

Practical MRV under the JCM and the role of IGES

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JCM Financing Programmes

Financing programs by Ministry of the Environment, Japan

JCM Model Project

- Finances less than half of initial investment costs to facilitate dissemination of low-carbon technologies.
- Covers projects that reduce energy-related CO2 emissions.
- Includes projects in collaboration with JICA and other government-affiliated financial institute.
- Budget for FY 2017-2019: approx. USD 60 million

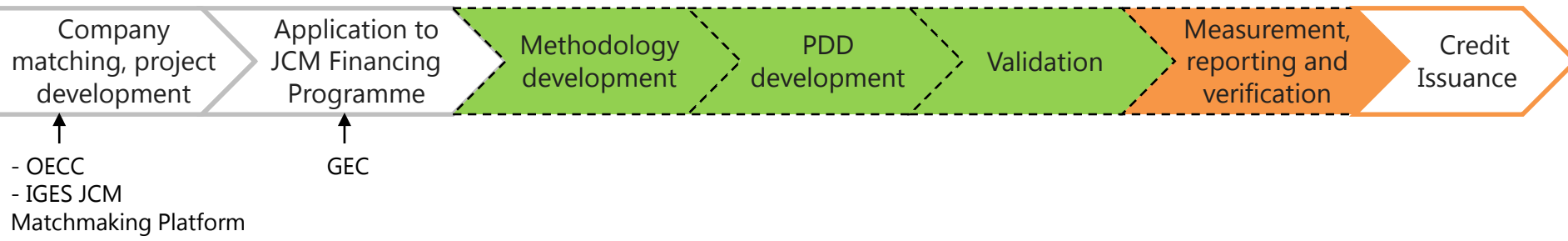
JCM REDD+ Model Project

- Finances part of project cost for REDD+ projects.
- Participatory monitoring of illegal logging, disaster prevention, forest restoration, provision of alternative livelihoods.
- Budget for FY 2017: approx. USD 0.8 million

ADB Japan Fund for JCM (JF JCM)

- Grant for incremental cost of technologies for projects under public and state-owned entities.
- Interest subsidy to ADB-financed loans for non-government projects, to private sector borrowers and financial institutions.
- Budget for FY2017: approx. USD 10 million

IGES Support for Project



JCM Matchmaking Platform:

- Online company information form for Japanese and partner countries
- Company search engine
- Companies can communicate directly

Methodology development:

- Preparation of draft methodology based on market survey, official statistics, etc.
- Submission of draft methodology proposal to the JCM Secretariat of Partner countries.

PDD development and validation

- Preparation of draft PDD, including local stakeholder consultation
- Coordination with project participants, TPEs and both sides' governments to submit necessary documents for each procedural step

Monitoring report and verification

- Preparation of draft monitoring report in coordination with TPEs
- Submission of monitoring reports to the JCM Secretariat of Partner countries.

IGES has supported participants of selected projects in:

44 methodologies

57 project design document

18 projects monitoring reports

5 projects issuance of credits

Example: Solar PV supported by the JCM

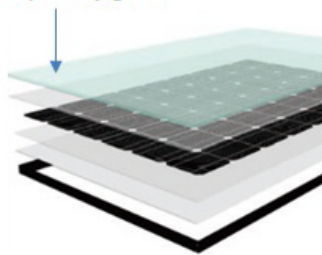
Rooftop solar PV

Factory, school, office buildings

(Thailand, Palau, Cambodia, Maldives, etc.)



Chemically strengthened specialty glass



Ultra-lightweight Solar Panels

Solar power plant

(Mongolia, Indonesia, Chile, etc.)



Floating solar power system

(Lao PDR)

Include grid-connected systems, isolated systems (self-consumption)

Practical MRV Case: Solar PV (MN_AM003)



3 eligibility criteria

Criterion 1	The project newly installs solar PV system(s).
Criterion 2	The PV modules obtained a certification of design qualifications (IEC 61215, IEC 61646 or IEC 62108) and safety qualification (IEC 61730-1 and IEC 61730-2).
Criterion 3	The equipment used to monitor output power of the solar PV system(s) and irradiance is installed at the project site.

(MN_AM003 Approved Methodology for Mongolia)

Practical MRV Case: Solar PV (MN_AM003)

Formula to calculate emissions

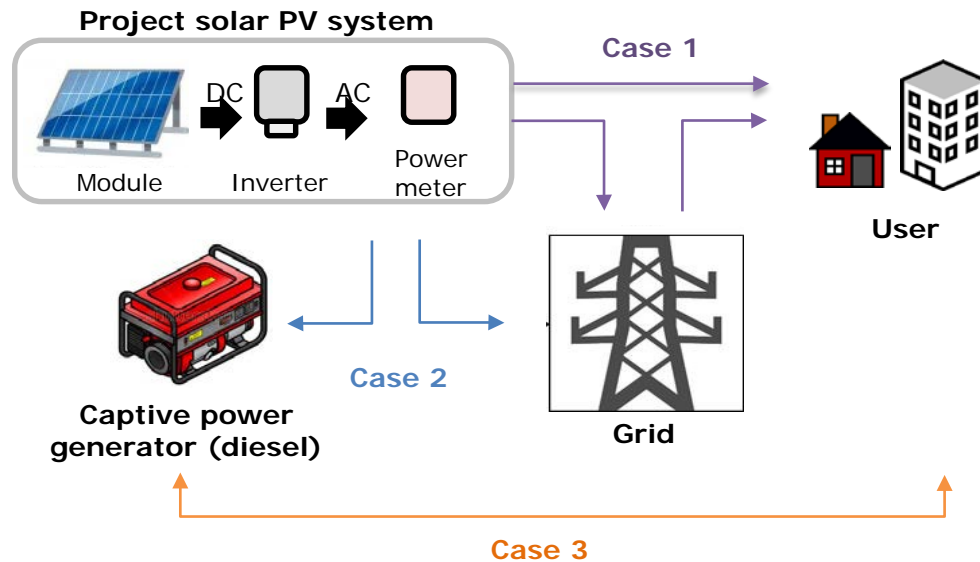
Calculation of reference emissions	<p>Electricity generated by the solar PV system (MWh)</p> <p style="text-align: center;"></p> <p>Monitored by project participant</p>	<p>\times</p>	<p>Reference emission factor (t-CO₂/MWh)</p> <p style="text-align: center;"></p> <p>Default value provided in the methodology</p>
Monitoring parameter	Only one: Electricity generated by the solar PV system (monitored using electricity meter)		
Calculation of project emissions	Emission from electricity consumption by solar PV system = 0		
Emission reductions	reference emissions - project emissions		

