# Establishment of flexible and effective new market mechanism

## Japan's Suggestion

Government of Japan

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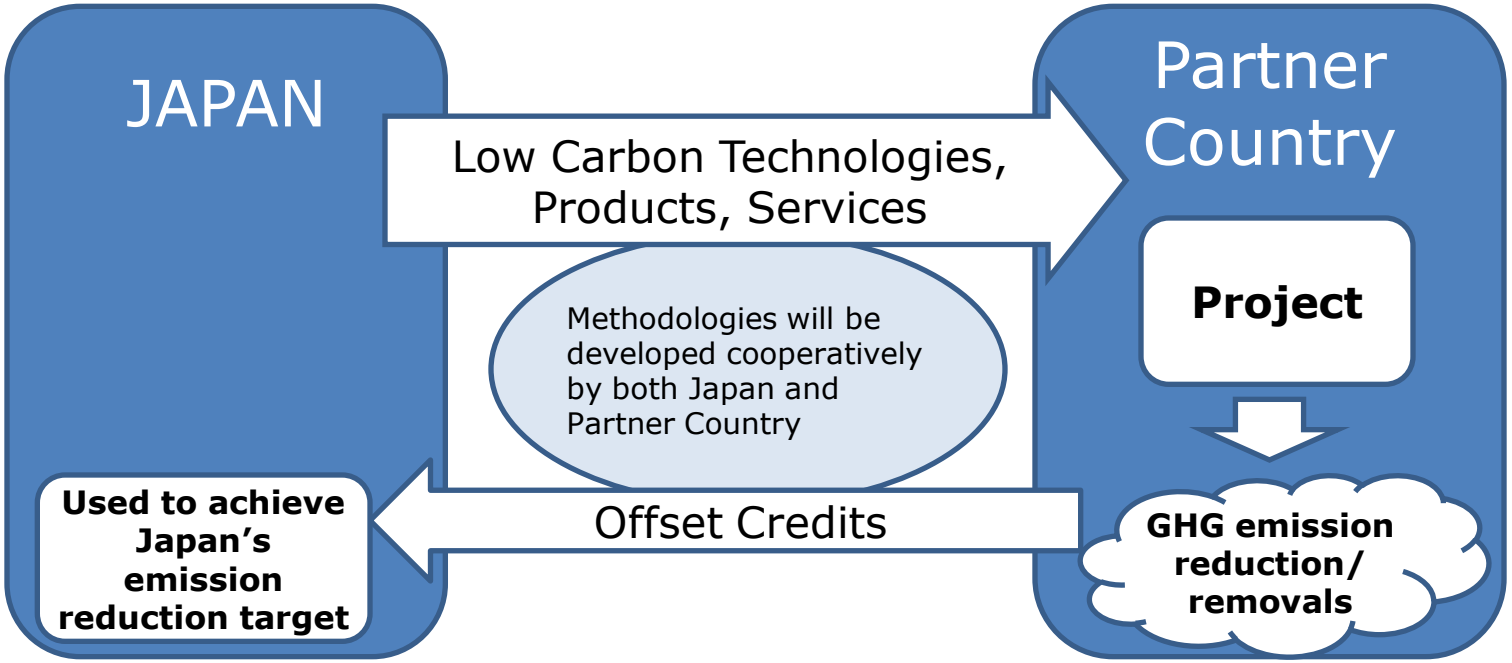
# Purpose of the BOCM

- Contribute to the ultimate objective of the UNFCCC through promotion of mitigation activities globally.
- Facilitate the bilateral cooperation in the field of climate change in such a way that best suits each country's national circumstances.
- Contribute to the sustainable development of developing countries.
- Appropriately evaluate the contribution to GHG emission reductions or removals.
- Facilitate diffusion of low carbon technologies, products and services and enhance capabilities to utilize them.



# The BOCM as new means of addressing climate change

## 2008～2012

◆Japan is currently making utmost efforts to achieve its target under the first commitment period of the Kyoto Protocol through domestic measures(GHG emissions reduction and carbon sinks) as well as acquiring credits of the Kyoto Mechanism.

