

CLIMATE CHANGE AND CARBON CREDITS

A. Summary

1. The West Kalimantan Power Grid Strengthening Project: The project involves power transmission link between West Kalimantan in Indonesia and Sarawak in Malaysia. The project is expected to result in the expansion of an interconnected electricity grid to isolated systems and displace the largely diesel based power generation in isolated systems by less carbon intensive power generation from the interconnected grid. The project is likely to meet the greenhouse gas reduction and sustainable development objectives of United Nations Framework Convention on Climate Change (UNFCCC) and may be potentially eligible under the Clean Development Mechanism (CDM) of the Kyoto Protocol. The project may also be eligible for carbon credits under other voluntary or bilateral mechanisms.

B. Background

2. The Kyoto Protocol (KP), which was signed in 1997 under the United Nations Framework Convention on Climate Change (UNFCCC), provides a GHG cap for Annex I Parties. The KP also provided the market based mechanism of CDM as a means to assist the industrialised nations to meet their commitments. For developing countries, CDM allows entities in the industrialised nations to support GHG mitigation projects in developing countries and purchase the GHG credits generated by these projects. Renewable energy, energy efficiency, methane capture and utilisation projects, are eligible, among others, for consideration under the CDM. Indonesia has ratified the Kyoto Protocol and is eligible to host CDM projects. Apart from CDM; The Joint Crediting Mechanism or Bilateral offset Credit Mechanism (JCM/BOCM) or other voluntary carbon market mechanisms may also be used to avail benefit of carbon credits.

C. GHG mitigation activities

1. General Description of the Project/Programme

3. The project involves power transmission link between 275 kV Bengkayang substation in West Kalimantan in Indonesia and Mambong substation in Sarawak, Malaysia. The project will potentially result in the expansion of an interconnected electricity grid to isolated systems. The project is expected to displace the largely diesel based power generation in isolated systems in West Kalimantan by less carbon intensive power generation from the interconnected grid. In the absence of the project activity power would have been generated by more carbon intensive diesel based isolated systems resulting in GHG emissions.

4. **Sources of anthropogenic GHG emissions:** The emission reduction will result from the displacement of power generation in isolated systems by less carbon intensive power generation from the interconnected grid.

2. ADB mission

5. ADB's mission is reducing poverty in the Asia and Pacific and a key means to achieve this mission is through financing energy, infrastructure and other projects in ADB's developing member countries. CDM promotes sustainable development in developing countries. CDM rules require certification from the host country governments that the projects are voluntary initiatives that help them achieve sustainable development.

D. CDM Modalities & Procedure issues

6. **Additionality:** A CDM project is expected to result in real measurable emission reductions which are additional to any that may occur in its absence. In other words, the project participants have to demonstrate that a baseline scenario would have prevailed in the absence of the project with CDM benefits. In general, this is done by applying a tool for demonstration and assessment of additionality that has been approved by the CDM Executive Board (EB). The tool provides two alternate approaches; investment analysis and barrier analysis.

7. **Demonstrating serious consideration of CDM at investment stage:** The project participants are expected to have considered CDM seriously while taking the investment decisions on the project. This must be demonstrated with documentary evidence. Projects with starting dates after 02 August 2008 must inform the Designated National Authority (DNA) and UNFCCC Secretariat within six months of the project start date, with precise geographical location of the project. For project activities that started before 02 August 2008, the project documentation must indicate awareness of the CDM prior to the project activity start date, and must show that the anticipated benefits of CDM were a decisive factor in the decision to proceed with the project. Evidence to support this would include, inter alia, minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a CDM project activity.

8. **Methodology for estimating baseline/project emissions, leakage and monitoring plan:** CDM projects are expected to establish a baseline scenario, which may have prevailed had the proposed CDM project not been undertaken. To do this, the CDM EB has approved several methodologies from which the project participants have to select the most appropriate one for the scope of the proposed project. In case there is none that is exactly applicable to the project, the participants may propose either a new methodology or request for revision of a methodology which with some modifications could be applied to the scope of the proposed project. The project may fall under the sectoral scope 01: Energy Industries as defined under the CDM Modalities and procedures and be potentially applicable under the existing large scale methodology AM0045: Grid connection of isolated electricity systems. Further analysis is underway to explore other CDM methodologies and methodologies under other mechanisms.

E. Operational and monitoring arrangements for Carbon Credits

9. Carbon Finance is generally based on performance-, which means that Emission Reductions will only be issued after proper monitoring, verification and certification generally by an independent agency. This agency is called Designated Operational Entity (DOE) in case of CDM. The project will have to establish a operation and monitoring plan, as required by the approved methodology applied. Some of the monitoring parameters may include are electricity generation from the proposed project activity; data to estimate, as applicable, the operating margin, build margin and combined margin. This operation and monitoring plan will be defined in the project design document (PDD), which will need to be validated by the DOE.

E. Support from ADB under CMP

10. ADB has taken several initiatives to mainstream climate change considerations into its funding. The current Carbon Market support of ADB is administered through the Carbon Market Program (CMP), managed by the Sustainable Infrastructure Division of the Regional and Sustainable Development Department. Technical Support Facility (TSF) under CMP provides advisory technical support to project sponsors to develop Carbon Credit-eligible projects..

F. Transaction Costs of Registration under Carbon Markets and Revenue Potential

11. Availing of Carbon Credit involves transaction costs. In case of CDM there are transaction costs at various stages, starting with PDD preparation. In some countries, the DNA charges fees for according Host country approval. **Validation:** For Validation of the project the third-party designated operational entity (DOE) charges fees, which vary according to the scale and complexities in the project. **Registration:** Depending on quantum of CERs generated by a CDM project annually, registration fees have to be paid to the UNFCCC Secretariat. Similar steps are involved in other carbon markets as well.

12. Once implemented, the project participants would have to monitor the parameters as required by the methodology which is suitable for the selected carbon market. The monitoring cost will depend on the required level of instrumentation and the level of skill of the people undertaking the monitoring. This will involve the cost of monitoring internally or through an independent agency for monitoring the project. **Verification / certification:** The project operation and the monitoring report prepared by the project entity will be verified by either the same third party entity (DOE in case of CDM). The DOE will charge fees for each verification.

13. **Revenues:** the implementing agency (or the project participant) will generally enter into an ER purchase agreement (ERPA) with a buyer at an appropriate stage of processing.

G. Current Status of the Project

14. At present the project is under evaluated for the selection of appropriate carbon market, methodology, baseline identification, additionality argument and Emission Reduction estimation. The responsibilities for various aspects will be decided in due course.