



Key Points for forming JCM projects, Success Factors for JCM Project Implementation

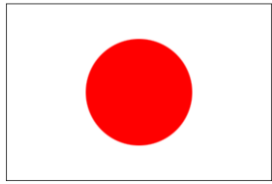


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1. The role of OECC roles on the JCM
2. Key points for forming JCM projects
3. Good practices of JCM projects
4. Success factors for forming JCM projects

1. The role of OECC on the JCM



Based on local needs in Georgia
Government-Private companies



- Meetings with local partners to identify local needs, potentials and issues

- Technology study
- Proposals on business model and technology

Maturity process toward business implementation

Application to JCM model project finance
- *Support preparation application forms*



1. The role of OECC on the JCM

Information dissemination on the JCM



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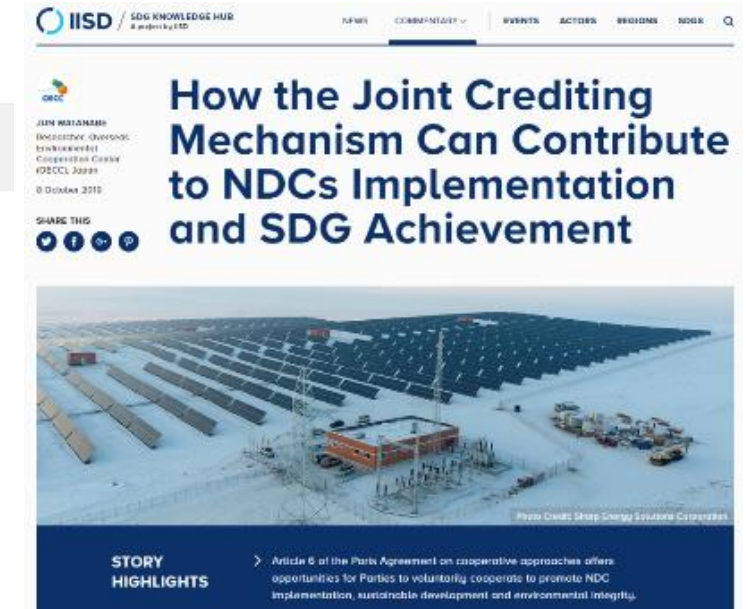
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Sharing of various JCM basic information



