Lessons learned from the identification of the JCM potential projects

Project Development Activities in Asia

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Overseas Environmental Cooperation Center, Japan
**Conduct technology needs assessment:** Conduct market survey on low carbon technology and product to reduce CO2/GHG, and design available financial scheme.

**Provide technology diagnosis by experts:** In cooperation with energy management solution companies, 1) conduct energy diagnosis for hotels, shopping malls and factories, and 2) provide recommendation for possible improvements. Also 3) Estimate total investment cost of technology including Operation & Maintenance.

**Encourage match-making between technology owners and local enterprises:** 1) Listen to the project ideas and support finding the best matching solution depending on the needs. 2) Conduct match-making event and study tour.

**Provide Joint Crediting Mechanism consulting:** 1) Disseminate the information on the methodology and the public input on the website. 2) Support preparing for the Financing Programmes for JCM Model projects.

*OECC also supports for methodology and PDD development in case of necessary.*
Selected projects under the JCM financing program supported by the OECC (as of 28 Feb. 2017)

<table>
<thead>
<tr>
<th>Selected year</th>
<th>Partner Country</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Myanmar</td>
<td>Introduction of Energy Efficient Refrigeration System in Logistics Center</td>
</tr>
<tr>
<td>2016</td>
<td>Viet Nam</td>
<td>Introduction of Amorphous High Efficiency Transformer in Northern, Central and Southern Power Grids</td>
</tr>
<tr>
<td>2016</td>
<td>Cambodia</td>
<td>Introduction of 0.8MW Solar Power Generation in International School</td>
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<tr>
<td>2016</td>
<td>Mongolia</td>
<td>Installation of 8.3MW Solar Power Plant in Ulaanbaatar suburb Farm</td>
</tr>
<tr>
<td>2015</td>
<td>Viet Nam</td>
<td>Introduction of Amorphous High Efficiency Transformers in Southern and Central Power Grids</td>
</tr>
<tr>
<td>2015</td>
<td>Bangladesh</td>
<td>Installation of High Efficiency Loom at Weaving Factory</td>
</tr>
<tr>
<td>2015</td>
<td>Mongolia</td>
<td>10MW Solar Power Project in Darkhan City</td>
</tr>
<tr>
<td>2015</td>
<td>Mongolia</td>
<td>Installation of 2.1MW Solar Power Plant for Power Supply in Ulaanbaatar Suburb</td>
</tr>
<tr>
<td>2015</td>
<td>Bangladesh</td>
<td>Introduction of PV-diesel Hybrid System at Fastening Manufacturing Plant</td>
</tr>
<tr>
<td>2014</td>
<td>Viet Nam</td>
<td>Introduction of Amorphous high efficiency transformers in power distribution systems</td>
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http://www.oecc.or.jp/english/contents/jcm.html
1) Thailand:
Introduction of 2.0 MW Rooftop Solar Power System in Paint Factory

<table>
<thead>
<tr>
<th>Project participants (Partner country)</th>
<th>Project participants (Japan)</th>
</tr>
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<tbody>
<tr>
<td>TOA Paint CO., Ltd./ Prime Roof Top Co., Ltd.</td>
<td>FINETECH CO., Ltd.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sectoral scope: Energy industries</th>
<th>Expected GHG reduction: 1,344 t-CO2/Year</th>
</tr>
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</table>

**Overview and future development**

- TOA Paint is one of the biggest painting company in Thailand.
- PRT is an investment company very active in renewable energy projects.
- Rooftop PV system is the 1\(^\text{st}\) phase of TOA’s “smart working place concept”.
- Expansion of the PV system to 4MW is planned to be implemented in the future.

**Needs finding and Match-making**

- “Feasibility Study on JCM Project by City to City Collaboration” between Bangkok and Yokohama in FY 2015
- Match-making event in Bangkok and study tour to Japan

**Preparation for applying the JCM financing program**

Support by the OECC: Schedule, GHG reduction potential, business plan, cost-effectiveness, international consortium, etc.

- OECC provided broad consulting from the JCM point of view to make the project suitable for the JCM financing program.
  - E.g. Boundary of the project, cost coverage by the JCM finance
2) Vietnam: Installation of energy efficient transformers with amorphous metal core

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<tr>
<td>EVN SPC, EVN HCMC, EVN CPC, EVN Danang</td>
<td>Yuko Keiso Co., Ltd.</td>
</tr>
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</table>

Sectoral scope: Energy distribution

Expected GHG reduction: (Ph.1) 610 tCO2/year, (Ph.2) 4,402 tCO2/year, (Ph.3) 2,098 tCO2/year

Overview and future development

- Installation of the AMTs to reduce no-load losses by transformers by 60%.
- The similar projects are considered in Laos, Myanmar and Cambodia.
- Phase 4: New project combined with solar power generation system is under consideration.
2) Vietnam:
Installation of energy efficient transformers with amorphous metal core

**Needs finding and Match-making**
- GHG reduction potential was surveyed in the past FS.
- Bottom-up approach to regional power corporations
- Cooperation with local supplier of the AMT

**Preparation for applying the JCM financing program**
Support by the OECC: Consensus building, methodology
- Advantages of the AMT was well recognized by EVNs through the survey/sales activities with local supplier. (Entire system efficiency, total cost with using the JCM finance)
- Supported methodology development

**Bidding schedule and application for the JCM financing program**

- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

(Bidding)  →  1st Call  ←  Bidding  →  2nd Call  ←  Bidding

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<tr>
<th>Project participants (Partner country)</th>
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<td>Ryobi Myanmar Distribution Service Co., Ltd</td>
<td>Ryobi Holdings Co., Ltd.</td>
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The Logistics center will be built in the Thilawa SEZ located southeast of Yangon

- Ryobi will build new logistic center in the Thilawa SEZ in 2018.
- High efficient refrigerator using NH3 and CO2 as refrigerants will be installed.
- Ryobi is now providing their service in Vietnam and plans to expand the cold chain in other ASEAN countries in the future.
3) Myanmar:
Introduction of Energy Efficient Refrigeration System in Logistics Center

**Needs finding and Match-making**

- Hearing survey from relevant organizations
  (Ministries, embassy, JICA, economic groups, companies, etc.)
- Suggestion for suitable low-carbon technology

**Preparation for applying the JCM financing program**

Support by the OECC: Consensus building, GHG reduction potential, selection of low carbon technology

- OECC provided broad consulting from the JCM point of view to make the project suitable for the JCM financing program.
Thank you for your attention!