Emissions reduction

Carbon sinks

Kyoto mechanism

## 2013～

◆Japan will continue to make emissions reduction efforts beyond 2012. Its concrete targets are currently reviewed and considered domestically.

◆The BOCM can be an effective way to achieve Japan's post 2012 targets, complementing the existing Kyoto Mechanism. Although Japan will not participate in the second commitment period of the Kyoto Protocol, it will remain in the Protocol and will intend to continue to use the Kyoto Mechanism to achieve its post 2012 targets.

Emissions reduction

Carbon sinks

Kyoto mechanism

BOCM

# Key features of the proposed BOCM in comparison with the CDM

(Subject to further consideration)

| | BOCM | CDM |
|---|---|---|
| Governance | -"de-centralized" structure (each government, joint committee) | -"centralized" structure (CMP, CDM-EB) |
| Sector/project Coverage | -Broader coverage | -Specific projects are difficult to implement in practice (e.g. USC coal-fired power generation) |
| Eligibility of projects | -several approaches are proposed<br>✓ "positive list"<br>✓"benchmarking"<br>✓ other methods as necessary | -"additionality" approach |

# Comparison between the proposed BOCM and the CDM

(Subject to further consideration)

| | Work flow process | BOCM | Current CDM |
|---|---|---|---|
| ① | PDD preparation | PDD will be become less burdensome by simplifying eligibility demonstration, making wider use of positive lists and benchmarking. | Project Participants (PPs) prepare PDDs (Project Design Documents), which contain eligibility demonstration based on the 'additionality tool'. |
| ② | Accreditation of DOE/Third- party Verifier | Scope of third-party verifiers to conduct validation and other works will be broadened to include other institutions, such as ISO certifiers, in addition to DOEs. | Validation and other works are carried out only by DOEs (Designated Operational Entities). |
| ③ | Methodologies | The joint committee will identify basic elements of methodologies applicable to the BOCM. | CDM EB approves the methodologies applicable to the CDM. |
| ④ | Registration | Each government will register projects. | CDM EB registers projects. |
| ⑤ | Monitoring | In order to reduce monitoring burden, default values will be widely used in conservative manner. | PPs collect and archive all relevant data necessary for calculating GHG emissions reduction in accordance with strict rules . |
| ⑥ | Verification and certification | One third-party verifier will conduct both validation and verification for the same project. | Verification is carried out by DOEs which have not done validation.<br>Certification is also done by DOEs. |
| ⑦ | Credit issuance | Each government will issue credits. | CDM EB issues credits. |

# Consultations and way forward

◆ Japan has been conducting feasibility studies in 28 countries since 2010.

◆ Japan has held consultations on the BOCM with several countries in East Asia(e.g. Vietnam, Cambodia, Lao PDR, Indonesia, India) since 2011, following up Leaders level Joint Statement with these countries. Consultations so far mainly focused on Japan's briefing on its proposed BOCM to these countries to enhance their understandings.

◆ Japan has made similar briefing to other interested countries as well.

◆ Japan will continue consultations with any interested countries. Building on the current feasibility studies since 2010, Japan plans to implement model projects for developing MRV methodologies, with the aim of starting BOCM operations from 2013.

【India】
Japan-India Joint Statement
(2010/10/25, 2011/12/28)