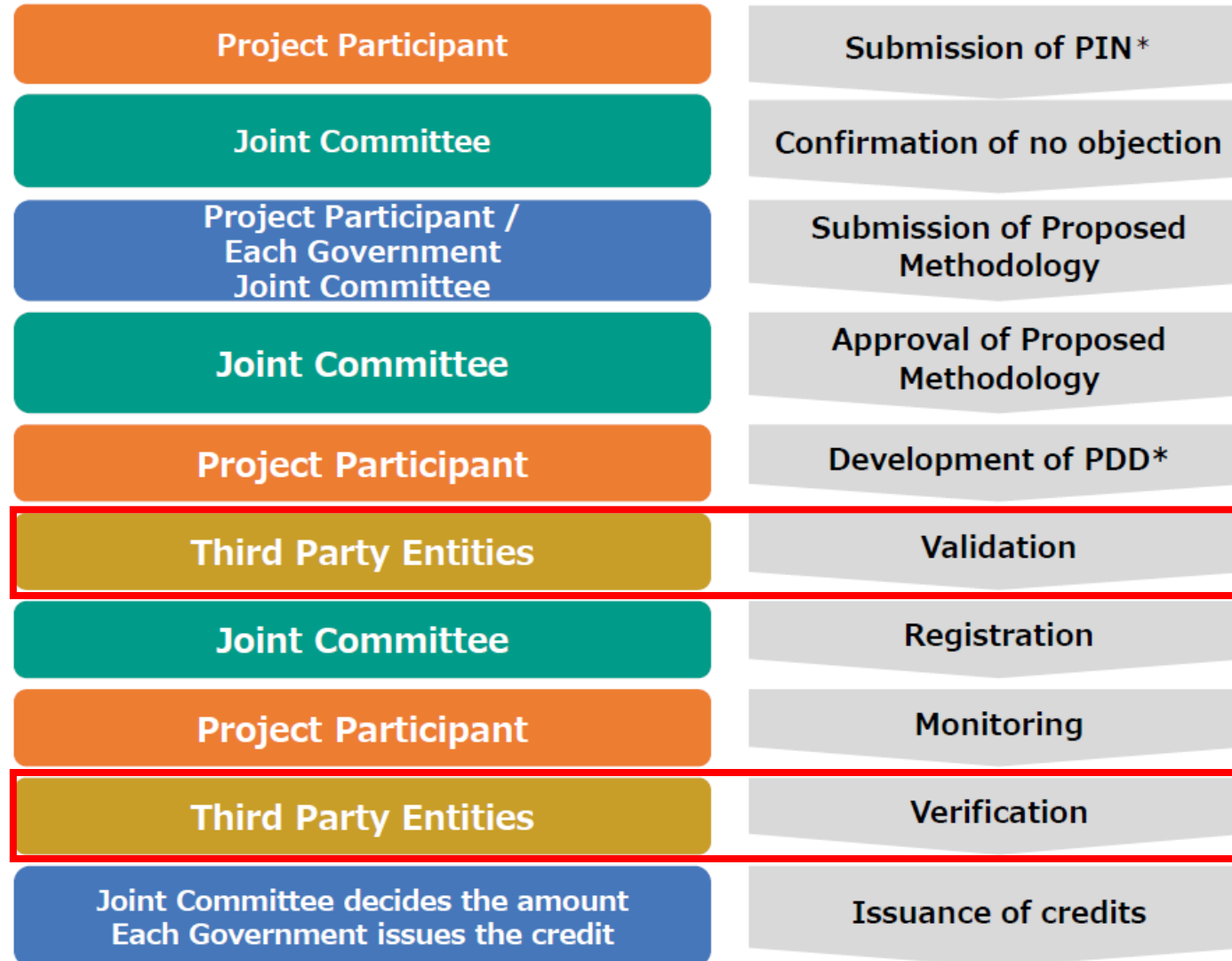
<http://carbon-markets.env.go.jp/eng/index.html>



