

## Realising Additional Emissions Reductions through the Joint Crediting Mechanism (JCM)

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### Major points:

- In preparation for the 21st Session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC), countries are submitting “intended nationally-determined contributions (INDCs)” under a post-2020 international framework. Against this backdrop, the role of a market mechanism that will realise additional emissions reductions in order to hold the increase in global average temperature below 2 degrees above pre-industrial levels is important.
- The Joint Crediting Mechanism (JCM) that the Government of Japan has been advancing jointly with partnering developing country governments is a mechanism for implementing projects that deliver additional greenhouse gas emissions reductions in partner countries through assistance for low carbon technologies, such as high-efficiency equipment and renewable energy utilization, which require high initial capital investments. The JCM aims to realise additional reductions on the basis of decisions taken by the UNFCCC.
- Applying MRV to existing projects and registering them as the JCM projects should not be approved, since only issuing credits from projects that are not new results in non-additional emission reductions, which could not ensure environmental integrity nor benefits for the host country.

### **1. An overview of a new market mechanism that will bring projects for additional emissions reductions**

In the lead-up to the 21st Session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC), the submission of a document by each country indicating its “intended nationally-determined contribution (INDC)” under a post-2020 international framework (hereinafter, the “INDC”) is now underway. As of 8 October 2015, more than 147 countries have already submitted their INDCs to the UNFCCC Secretariat (UNFCCC 2015). In July 2015, Japan also submitted its INDC, which includes a 2030 target of reducing greenhouse gas emissions by 26% below the fiscal year 2013 level by 2030

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(Government of Japan 2015). In addition to undertaking domestic emissions reductions, Japan intends to contribute to global greenhouse gas emissions reductions through technologies and assistance to developing countries. Although the Joint Crediting Mechanism (hereinafter, the “JCM”) is not the basis of accumulated reductions towards Japan’s 26% reductions target, the scheme aims to appropriately count emissions reductions and absorption achieved through the JCM as Japan’s reduction. In addition to this positioning of using achieved reductions towards attaining the 2030 target, there are also plans to use the JCM in attaining Japan’s 2020 target (a 3.8% reduction from the fiscal 2005 level) (Global Warming Prevention Headquarters.2013).

As for the state of market mechanism negotiations within the UNFCCC, in addition to the market mechanisms under the Kyoto Protocol (the clean development mechanism (CDM), joint implementation (JI), and international emissions trading (IET)), discussions have been ongoing with regard to market mechanisms under the Convention since the 2007 Bali Action Plan (UNFCCC 2007, 2010). Thus far, the market mechanism under the Convention need to deliver real, permanent, additional and verified reductions, while avoiding double counting and achieving a net reductions, which has been agreed as a decision of the COP (UNFCCC 2011, 2012). In addition, schemes like the JCM developed and implemented jointly by countries are also included within market mechanisms<sup>3</sup>.

It is the fundamental principle that market mechanisms must realise additional emissions reductions. Additional emissions reductions are the emissions amount that was reduced compared with a situation in which the project had not been undertaken (UNFCCC 2014).

## **2. Advancing the JCM institutional arrangement as the new market mechanism**

As a new market mechanism promoting reductions under the UNFCCC, the JCM is moving forward in its institutional arrangement while lessons are being drawn from experience of the CDM. At present, Japan has signed documents for the JCM with 15 partner country governments<sup>4</sup> (Government of Japan 2015b). Based on these, a Joint Committee consisting of representatives from both countries is established, rules and guidelines for the JCM are adopted, methodologies are approved, and projects are registered. As of 4 October 2015, 19 JCM methodologies have been approved and seven projects have been registered (JCM 2015). In preparation for the issuance of credits, the construction of the JCM registry is now underway, and currently public comments are being solicited regarding the “Outline of Japan’s JCM Implementation (Draft),” aiming at smooth implementation of the JCM in Japan (MoEJ 2015).

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<sup>3</sup> Parties, individually or jointly, may develop and implement various approaches, including opportunities for using markets (1/CP18, paragraph 41)

<sup>4</sup> Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Viet Nam, Lao PDR, Indonesia, Costa Rica, Palau, Cambodia, Mexico, Saudi Arabia, Chile and Myanmar.

It is important to realise “additional emissions reductions” because we need to enhance 2020 targets and need to be consistent with medium- to long-term emissions pathways towards the 2 degrees target as stipulated in the recent IPCC report. In this context, new market mechanism under the Convention requires achievement of a “net decrease” through the mechanism. It is important for the JCM to make contributions as a mechanism that delivers additional reductions in partner countries and moreover achieves a net emissions decrease in accordance with the decision made under the UNFCCC. For this reason, this paper presents a study that considers the state of institutional arrangement thus far, in order to achieve additional reductions through the JCM.

### **3. The importance of additional emissions reductions and its difficulty, as learned from experiences of the CDM**

Numerous lessons can be learned from the experience of implementing the Kyoto Mechanisms, namely the CDM, especially how difficult it is to realise the additional emissions reductions. After the year of 2000 when Marrakesh Accords was agreed, the UNFCCC, research institutions, private corporations, and others, notably the CDM Executive Board, through substantial efforts and contributions, developed the rules and tools to determine ‘additionality.’ Despite such efforts, the issue of how a project is additional continues (Stavins et al 2014).