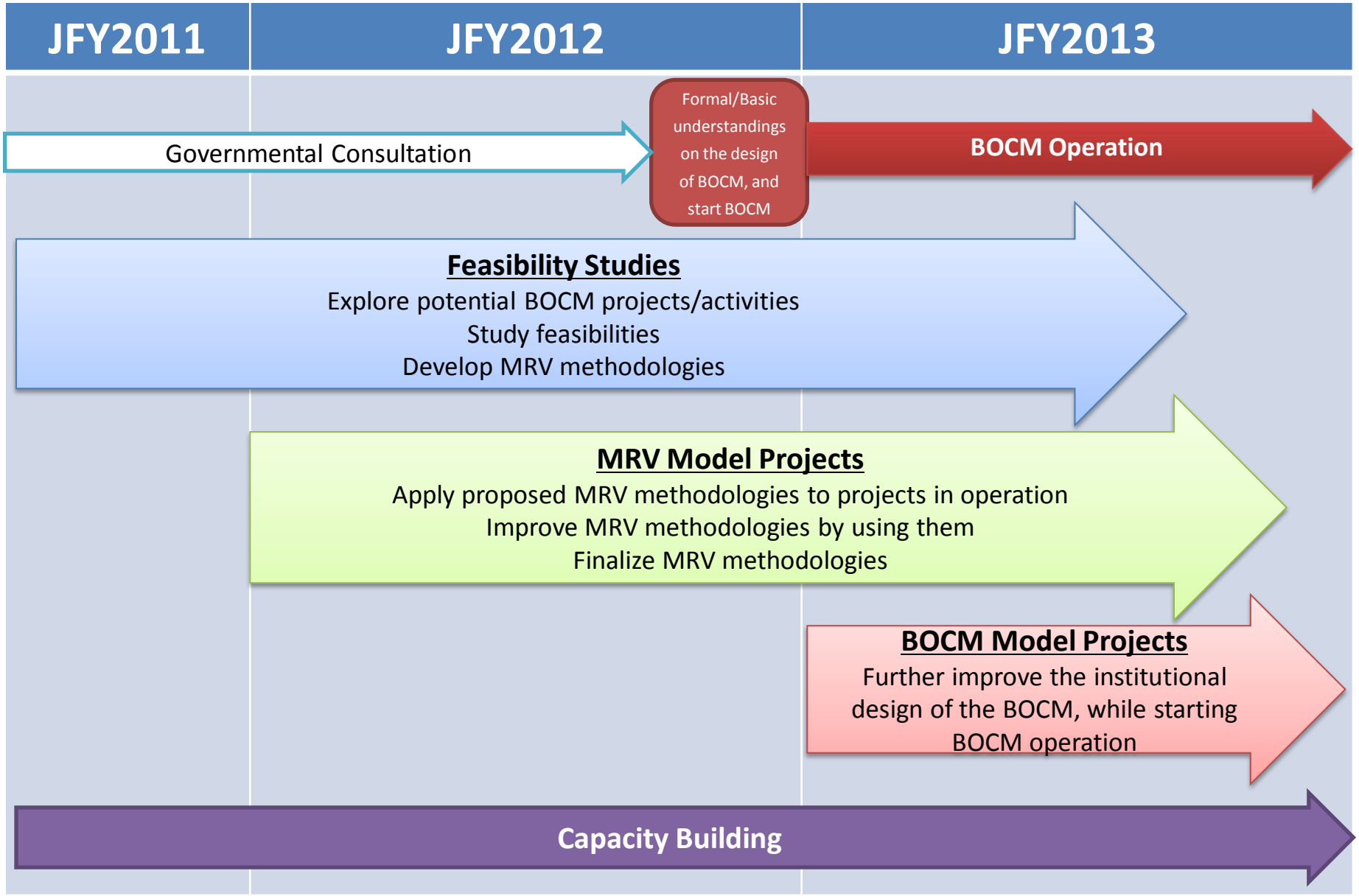
【Thailand】
Japan-Thailand Joint
Statement (2012/3/7)

【Vietnam】
Japan-Vietnam Joint Statements
(2010/10/31, 2011/10/31)

【Mekong Region】
Japan-Mekong Joint Statement
(2010/10/29, 2011/11/18)

【Indonesia】
A document of bilateral cooperation on
climate change issues (2011/11/25)

# MRV Model Project and BOCM Model Project(1/2)



# MRV Model Project and BOCM Model Project(2/2)

## MRV Model Project

- The purpose of MRV Model Project is to develop MRV methodologies, by applying them to model projects under operation, and make inputs to institutional design of the BOCM.
- MRV model projects will be selected from those already under operation, and selected entities will develop methodologies to be used for the projects (methodologies already developed through FS may also be used).
- Selected entities will implement MRV in the selected projects on the basis of the methodologies to calculate emission reductions/removals achieved, and improve the methodologies.
- Applicable MRV methodologies will be finalized by both countries, based upon knowledge and experience gained through implementation of these MRV model projects. The knowledge and experience will be input to the Government consultations on institutional design.