Video production for good practices of the JCM

1. The role of OECC on the JCM

Support for Validation and Verification of JCM projects



2. Key Points for forming JCM projects

Priority technologies of the JCM

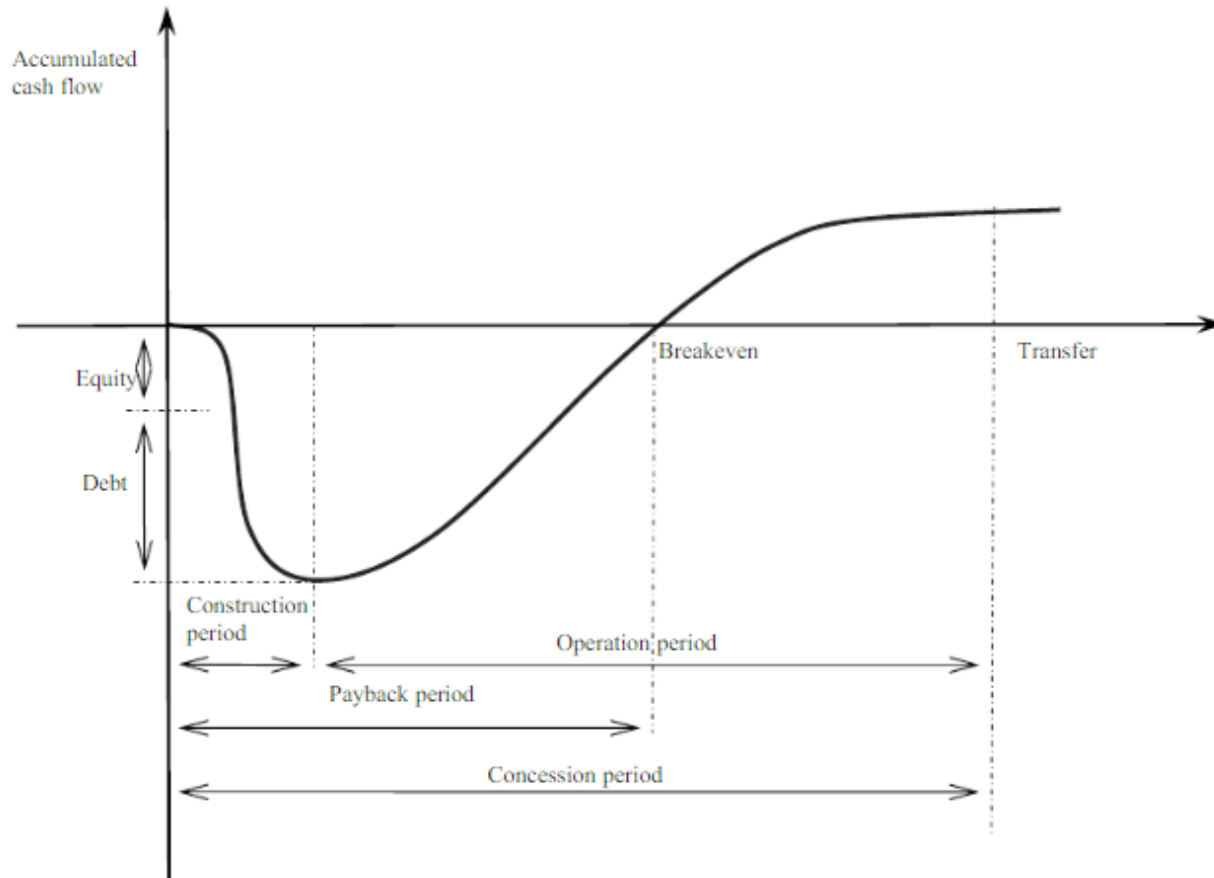
- | | |
|---|---|
| <ul style="list-style-type: none">➤ Solar power generation➤ Wind power generation➤ Geothermal power generation➤ Hydro power generation➤ Waste to energy | <ul style="list-style-type: none">➤ Storage battery & Electric grid system➤ Energy-saving infrastructure➤ Hydrogen technology➤ Carbon Capture and Storage➤ Ammonia fuel |
|---|---|

[Common areas between Georgia's NDC and priority technologies of the JCM]

- ✓ Utilization of **Waste to energy** in waste sector
- ✓ Utilization of **Storage battery & Electric grid system** in energy sector
- ✓ Utilization of **Energy-saving infrastructure** such as Waste-heat Recovery
 - ✓ Utilization of **Hydrogen technology** in transport sector

2. Key Points for forming JCM projects

Is it profitable as a business? (Business feasibility / sustainability)



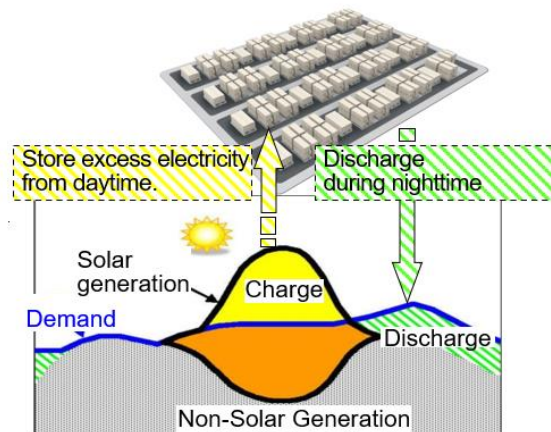
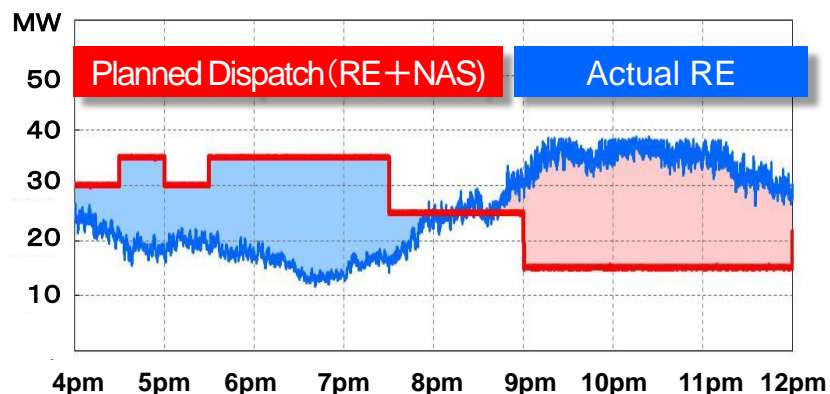
- ✓ Establishment of an environmental business model including securing all necessary licenses and permissions
- ✓ Robustness of business return on investment while securing revenue source such as Power Purchase Agreement (PPA)
- ✓ Financial arrangement including loan with appropriate interest rates

