

Tips and Findings Thorough Experiences with JCM Project Development

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JCM Model Projects by the MOEJ

The budget for projects starting from FY 2019 is **9.9 billion JPY (approx. USD 99 million)** in total by FY2021

(1 USD = 100 JPY)

Finance part of an investment cost (less than half)

Government of Japan

✂Includes collaboration with projects supported by JICA and other governmental-affiliated financial institute.

Conduct MRV and expected to deliver at least half of JCM credits issued

International consortiums (which include Japanese entities)



- Scope of the financing: facilities, equipment, vehicles, etc. which reduce CO₂ from fossil fuel combustion as well as construction cost for installing those facilities, etc.
- Eligible Projects : starting installation after the adoption of the financing and finishing installation within three years.

Role of OECC in JCM Model Project Development

OECC works for project findings and development in 9 Asian Countries in FY2019 .
(Mongolia, Bangladesh, Viet Nam, Lao PDR, Indonesia, Cambodia, Myanmar, Thailand and the Philippines).



Activity flow of the JCM model project development and the support from OECC



Identify project participants / technologies



Developing a JCM model project seed

Identifying mitigating sector / industry

Applying for a Financing program for JCM model project

Supporting implementation of the JCM model project

Advice for the proposal development (application documents)

methodology and PDD development

Workshop and Japan study tour

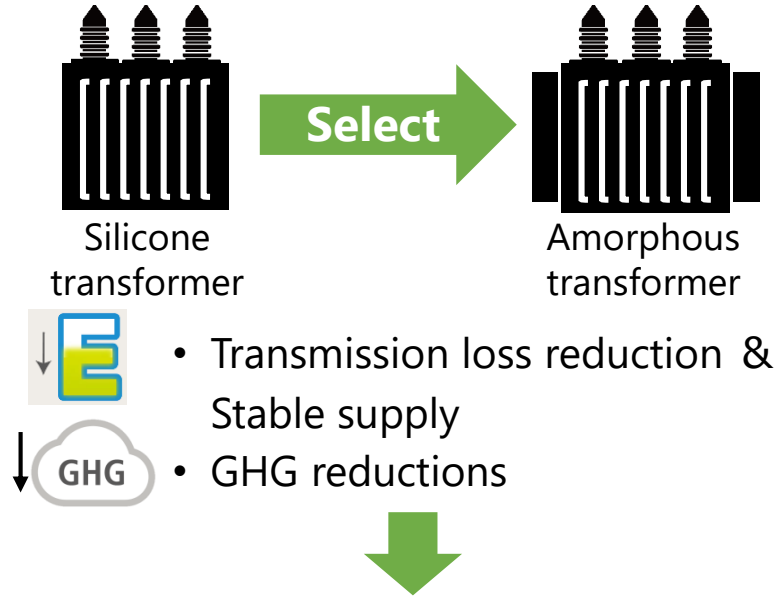


JCM model projects consulted by OECC

OECC has been successfully supported the project development for 20 projects

Year	Partner country	Technology introduced and project boundary	GHG reduction (tCO ₂ /year)
2019	Philippines	Biogas Power Generation and Fuel Conversion Project in Pineapple Canneries	52,156
2019	Mongolia	Fuel Conversion by Introduction of LPG Boilers to Beverage Factory	5,781
2018	Mongolia	21MW Solar PV in Bayanchandmani	27,008
2017	Mongolia	20MW Solar PV in Darkhan City	22,927
2017	Mongolia	15MW Solar PV in New Airport Suburb	18,438
2017	<u>Indonesia</u>	<u>Absorption Chiller at Chemical Factory</u>	1,084
2017	<u>The Philippines</u>	<u>1.2MW Solar PV at Refrigerating Warehouse</u>	838
2017	<u>The Philippines</u>	<u>1.53MW Solar PV at Auto Parts Factories</u>	1,124
2017	Laos	Amorphous Transformers in Nationwide Power Grids	2,099
2017	Viet Nam	Amorphous Transformers in Southern and Central Power Grids II (phase 4)	1,469
2016	<u>Thailand</u>	<u>1.5MW Solar PV and EMS at Paint Factory</u>	1,344
2016	<u>Cambodia</u>	<u>800kW Solar PV project at International School</u>	772
2016	<u>Mongolia</u>	<u>8.3MW Solar PV at Farm in Ulaanbaatar Suburb</u>	10,580
2016	<u>Viet Nam</u>	<u>Amorphous Transformers in Northern, Central and Southern Power Grids (phase 3)</u>	2,098
2015	<u>Mongolia</u>	<u>10MW Solar PV in Darkhan City</u>	14,746
2015	<u>Mongolia</u>	<u>2.1MW Solar PV at Farm in Ulaanbaatar Suburb</u>	2,707
2015	<u>Bangladesh</u>	<u>High Efficiency Loom at Weaving Factory</u>	1,518
2015	<u>Bangladesh</u>	<u>340kW PV-diesel Hybrid System at Fastening Manufacturing Plant</u>	265
2015	<u>Viet Nam</u>	<u>Amorphous Transformers in Southern and Central Power Grids (phase 2)</u>	3,564
2014	<u>Viet Nam</u>	<u>Amorphous Transformers in Southern Power Grids (phase 1)</u>	610