## BOCM Model Project

- The purpose of BOCM Model Project is to further improve the institutional design of the BOCM, while starting BOCM operation.
- After selection of BOCM model projects, selected entities will implement the BOCM model projects and quantify amount of emission reductions/removals achieved by the projects, by applying MRV methodologies.

# Framework for developing methodologies in the BOCM (1/2)

Subject to further consideration

## The requirements to be met by the BOCM methodologies

The BOCM methodologies should:

- Be simplified, objective and practical, while lowering uncertainty and ensuring environmental integrity,
- Accelerate the deployment of low carbon technologies, products and services, taking into account the national circumstances in host countries,
- Facilitate the nationally appropriate mitigation actions (NAMAs) in host countries.

## The elements to be included in the BOCM methodologies (Forest-related methodologies will be considered separately)

**1. Eligibility**

Eligibility defines the conditions on which projects/activities are allowed to obtain emissions reduction under the BOCM.

<Concept in establishing the eligibility criteria>

The eligibility should be established in terms of emissions reduced by accelerating the deployment of low carbon technologies, products and services and facilitating NAMAs, but not based on the hypothetical assessments of what would have occurred in the absence of additional revenue from offsets/credits of emissions reduction.

<Draft eligibility criteria>

**(1) Positive list**

Positive list identifies the low carbon technologies, products and services that should be deployed in host countries as its priority, and the projects meeting the positive list will be automatically deemed eligible.

**(2) Benchmark**

Benchmarks are determined in advance by project types based on energy efficiency or diffusion rate of equipments and measures, and the projects overachieving the benchmarks will be automatically deemed eligible.

**(3) NAMAs identified by host countries**

The NAMAs which host countries develop by themselves and to which the host countries register that offsets/credits can be issued will be eligible as the BOCM.

**(4) Others**

In principle, the eligibility should be evaluated based on the conditions (1) to (3) above, however, such indicators as market share, diffusion rate of technologies or barrier due to prevailing practice may be applied, if appropriate.

# Framework for developing methodologies in the BOCM (2/2)

Subject to further consideration

## The elements to be included in the BOCM methodologies (Forest-related methodologies will be considered separately)

**2. Emissions reduction calculation**

➢The emissions reduction by the BOCM should be calculated as the difference between reference emissions and actual emissions after project/program implementation (project emissions).
In principle, the reference emissions should not be established on a project-specific basis, but be commonly applied to the projects/activities which meet a certain eligible criterion.

➢ The reference emissions should be established so that they lead to the reduction in global emissions, based on the following indicators:

- Performances of equipments and appliances（including those under energy efficiency standards and labeling scheme)
- Existing actual emissions at a certain time point before project implementation
- Historical emissions trends in the past, etc.

**3. Monitoring**

➢ Monitoring methodologies should be designed so that they are feasible and do not impose excessive burden on project participants, taking into account the national circumstances in host countries by, inter alia:

- Establishing conservative default values
- Making use of manufacturer's specifications or statistics, which don't need to be measured
- Making use of estimations based on sampling and simulations
- Monitoring activity levels using compiled data such as company's inventory and accounts
- Allowing the estimation of missing data at the verification of monitored data under certain conditions, etc.