2. Key Points for forming JCM projects

Utilization of advanced technologies toward decarbonization society

The JCM recommends the introduction of advanced technologies

Storage Battery



NGK INSULATORS, LTD.

Digital power mitigation



NIES supercomputer

Green hydrogen

Pollutants emission = 0
CO₂ emission = 0

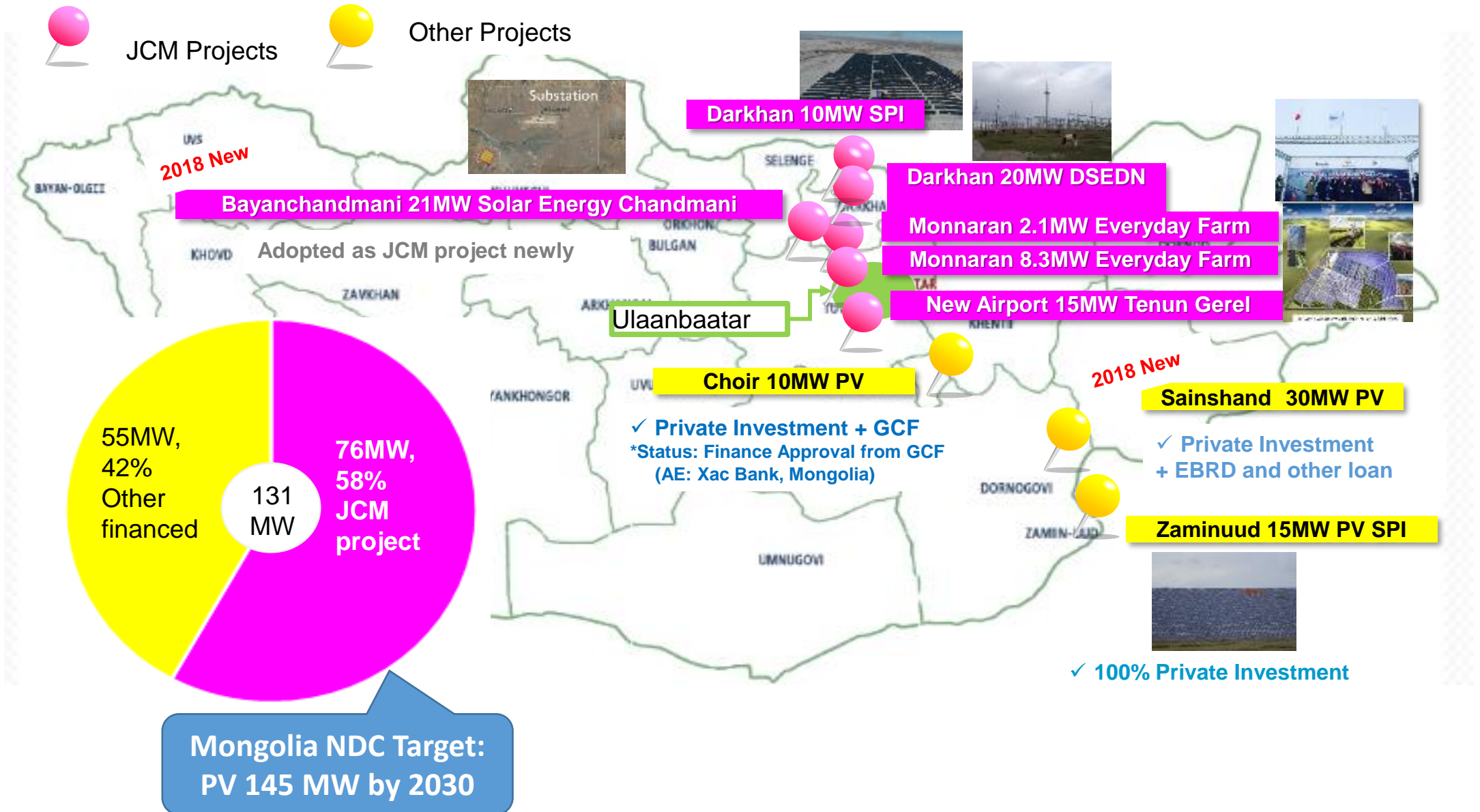


3. Good practices of JCM projects

List of JCM projects that OECC has contributed to discovering and/or forming

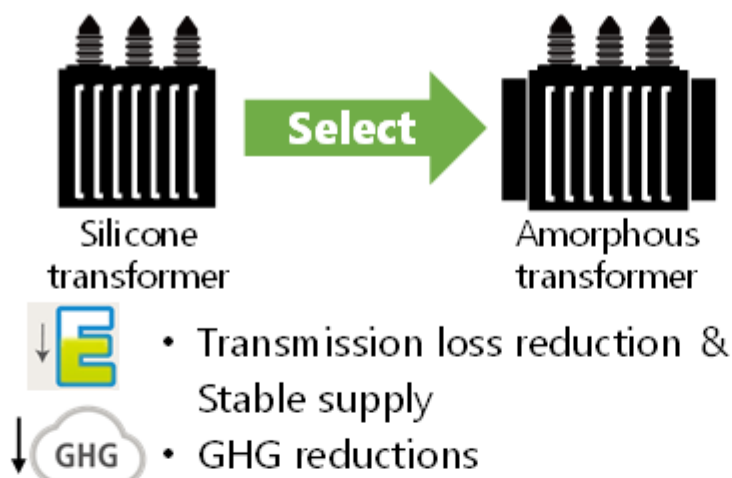
Selected Year	Partner country	Representative Participants	Project Title	Expected GHG Emission Reductions (tCO2/year)
2022	Thailand	Dole Japan, Inc.	Thermal Energy Supply and Methane Avoidance Project Utilizing Biomass mixed with Biogas from Wastewater in Fruit Processing Factory	43,343
2022	New partner candidate	Confidential	Confidential	About 60,000
2021	Indonesia	Sumitomo Forestry Co., Ltd.	Introduction of 3.3MW Rooftop Solar Power System in Woodworking Factories	2,396
2020	Vietnam	Idemitsu Kosan Co., Ltd.	Introduction of 2MW Solar Power System for Pellet Factory	945
2019	Philippines	ITOCHU Corporation	Biogas Power Generation and Fuel Conversion Project in Pineapple Canneries	52,156
2019	Mongolia	Saisan Co., Ltd.	Fuel Conversion by Introduction of LPG Boilers to Beverage Factory	5,781
2019	Philippines	Tokyo Century Corporation	7.3MW Solar Power Project at Mandalay Airport and Yangon City	3,276
2018	Myanmar	Global Engineering Co., Ltd.	Introduction of 8.8MW Power Generation System by Waste Heat Recovery for Cement Plant	19,241
2018	Mongolia	Ministry of Energy, Mongolia (ADB JFJCM)	Upscaling Renewable Energy Sector Project	6,423
2017	Mongolia	Sharp Corporation	Introduction of a 20MW Solar Power System in Darkhan City	22,927