It was pointed out that the assumptions and criteria were inadequate and not well functioning. For example, under the CDM rules, if there is a document proving that “prior consideration” exists, then it was possible to launch the project and register it as a CDM project later. Under the CDM, participants of hydropower, wind power, biomass power generation, and other projects which can sell power to the grid that make up the majority of the more than 7,600 registered projects, relied their project profitability on the selling of power generation and regarded income from the CDM credits as additional. Even in the situation where the price of credits has slumped dramatically, many project rushed for requesting registration in a last-minute rush in 2012, the final year of the first commitment period of the Kyoto Protocol, suggesting that the majority were projects whose investment decisions incorporated only the project’s commercialization, without relying on earnings from emissions reductions credits.

Certainly there were a large number of new projects generated by investment and technical cooperation between developed and developing countries. However, it is clear from experience to date that a sizeable number of projects are likely to have been implemented regardless of the existence of the CDM, and it can be said that there is no denying that international credibility towards the CDM has been declined.

#### **4. The JCM's approach to additional emission reductions**

To indicate their eligibility, it is necessary for the JCM projects to fulfill eligibility criteria stipulated within a methodology approved in advance. Through approval by a Joint Committee comprised of representatives from the governments of both Japan and the partner country, the methodology serves as the basis of distinguishing the types of low-carbon technology and projects that use them as eligible for the JCM, considering the technologies that have already existed in the partner country. For example, the eligibility criteria would sort out the types of particular low-carbon technologies or the rate of energy efficiency of a technology. Through these criteria, the JCM aims to introduce to partner countries low-carbon technologies that are not realized under BaU.

As for adopting eligibility criteria, this process avoids the complex screening for proof of additionality adopted in the CDM, and has the advantage of allowing project participants to be able to determine in advance if the project they intend to propose is eligible as a JCM project.

#### **5. The JCM's incentives to promote additional emissions reductions**

The JCM aims to disseminate advanced low carbon technologies to developing countries, quantify the emissions reductions achieved, and use part of the reductions for fulfilling Japan's emissions reductions targets for 2020 and 2030, which will ultimately contribute to the objective of the UNFCCC to stabilize global climate (Government of Japan 2015b). For the Government of Japan to use the JCM credits, they are made as retired (MoEJ 2015). In the JCM system now being built, it is not possible for credits from the JCM to be traded internationally (Government of Japan, 2015b). Credits are issued in the country where a project takes place under the JCM; however, international trading of those credits is not possible. In addition, in budgetary requests from fiscal 2016, requests by the national government to purchase credits are not found currently, meaning that the likelihood of the scenario of the Japanese government purchasing credits can be regarded as low (MoEJ, 2015b, METI 2015). Under the JCM, even if credits were to accumulate in the partner country, there would be no financial benefits for the partner country in acquiring credits unless they can be sold to Japan.

JCM projects have to have other benefits to realise additional emissions reductions. As one of the main causes of insufficient dissemination of low-carbon technologies in developing countries is the high cost of capital investment, financial assistance from the Japanese government towards the initial investment for project implementation are being offered at present as an incentive provided by the JCM. The JCM focuses on this support, and the subsidy scheme of the Ministry of the Environment, Japan provides financial assistance for up to 50% of the initial costs as an effective countermeasure towards this factor (GEC 2015, 2015b). In

addition, based on the proportion of the contribution resulting from this assistance, project participants must deliver the credits earned upon achievement of the reduction amount into the Government of Japan's account.

One of the advantages under the CDM was the possibility to trade credits. A business model was formed in which, if credits have value, only the project can be allowed to proceed and profit on sales can be gained later. However, through this, non-additional projects have been generated through CDM, and as a result of this, the international system of the CDM can be regarded as having been unable to secure environmental integrity and likely led to a decline in international credibility.

## **6. The Role of Measurement, Reporting, and Verification (MRV)**

Under the JCM, when generating a quantitative evaluation of the contribution made by the additional reduction project, it is necessary to develop a relevant MRV methodology. Based on experience with the CDM, development of the methodology under the JCM employs simple and conservative techniques. As part of the JCM approved methodology, a spreadsheet for calculation of emissions reductions that can be used by project participants is included. Therefore, project participants do not have to prepare their own calculation sheets. In addition, the spreadsheets contain default values as necessary variables for calculation. Therefore it is possible for project participants to use these default values in case they cannot obtain project-specific values (Government of Japan 2015b).

Applying MRV to existing projects and registering them as JCM projects should not be approved, since issuing credits from projects that are not new results in no meaning from the standpoints of environmental integrity or benefits for the host country. At the same time, there is a view that making the effects of emissions reductions tangible through applying the MRV methodology to existing projects will lead to the promotion of the dissemination of low-carbon technologies. Upholding the importance of making emissions reductions effects tangible and dissemination of information to advance international contributions, the JCM methodologies, including the spreadsheet to calculate emission reductions, are being publicly disclosed. To further promote the use of low carbon technologies in developing countries where costs for initial investment has been a challenge, the JCM provides a solid solution through the JCM financing programme.

## **7. Towards realising additional reductions through the JCM**

So far, only the JCM has developed a system that can be recognized as new mechanism under the UNFCCC and is actually being implemented (UNFCCC 2015b). The JCM requires "learning

by doing,” as the CDM did. There is, however, one point of difference, and that is learning from the experience of the CDM. The CDM embodies first-hand the difficulty of realising additional reductions. Based on the CDM experiences, it is necessary for the JCM to contribute to the realisation of additional emissions reductions and share its own experiences with the international society.

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