# BOCM Methodology Formats

- Key Features of the methodology formats
  - ➢ The methodology formats should be designed, so that project proponents can use them easily, verifiers can verify the data easily, and calculation logic is disclosed transparently.
  - ➢ In order to reduce monitoring burden, default values should be widely used in conservative manner.

| | |
|---|---|
| Applicability | • A “check list” will allow easy determination of applicability of methodologies to the proposed project. |
| Method | • Flow chart will guide project proponents to the most appropriate calculation method for the proposed project. |
| Data | • List of required parameters will inform project proponents what data is necessary to calculate GHG emission reductions/removals with methodologies.<br>• Default values for specific country and sector are provided beforehand. |
| Calculation | • Premade spread sheets will calculate GHG emission reductions/removals automatically by inputting required parameters, in accordance with methodologies. |

# Image of BOCM Methodology Formats (1/5)

- Applicability
  - Simple check list is provided for project proponents to determine the applicability of the methodology
  - All conditions have to be met in order to apply a methodology.

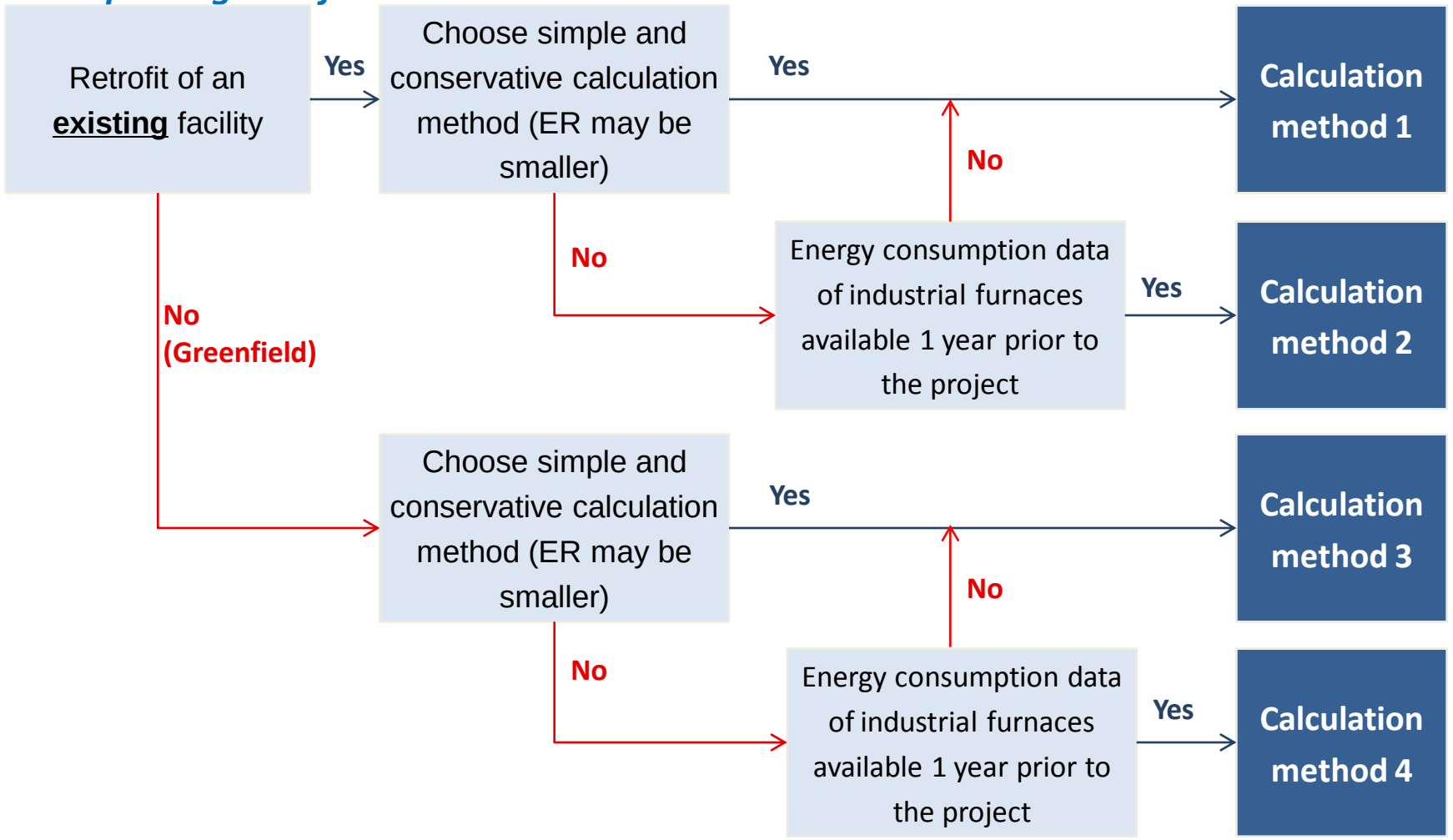
***Example: High-Performance Industrial Furnace***