2017	Indonesia	Tokyo Century Corporation	Introduction of Absorption Chiller to Chemical Factory	1,084
2017	Philippines	Tokyo Century Corporation	Installation of 1.2MW Rooftop Solar Power System in Refrigerating Warehouse	838
2017	Mongolia	Sharp Corporation	Introduction of 15MW Solar Power System near New Airport	18,438
2017	Philippines	Tokyo Century Corporation	Introduction of 1.53MW Rooftop Solar Power System in Auto Parts Factories	1,124
2017	Laos	Yuko Keiso Co., Ltd.	Introduction of Amorphous High Efficiency Transformers in Power Grid	2,099
2017	Vietnam	Yuko Keiso Co., Ltd.	Introduction of Amorphous High Efficiency Transformers in Southern and Central Power Grids II	1,469
2016	Myanmar	Ryobi Holdings Co., Ltd.	Introduction of Energy Efficient Refrigeration System in Logistics Center	125
2016	Vietnam	Yuko Keiso Co., Ltd.	Introduction of Amorphous High Efficiency Transformers in Northern, Central and Southern Power Grids	2,098
2016	Thailand	Finetech Co., Ltd.	Introduction of 1.5MW Rooftop Solar Power System and Advanced EMS for Power Supply in Paint Factory	1,344
2016	Cambodia	Asian Gateway Corporation	Introduction of 0.8MW Solar Power Generation in International School	772
2016	Mongolia	Farmdo Co., Ltd.	Installation of 8.3MW Solar Power Plant in Ulaanbaatar suburb Farm	10,580
2015	Vietnam	Yuko Keiso Co., Ltd.	Introduction of Amorphous High Efficiency Transformers in Southern and Central Power Grids	4,360
2015	Bangladesh	Toyota Tsusho Corporation	Installation of High Efficiency Loom at Weaving Factory	1,518
2015	Mongolia	Sharp Corporation	10MW Solar Power Project in Darkhan City	14,746
2015	Mongolia	Farmdo Co., Ltd.	Installation of 2.1MW Solar Power Plant for Power Supply in Ulaanbaatar suburb	2,707
2015	Bangladesh	YKK Corporation	Introduction of PV-diesel Hybrid System at Fastening Manufacturing Plant	265

