

Using JCM to Bring Solar Energy to Schools in Quezon City, Philippines

Kawasaki International Eco-Business Forum
1F Large Conference Room at Cultz Kawasaki
13 November 2024

Making the JCM Work

Keys to Success

- ✓ **Identify a project**

Leads to reduce energy-related greenhouse gas emissions in developing countries by co-innovations through bilateral collaboration

- ✓ **Find a partner**

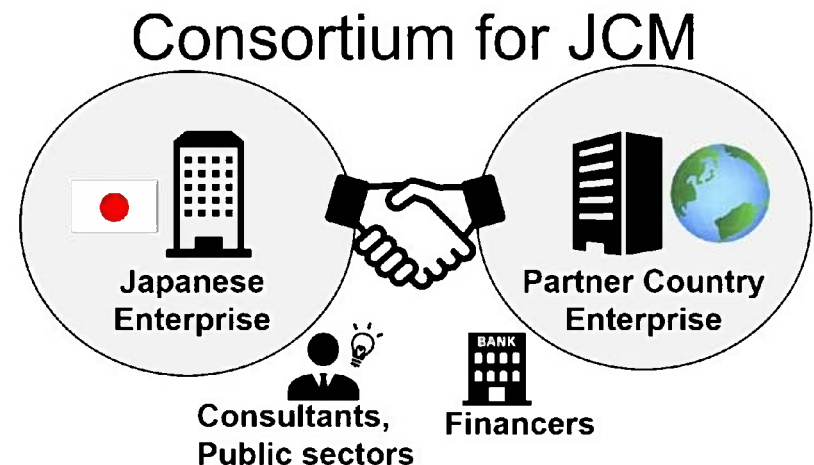
Potential JCM representative

A company who has experience

- ✓ **Establish a consortium**

Assign local EPC collaborator(s)

- ✓ **Manage the team and timeline**

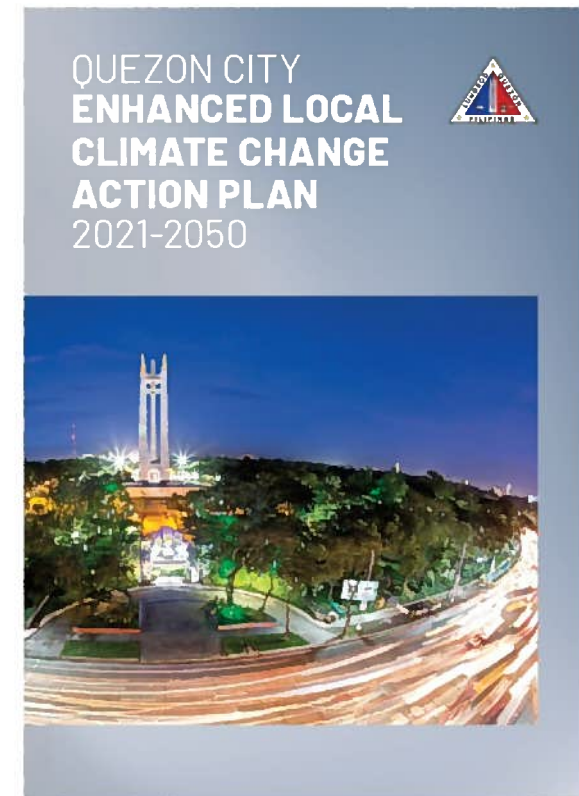


JCM Project Case Study

Solar for Schools in Quezon City, Philippines

50 schools are selected out of total 150 by using set of 10 socio-economic and technical criteria (approx. 8 schools per region)

- ✓ Preliminary analysis of energy and emissions savings complete
- ✓ **Implementation by 2025**
- ✓ Key need: lack of funding to cover project costs



Solar energy for 50 Schools in Quezon city

Proof of Concept: Commonwealth High School

- 380 hybrid solar panels/20 inverters/160 batteries, on five buildings
- Surplus energy stored in **batteries**
- **Produces 146,000 kWh per year**
 - Lowers electricity costs and helps meet energy demands during power loss
- Reduces air pollution
 - Estimated **reduction of 88.07 t CO₂e per year**
- Used as educational laboratory
 - Connections made to **student curriculum**



Solar energy for 50 Schools in Quezon city Emission Reductions and Co-benefits

	Relevant Data
Renewable energy generated per year*	2,473 MWH
Emission Factor**	0.507 MWH/CO2
CO2 tons Reduced (15 Years)**	18,807
CO2 tons Reduced (20 Years)**	25,076
PM2.5 kg reduced (15 Years)***	2027
PM 2.5 kg Reduced (20 Years)***	2666
Disability Adjusted Life Years Averted (15 Years)****	33
Disability Adjusted Life Years Averted (20 Years)****	44

