Third Workshop on Enhancing the Regional Distribution of CDM Projects in Asia and the Pacific

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In partnership: UNEP RISO Centre
Angkor Bio Cogen
Rice Husk Power Project

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Project Details

2 MW. Power plant

Generate electricity using rice husk that produced from a rice mill and sell the power back to the mill.
The Project will avoid methane emissions that would be produced from rice husk left to decay in the absence of the Project.
The Project also displace the use of diesel oil for power generation at the rice mill.
**CDM details**

The annual amount of emission reductions

**Baseline emission**

55,349 tCO₂

**Project Emission**

3,729 tCO₂

**Emission Reduction**

3,729 tCO₂

**Total**

51,620 tCO₂
Status and Challenges – Video clip of the construction from the start to now.
Main features of the project

The first time in the world using the TORBED technology to burn the rice husk. As a result, a complete burning of the husk will turn them into amorphous silica.
Result finding from a lab test shows that the ash is 100% amorphous.
Note:
crystalline ash is usually produced by other typical rice husk reactors used around the world. Crystalline ash is sharp and can cause lung problem among the workers.
Amorphous silica from the rice husk ash is an important ingredient to produce high strength concrete.
Challenges

The challenges of the project is the time to build, which was expected at the beginning that it would take only 24 months.

**Reasons for the delay.**

- This is the first of its kind to apply this technology in the world and also in Cambodia.

- lacking supplies / equipment in the country.

- lacking skilled workforce in the country.

- transportation issue — country infrastructure.
Merits

Technological breakthrough

Indirect benefits go to the rice industry in Cambodia which at the moment has higher operating costs than other neighboring countries (e.g. Thailand, Vietnam)
Opportunity

• There is a large number of rice husk left from the rice industry around the world every year. (460 millions tons of milled rice production* – or around 150 million tons of rice husk).
  – Some of them left in the dumpsite (as husk)
  – Some of them is burnt in small industries (brick etc.)
  – Some of them is burnt in a big industries but the ash from those industries is usually crystalline and becoming another hazardous waste problem.

• The ABC project in Cambodia using a technology that can be an example to fix all of this problem.

* Figure from USDA
Recommendations on CDM rules

More flexibility of the CDM rules.

- since a project during the construction might have some minor details different from its original PDD.

- a project might face unforeseen difficulties from the delay of construction or commissioning.
End

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