



# Webinar on JCM in Kenya

## A Case of JCM Project & Key Points for Utilizing Financing Programme for JCM Model Project in Kenya

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Pacific Consultants Co., Ltd.

Pacific  
Consultants

Producing  
The Future™

P R O D U C I N G  
T H E F U T U R E

## Who we are?

### PACIFIC CONSULTANTS CO., LTD.

- ✓ Established: 4<sup>th</sup> September 1951
- ✓ 2,112 employees (as of 2021.10.01)
- ✓ Civil engineering consultants



**Environmental Management**  
Riverine and Coastal Management, Dams, Ports, Natural Disasters, etc.



**Transportation Infrastructure**  
Roadways, Railways, Airports, Tunnels, Bridges, Structures, etc.



**Mechanical and Electrical Design**  
MEP Planning and Design for Large-Scale Infrastructure and facilities, etc.



**Public Sector Management**  
PPP, PFI, Bidding Support, Public Asset Management, etc.



**Information System**  
GIS and Remote-Sensing, ITS, e-Government, etc.



**Urban Development**  
Transportation Planning, Urban Planning and Design, etc.



**Environment and Energy**  
Water and Sewage, Renewable Energy, Waste Disposal, etc.



**Geotechnical**  
Slope Stabilization, Soil Liquefaction, Soil Analysis, etc.



**Overseas Projects**  
ODA, Foreign Government, Private-Sector Clients, etc.

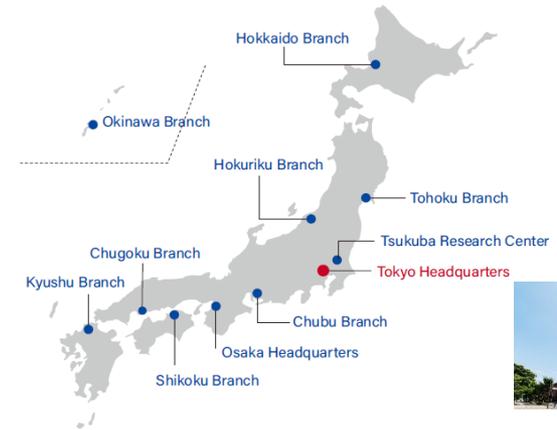


**New Project Development**  
Smart Community, Wellness, Regional Energy Management, etc.



**Research and Development** >

### Domestic and Overseas Business Locations



# Company profile

## Experiences on JCM Financing Programme



Introduction of Solar PV System at Salt Factory (Kenya)

Solar Power on Rooftop of School Building Project (Maldives)



Small Scale Solar Power Plants for Commercial Facilities in Island States (Palau)

# JCM Model Project: profile

## Experiences on JCM Financing Programme

### Chronology

- 2013 An EPC informed about a solar project
- 2014 Discussion b'n the EPC and Kenyan company continued
- 2015 -Site visit by PCKK & discussions  
-Proposal submission
- 2016 Selection notice  
Commissioning
- 2017 Payment of the grant  
JCM methodology approved
- 2018 JCM Registration work
- 2019 Ditto
- 2020 Registered under JCM
- 2021 JCM Credit issued for 1<sup>st</sup> time

The screenshot shows the JCM website interface. At the top, there is a navigation menu with 'Overview', 'Call for Proposals', 'Projects' (selected), 'News', 'JCM Global Match', and 'Publications'. Below the navigation, the page title is 'Introduction of Solar PV System at Salt Factory'. A 'Representative Participant' section lists 'Pacific Consultants Co., Ltd.' as the representative and 'Krystalline Salt Limited (Kaysalt)' as the partner participant. A table on the right provides project details: Host Country (Kenya), Selected Year (2015), Type (JCM Model Project), and Sector (Renewable Energy). Below the table, there are three status buttons: 'Active' (green), 'Credit issued' (blue), and 'Registered' (pink). The 'Outline of GHG Mitigation Activity' section contains text explaining the project's goal to reduce CO2 emissions by introducing a 991kW solar PV system at a salt factory. A diagram below the text illustrates the system: a 'Solar PV system' box contains a 'Solar PV module' (receiving sunlight), an 'Inverter' (converting DC to AC), and a 'Power meter' (measuring kW). This system is connected to a 'Controller' box, which is also connected to a 'Diesel Generator' and a 'Salt Factory' building. The 'Salt Factory' is also connected to the 'Grid'.

Source: GEC website [http://gec.jp/jcm/projects/15pro\\_ken\\_02/](http://gec.jp/jcm/projects/15pro_ken_02/)

# JCM Model Project Formation Study in Kenya, Ethiopia, and Africa

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## Our Mission of the Project Formation Study

Commissioned by Ministry of the Environment Japan :

- To **identify possible JCM Model projects,**
- To **advise** to project owners with necessary information to develop proposals for JCM Financing Programme,
- To **assist** the participating companies of JCM project candidates to **develop proposal for JCM Financing Programme,**

# JCM Financing Programme

## How can I use this grant?

**Budget for projects starting from FY 2022 is 17.1 billion JPY (approx. USD 158 million) in total by FY 2024**  
(1USD = 108 JPY)

Finance part of an investment cost  
(up to half)

Government of Japan

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

Conduct MRV and expected to deliver JCM credits issued

International consortiums  
(which include Japanese entities)



- Scope of the financing: facilities, equipment, vehicles, etc. which reduce CO<sub>2</sub> from fossil fuel combustion as well as construction cost for installing those facilities, etc.
- Eligible Projects: starting installation after financing is awarded and finishing installation within three years.

