
- Thermal Oil Heater System
- 2.3MW Hydro Power Plant
- 5MW Solar PV
- 3.5MW Hydro Power Plant
- 12MW Biomass Power Plant
- LED Lighting to Sales Stores
- Gas Co-generation system
- CNG-Diesel Hybrid Public Bus
- 2MW Mini Hydro Power Plant
- 6MW Hydro Power Plant1
- 4.2MW Solar PV
- 3.3MW Rooftop Solar PV
- High Efficiency Autoclave2
- 3.1MW Solar PV
- Energy Saving and Solar PV

Costa Rica : 2 projects

- 5MW Solar PV*
- Chiller and Heat Recovery System

Chile : 13 projects

- 1MW Rooftop Solar PV*
- 3.4MW Rice Husk Power Generation
- 3MW Solar PV1*
- 25.8MW Solar PV
- 9MW Solar PV2
- 6MW Solar PV
- 9MW Solar PV2
- 2.0MW Solar PV
- 3MW Solar PV2
- 9MW Solar PV1
- 3MW Solar PV3
- 9MW Solar PV1
- 47MW Solar PV

UNIDO-JCM the first project

- Farmland Co., Ltd.
- Kenya/Introduction of Solar Power (230Kw, expanding to 10Mw) plus Battery to PJ Dave Flora Ltd.



UNIDO-JCM Eligibility

Eligible Country

- Kenya, Ethiopia, Tunisia, and Senegal

Eligible Technology

- Decarbonization technologies that reduce greenhouse gas (GHG) emission including CO2 from energy source.

Adopted project

- Introduction of Solar Power (230Kw, expand to 10Mw) plus Battery to PJ Dave Flora Ltd. (Kenya)

Flexibility

- Grant: Cover up to 75% of project cost
- Monitoring period : at least 5 years



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