3. Good practices of JCM projects: Mongolia



3. Good practices of JCM projects: Vietnam and Lao PDR

In the 2015-2019 period, electricity loss was cut by about 29.7 billion kWh compared to 2010 and helped reduce emissions by 26.5 million tCO₂ (NDC 2020).



• More expensive than conventional product
JCM: Reducing initial investment cost



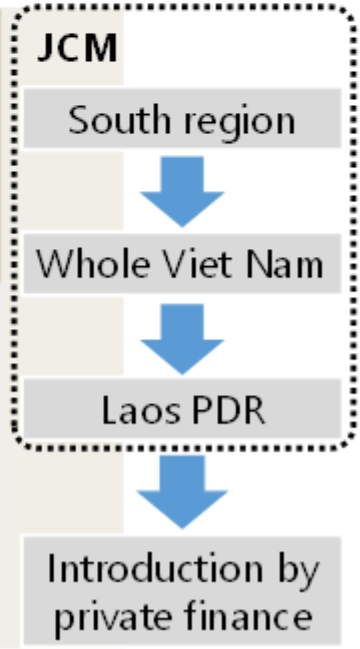
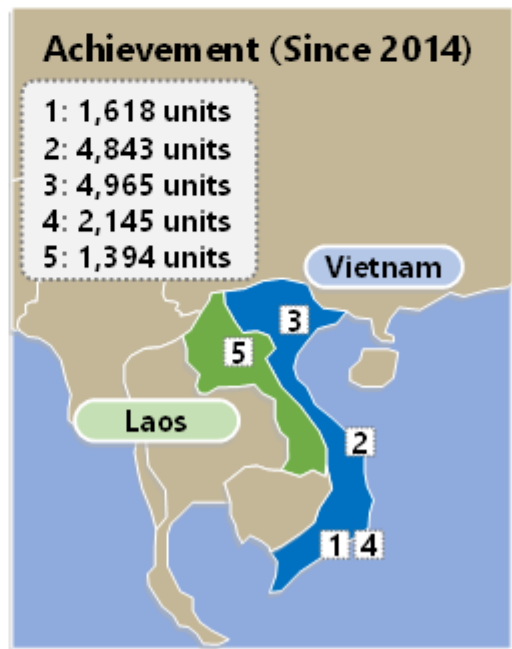
• Environmental performance is not sufficiently considered in procurement process
Local Power Authorities : Revising Procurement process