Practical MRV Case: Solar PV (MN_AM003)

Reference emission factor

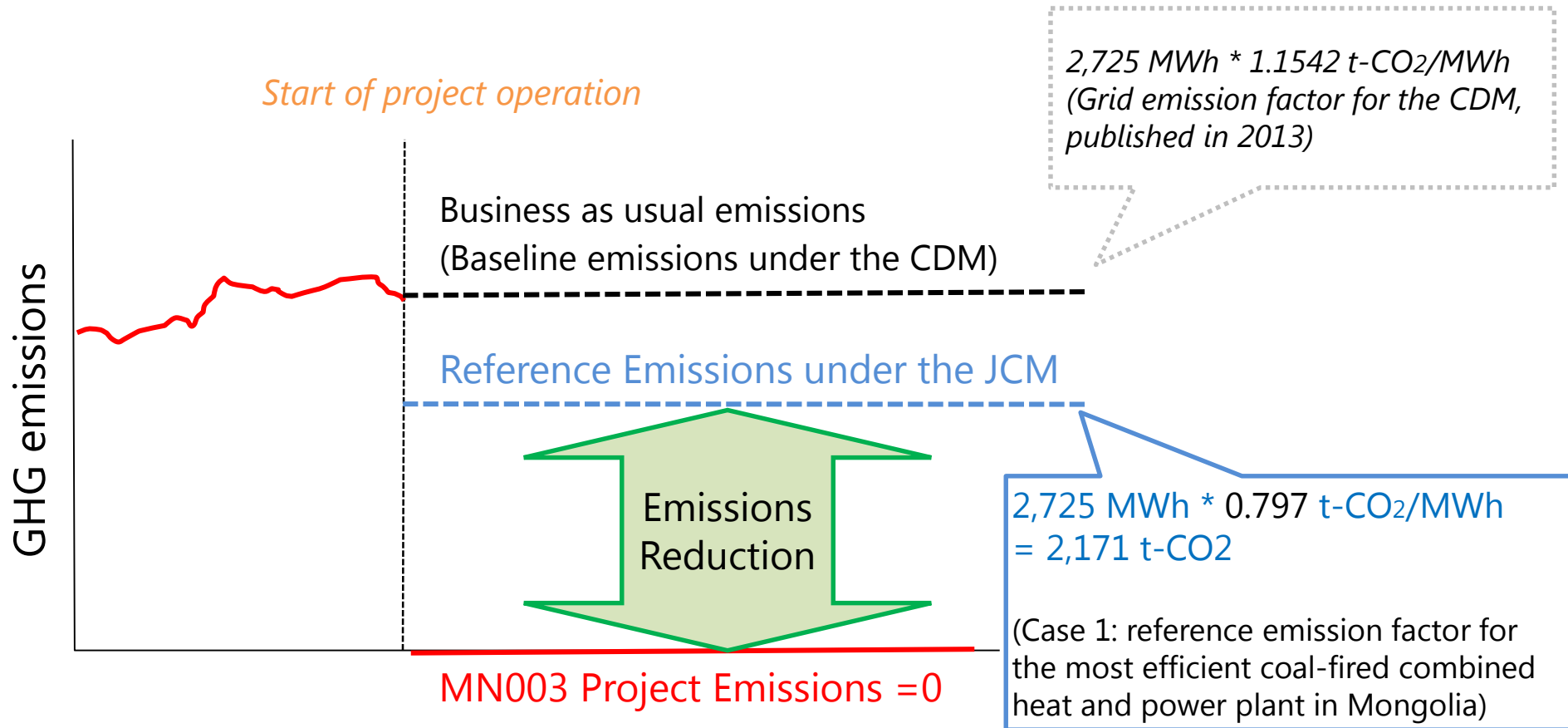
Calculation of reference emissions	Electricity generated by the solar PV system (MWh) × Reference emission factor (t-CO ₂ /MWh)
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Project participant selects the reference factor from the options in methodology, based on the project connectivity to Mongolia's national electricity grid.



Case 1: 0.797 tCO ₂ /MWh	Connected only to the national grid
Case 2: 0.533 tCO ₂ /MWh	Connected to both the national grid and a captive power generator
Case 3: 0.533 tCO ₂ /MWh	Connected only to an internal grid/captive power generator, not connected to the national grid

Illustration of estimated project emission reductions (MN003)



Estimated emission reductions = 2,171 t-CO₂

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