*From C40 based on estimated diverted energy <https://cff-prod.s3.amazonaws.com/storage/files/8FFtvehSbwSsaBW51loBPVRieJAYZHjf5PZMWDqg.pdf>

**Emissions Factors for Luzon-Visayas Regional Grid based on JCM methodology PH_AM002: <https://www.jcm.go.jp/ph-jp/methodologies/111>


*** Based on approved JCM methodology PH_AM002 (<https://www.jcm.go.jp/ph-jp/methodologies/111>)

or multiplying energy generated X emissions factor X number of years

**** Based on renewable energy co-benefits model developed by Kyushu University

Solar energy for 50 Schools in Quezon city

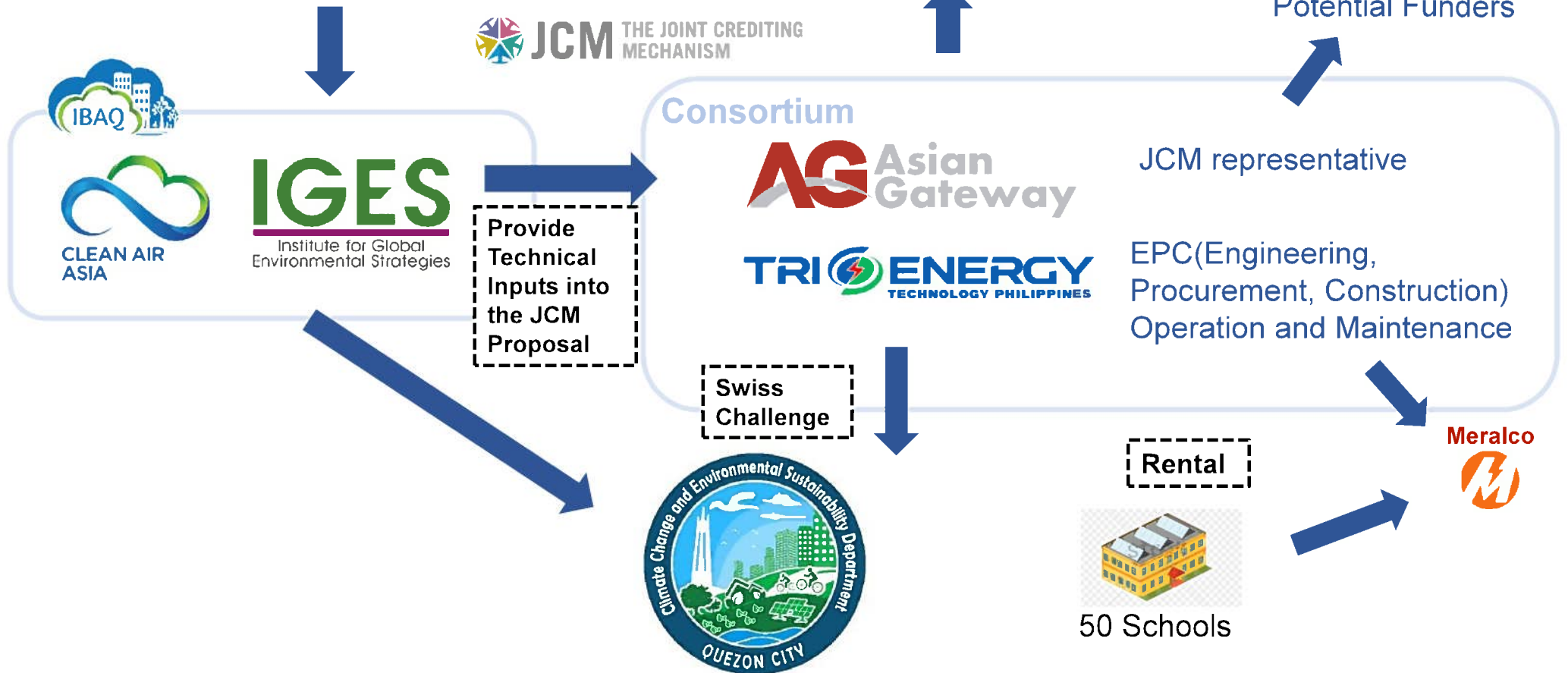
Formation as of November 2024

 **Ministry of the Environment**
Government of Japan

 **Global Environment Centre**
Foundation

 **JCM** THE JOINT CREDITING
MECHANISM

Potential Funders



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