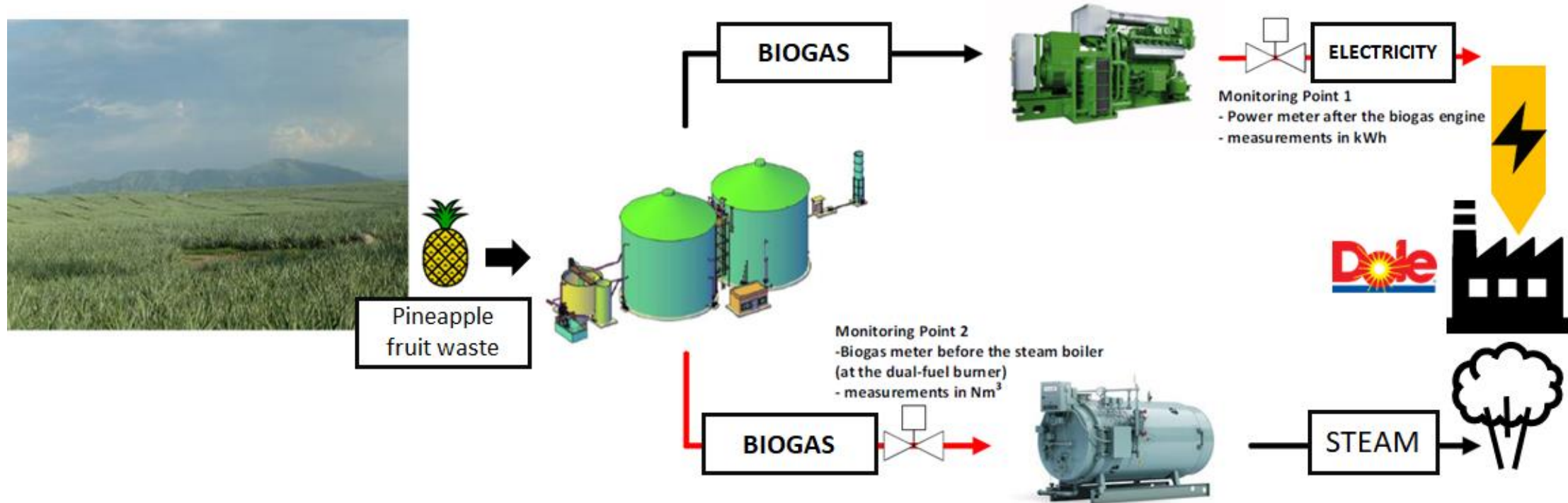
• Challenges for introducing new technology
Cooperation between Japan (amorphous supply) & Viet Nam (Transformer production)

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%. *EVNnews

- OECC formed a scheme where only iron cores were exported from Japan and transformers were manufactured locally, which led to local competition and price reduction, thus taking away subsidies.
- As a top runner technology, Amorphous transformers became a procurement criterion for EVNs (VIETNAM ELECTRICITY).



3. Good practices of JCM projects: Philippines



GHG **GHG reduction: 52,156 tCO₂/year**

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

***INDC aims to reduce 70% GHG emissions by 2030 through improved power supply and proper disposal of waste.**

Lowering electricity cost for the operation in Dole Philippines

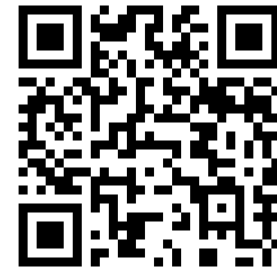
4. Success factors for forming JCM projects

- ✓ Discovering project seeds based on local needs
- ✓ Robustness of financial arrangements for a JCM project
- ✓ Close alignment with eager project participants both local and Japanese side
- ✓ Simplify measurement within MRV related to the methodology of the JCM project to calculate GHG emission

Thank you for your attention!



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