Case1: Transferring & replicating low-carbon technologies



- More expensive than conventional product

JCM: Reducing initial investment cost



- Environmental performance is not sufficiently considered in procurement process

Local Power Authorities : Revising Procurement process



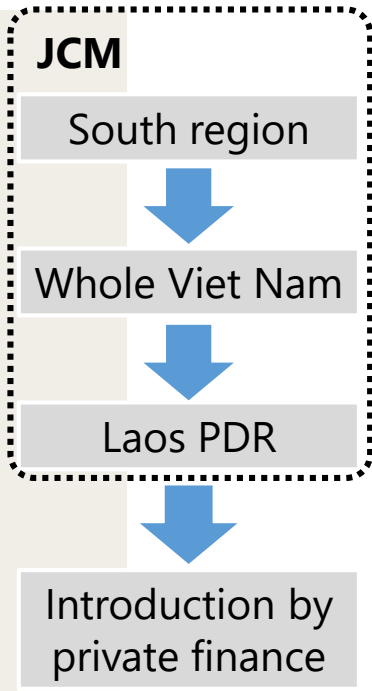
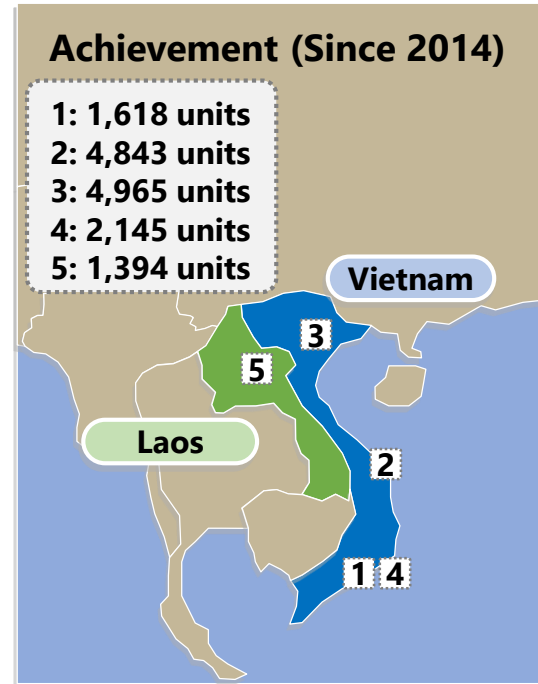
- Challenges for introducing new technology

Cooperation between Japan (amorphous supply) & Viet Nam (Transformer production)

Power loss in Viet Nam Electricity's systems has reduced from 7.24% in 2017 to **6.83% in 2018** and achieved the loss rate target of 7.2%. *EVN news

Ensuring the balanced capacity of power sources in each region: ensuring the reliability of electricity supply in each regional electricity system so as to **reduce losses in transmissions**, share the electricity yield and efficiently exploit hydropower plants in rainy and dry seasons.

*Revised National Power Development Master Plan for the 2011-2020 (2016)



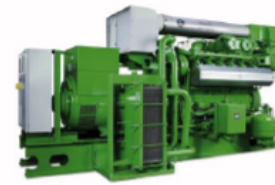
Case2: Promoting large-scale GHG emissions reduction by Biogas Generation



Pineapple fruit waste

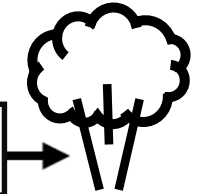


BIOGAS



ELECTRICITY

Monitoring Point 1
- Power meter after the biogas engine
- measurements in kWh



Monitoring Point 2
- Biogas meter before the steam boiler
(at the dual-fuel burner)
- measurements in Nm³

BIOGAS



STEAM



GHG reduction: 52,156 tCO₂/year



- By Power Generation: 11,881 t-CO₂ reduction / year
- By Boilers: 40,275 t-CO₂ reduction/ year



Lowering electricity cost for the operation in Dole Philippines, Inc.

Tips and potential of the project development with huge amount of GHG emissions reduction with an example in the agriculture sector

- ✓ **Finding replicable technologies**
- ✓ **Seeking a potential in variety of sectors / technologies**

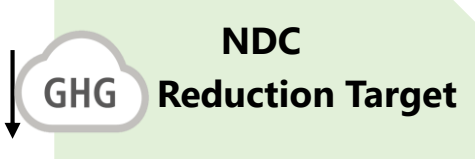


➔ **Example** Big Potential in the Agriculture Sector

- ◆ Huge amount of waste turns into energy source
- ◆ GHG emissions reduction by biomass power replacing fossil fuel origin-electricity or diesel power
- ◆ A large scale of GHG emissions reduction by methane avoidance

Conditions

- ◆ Must include GHG emissions reduction from energy sources
- ◆ Secure a certain amount of biomass supply continuously
- ◆ Must be identify the end user to monitor the GHG emissions reduction

Benefits from the JCM

- ✓ **Contribute to the achievement of NDC** 
- ✓ **Reduce initial investment and operation cost** 
- ✓ **Promote sustainable business/project operation** 
 - **Job creation**
 - **Know-how of project management**
 - **Better technologies**

Thank you for your attention!

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Carbon Market Express: <https://www.carbon-markets.go.jp/eng/>



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