## Tips!

- To apply and utilize JCM Model project well, understanding this program is very important
- Pacific Consultants Co.,Ltd. can support the project owner to understand the JCM Financing Programme

# JCM Model Projects – Kenya and Ethiopia

Year Selected	Project Title	Technology	GHG Emission Reductions (tCO2/year)	Status
<b>Kenya</b>				
2015	Introduction of Solar PV System at Salt Factory	Solar (991kW)	630	Registered Credit issued
<b>2022 New!</b>	Introduction of 3.1MW Rooftop Solar Power System to Food Processing Facilities	Solar (3.1MW)	2,455	Installing
<b>2022 New!</b>	Introduction of 2.3MW Rooftop Solar Power System to Hatchery, Meat Processing and Battery Facilities	Solar+ battery (2.3MW)	1,741	Installing
<b>2022 New!</b>	Energy Supply Project by 1.5MW Rooftop Solar Power System to Beverage Factory	Solar (1.5MW)	924	Installing
<b>2022 New!</b>	<UNIDO-JCM> Introduction of 230kW Solar Power plus Battery to PJ Dave Flora Ltd	Solar (230kW)	184	Installing
<b>Ethiopia</b>				
2019	120MW Solar Power Project in Metehara, Oromia Region	Solar (120MW)	30,007	Installing

# Highlights before application

- start making proposal 3 months in advance -

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## ■ Formation of a project started in 6-9 months

- Installation starts in about 5 months after application
- Identification of a Japanese partner in Int'l Consortium
- Quotation aggregated by equipment & installation cost
- Financial support calculated on emission reduction  
= either smaller of 'tCO2' for durable years of equipment  
or 50%\* of financial support

- As of now, conditions **for solar project in Kenya:**  
JPY2500/tCO2 & max. 40% of applicable equipment  
\*\* Modules, inverters, cables, monitoring equipment, etc.)

## ■ Loans & finances other than JCM financing programme

- Loans arrangement to cover Capex before application
- Financial close right before/after GEC's official approval

## ■ Merits and demerits of utilizing the JCM

- Internal evaluation of feasibility should be done

\*Maximum percentage of financial support shall be determined according to the number of already selected project(s) using a similar technology in each partner country.

# Steps for Developing Application

- For Commercial & Industry, and energy efficient -

	Subjects	Suggestions
<b>Factories &amp; farms</b>	<p><b>Calculations of CO2 emission reduction and financial support &amp; feasibility</b></p> <ul style="list-style-type: none"> <li>❑ Spec of new equipment determined</li> <li>❑ Quote &amp; layout design developed by EPC</li> <li>❑ Based on the equipment to be installed, calculate emission reduction by template</li> <li>❑ Assess economic benefits and risks</li> </ul> <p><b>Permissions &amp; Licenses</b></p> <ul style="list-style-type: none"> <li>❑ Obtain permissions compliant to building and landscape management standards</li> <li>❑ Procedures might differ from municipality to municipality.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Energy consumption data (BAU) obtained for the past 3 years</li> <li>✓ Conduct feasibility study to determine the spec of equipment &amp; check reductions in energy consumption</li>   <li>✓ Need to confirm the procedures in detail at the local government offices well beforehand.</li> </ul>
Others	<ul style="list-style-type: none"> <li>❑ Lack of foreign currency reserves of the country might affect importation of goods</li> </ul>	<ul style="list-style-type: none"> <li>✓ Project plan needs to be developed allowing sufficient time to identify possible challenges in foreign currency allocation, customs clearance, etc.</li> </ul>

# Steps for Developing Application - For utility scale power project -

	Subjects	Suggestions
<b>Pre-requisite</b>	<p><b>Permissions &amp; Licenses</b></p> <ul style="list-style-type: none"> <li>❑ Regulatory authority provides clear steps</li> </ul> <p><b>Government guarantees</b></p> <ul style="list-style-type: none"> <li>❑ Lender of the IPP project may require a government guarantee &amp; currency conversion Guarantee</li> </ul>	<ul style="list-style-type: none"> <li>✓ Follow the EIA recommendations</li> <li>✓ Study governance of Regulatory Authority</li> </ul> <p>Check at the outset for</p> <ul style="list-style-type: none"> <li>✓ Government guarantees for the utility's payments &amp; currency conversion of revenue</li> </ul>
<b>Process</b>	<p><b>Calculations of CO2 emission reduction and financial support &amp; feasibility</b></p> <ul style="list-style-type: none"> <li>❑ Quote &amp; layout developed, spec decided</li> <li>❑ Based on the equipment to be installed, using GEC's templates</li> <li>❑ Assess economic benefits and risks</li> </ul> <p><b>Permissions &amp; Licenses</b></p> <ul style="list-style-type: none"> <li>❑ Obtain 80+% of permissions &amp; licenses before application,</li> <li>❑ Process may take longer than expected</li> </ul> <p><b>Land leasing</b></p> <ul style="list-style-type: none"> <li>❑ Secure land leasing agreement on the site</li> <li>❑ Secure land use rights of land b'n the site and transmission line</li> </ul>	<ul style="list-style-type: none"> <li>✓ Calculate emission reduction by concrete number &amp; spec of equipment</li> <li>✓ Operations for durable years of the equipment is required</li> <li>✓ Project plan needs to be developed allowing sufficient time to absorb possible changes</li> <li>✓ Stakeholders need to agree Select land with as few landowners/stakeholders as possible. Approval by State authorities may take time</li> </ul>

## For Enquiries

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