| | Applicability | Check |
|---|---|---|
| Condition 1 | • High-performance industrial furnaces implemented in the planned project are equipped with regenerative burners. | ☑ |
| Condition 2 | • High-performance industrial furnaces are implemented in the aluminum sector of the host country. | ☑ |
| Condition 3 | • The same heat source is used by the waste heat generating facility and the recipient facility of waste heat. | ☑ |
| Condition 4 | • Unused waste heat has to exist with in the project boundary prior to the planned project implementation. | ☑ |
| Condition 5 | • Fossil fuels and electricity consumption by the high-performance industrial furnaces have to be measureable after the project implementation. | ☑ |

# Image of BOCM Methodology Formats (2/5)

- Method
  - Flow chart will guide project proponents to the most appropriate calculation method for the proposed project

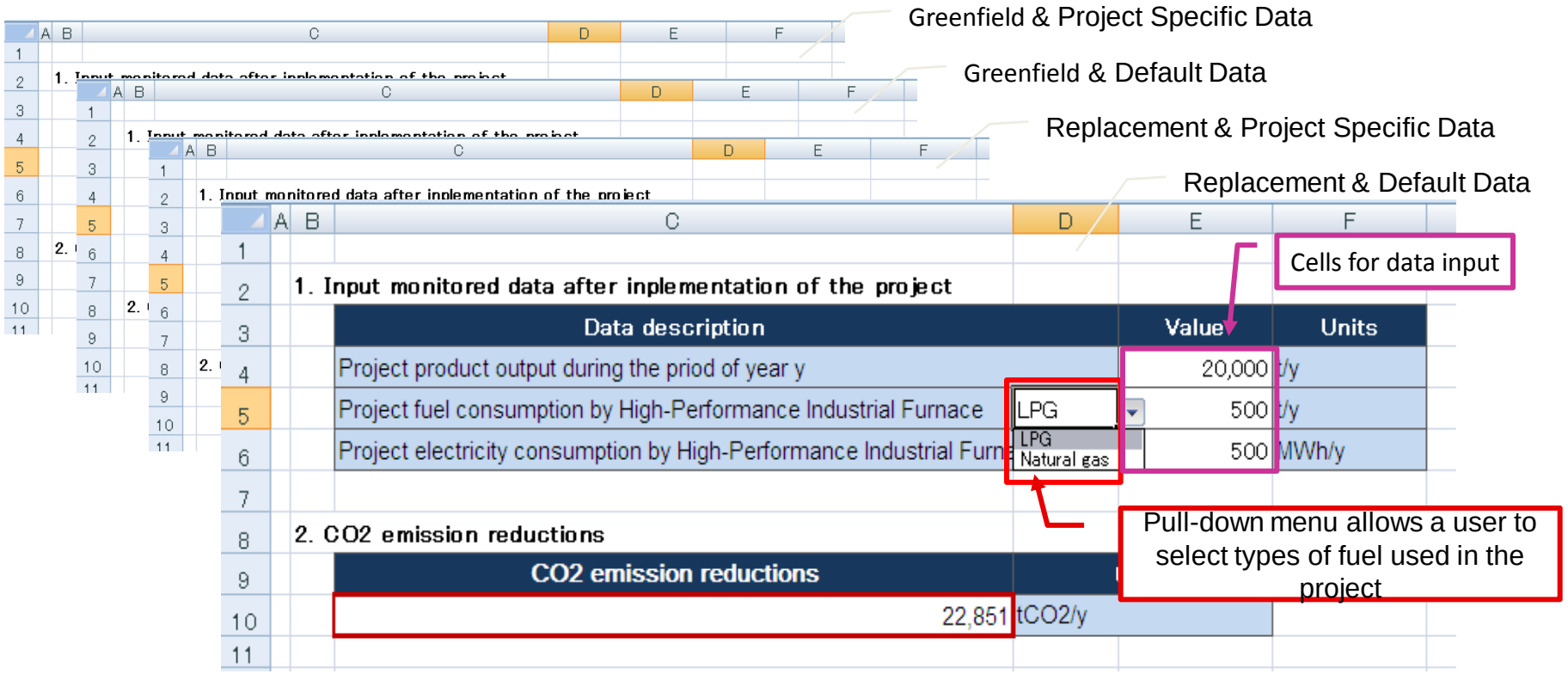
***Example: High-Performance Industrial Furnace***



# Image of BOCM Methodology Formats (3/5)

- Data input
  - ➢Project proponents are requested to input data in the data sheet only.
  - ➢Spread sheets are prepared for different methods.

***Example: High-Performance Industrial Furnace***

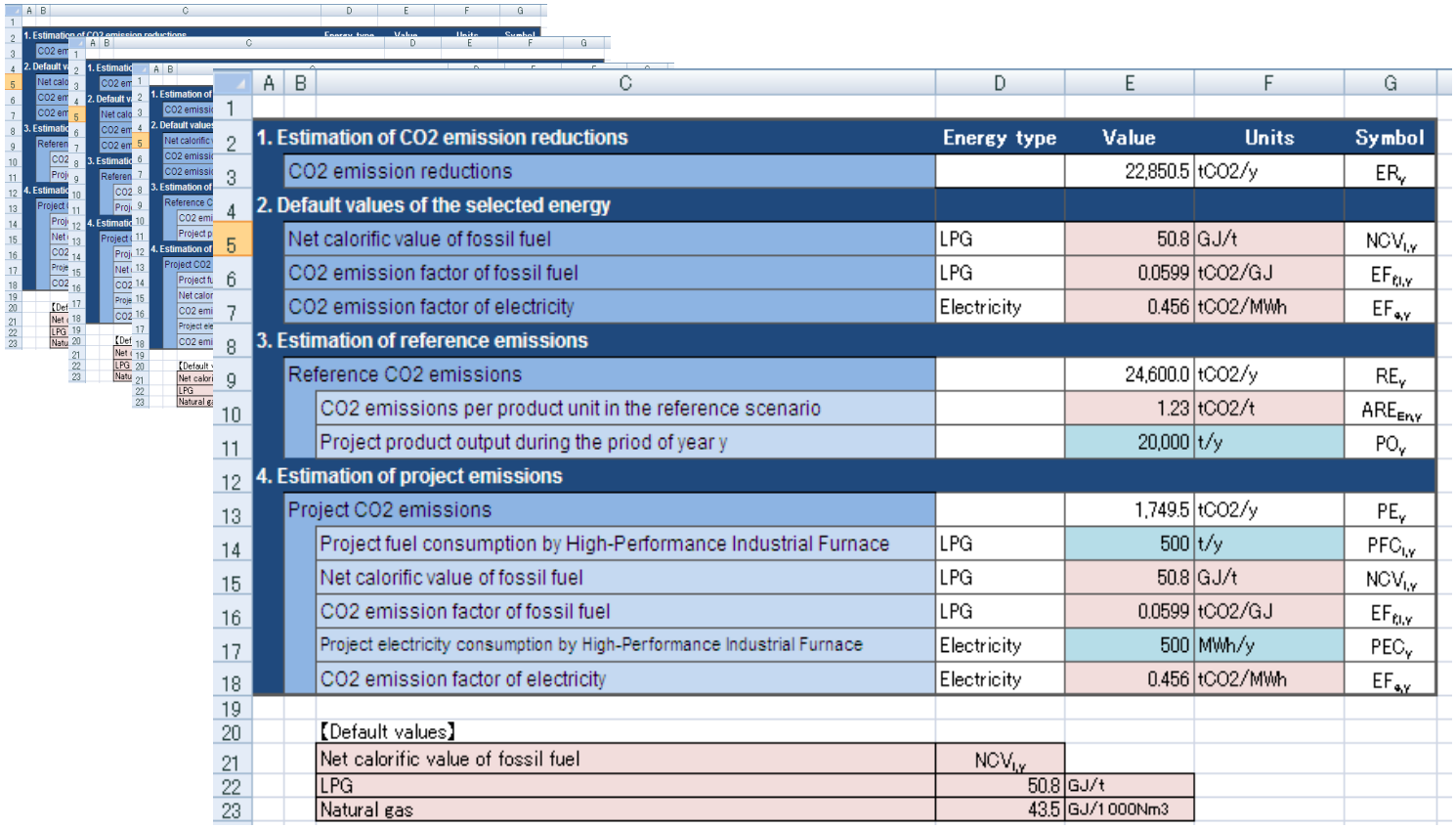



An example above provides different cases for greenfield project and existing (replacement) project and required data for each case.

# Image of BOCM Methodology Formats (4/5)

- Calculation of Emission Reductions/removals
  - Spread sheets for calculation logic are provided in separate sheets and data input in the “data input sheet” automatically calculate emission reductions/removals.
  - Default values should be widely used, in conservative manner, in order to reduce monitoring burden.

***Example: High-Performance Industrial Furnace***



| 1. Estimation of CO2 emission reductions | Energy type | Value | Units | Symbol |
|---|---|---|---|---|
| CO2 emission reductions | | 22,850.5 | tCO2/y | $ER_y$ |
| 2. Default values of the selected energy | | | | |
| Net calorific value of fossil fuel | LPG | 50.8 | GJ/t | $NCV_{f,y}$ |
| CO2 emission factor of fossil fuel | LPG | 0.0599 | tCO2/GJ | $EF_{f,y}$ |
| CO2 emission factor of electricity | Electricity | 0.456 | tCO2/MWh | $EF_{e,y}$ |
| 3. Estimation of reference emissions | | | | |
| Reference CO2 emissions | | 24,600.0 | tCO2/y | $RE_y$ |
| CO2 emissions per product unit in the reference scenario | | 1.23 | tCO2/t | $ARE_{En,y}$ |
| Project product output during the priod of year y | | 20,000 | t/y | $PO_y$ |
| 4. Estimation of project emissions | | | | |
| Project CO2 emissions | | 1,749.5 | tCO2/y | $PE_y$ |
| Project fuel consumption by High-Performance Industrial Furnace | LPG | 500 | t/y | $PFC_{f,y}$ |
| Net calorific value of fossil fuel | LPG | 50.8 | GJ/t | $NCV_{f,y}$ |
| CO2 emission factor of fossil fuel | LPG | 0.0599 | tCO2/GJ | $EF_{f,y}$ |
| Project electricity consumption by High-Performance Industrial Furnace | Electricity | 500 | MWh/y | $PEC_y$ |
| CO2 emission factor of electricity | Electricity | 0.456 | tCO2/MWh | $EF_{e,y}$ |

【Default values】

| Net calorific value of fossil fuel | $NCV_{f,y}$ | |
|---|---|---|
| LPG | 50.8 | GJ/t |
| Natural gas | 43.5 | GJ/1000Nm3 |

# Image of BOCM Methodology Formats (5/5)

- Description of methodologies
  - Details of methodologies should be described by writing and calculation formula so that project proponents can understand logic behind and to enhance transparency.

Structure of the methodology

- Project description
- Applicability
- Calculation method selection
- List of required data
- Project boundary
- Reference scenario
- Calculation
- Monitoring