

## Mini - Project Idea Note

Generic Name of Project: *Biomass Power Company (BPC) #2: 9.9 MW Rice husk Fired Power Plant Project*

Date submitted: *May 2007*

Technical summary of the project	
Greenhouse gases targeted	<input checked="" type="checkbox"/> CO <sub>2</sub> / <input checked="" type="checkbox"/> CH <sub>4</sub> / <input type="checkbox"/> N <sub>2</sub> O / <input type="checkbox"/> HFCs / <input type="checkbox"/> PFCs / <input type="checkbox"/> SF <sub>6</sub>
Field of activities	<input checked="" type="checkbox"/> a. Energy supply <input type="checkbox"/> b. Energy demand <input type="checkbox"/> c. Transport <input checked="" type="checkbox"/> d. Waste management <input type="checkbox"/> d. Manufacturing industries <input type="checkbox"/> e. Chemical industries <input type="checkbox"/> f. Mining/mineral industries <input type="checkbox"/> g. Fugitive emissions from fuels (solid, oil, gas) <input type="checkbox"/> h. Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride <input type="checkbox"/> i. Solvent use <input type="checkbox"/> j. Agriculture and livestock
Objective of the project	To reduce greenhouse gases, CO <sub>2</sub> emissions, due to the displacement of grid electricity by electricity generated from biomass energy; and abatement of CH <sub>4</sub> emissions from uncontrolled burning or decay of rice husk in open-air environment.
Project description and proposed activities	<p>The project is a rice husk fired power plant in Suphanburi province, Thailand, with approximately <i>9.9 MW-gross</i> and <i>8.8 MW-net</i> capacities. Generated electricity will be sold to the Provincial Electricity Authority (PEA) through the national grid under the Very Small Power Producer (VSPP) scheme. The net annual supply of electricity to the grid will be approximately <i>70,400 MWh/year</i>.</p> <p>An amount of approximately <i>100,000 ton/year</i> of rice husk will be used in the project. GHG emission reduction shall come from (i) the amount of electricity substituted to Thailand's grid electricity generation; and (ii) amount of rice husk used in the project instead of being disposed in uncontrolled conditions (decay or burned in open air).</p>
Technology to be employed	The technology to be employed in this project is a biomass thermal-steam cycle power plant, which uses rice husk as energy source. The power plant is expected to have thermal-electrical conversion efficiency approximately <i>22.5%</i> . The plant plans to use mechanical driven-stoker fired boilers, which are widely used in Thailand for burning rice husk in power generating boilers.
Location of the project	
Brief description of the location of the project (Region and Country where the project will be implemented)	The Project is located in Suphanburi province, Thailand.

Expected environmental and social benefits	
Estimate of Greenhouse Gases abated (in metric tons of CO <sub>2</sub> -equivalent)	Potential GHG-emission reductions is estimated at approximately <i>48,902 tCO<sub>2</sub>-equivalent/year</i> , or <i>1,222,555 tCO<sub>2</sub>-equivalent</i> for the project duration (estimated <i>25 years</i> )
Socio-economic aspects What social and economic effects can be attributed to the project and which would not have occurred in a comparable situation without that project?	<p>The project activity will contribute to the sustainable development of Thailand in the following ways:</p> <ul style="list-style-type: none"> <li>• Enhance Thailand's economic sustainability by reducing the country's dependence on the use fossil fuel in power generation, which now is dominated by natural gas, lignite and imported fuel oil;</li> <li>• Support the government policy in promoting the use of renewable energy for power generation;</li> <li>• Promote the concept of distributed generation which shall cause less transmission and distribution power losses for Thailand country, and improve security of power supply;</li> <li>• Enhance Thailand economic efficiency through more efficient use of abundant agricultural residues (rice husk);</li> <li>• Increase local employment during project's construction phase, and project's operation phase;</li> <li>• Increase income and liquidity to local economic through many activities (direct and in-direct) such as transportation of rice husk, operating and maintenance of power plant, etc.; and</li> </ul> <p>Improve stability of electricity supply in local areas</p>
PIN/PDD Developer-Intermediary	
Name of the PIN/PDD Developer	<p><b>Dr. Thierry LEFEVRE</b>, Managing Director Energy Economy Environment Consultants Co. Ltd. SLD Building (7B), 13 Soi Saladaeng 1, Rama IV Road, Silom Sub-district, Bangrak, angkok 10500, Thailand Tel: (662) 235-5817, (662).629.0912 Fax: (66 2) 236-9574</p>
E-mail and web address, if any	<a href="mailto:t.lefevre@eeec.co.th">t.lefevre@eeec.co.th</a> or <a href="mailto:t.lefevre@ceerd.net">t.lefevre@ceerd.net</a>
Expected schedule	
Earliest project start date	By <i>2007</i>
Expected first year of CER delivery	<i>2009</i>
Project lifetime	<i>25 years</i>
Current status or phase of the project	<p><input type="checkbox"/> Identification and pre-selection phase  <input type="checkbox"/> Opportunity study finished  <input checked="" type="checkbox"/> Pre-feasibility study finished  <input type="checkbox"/> Feasibility study finished  <input type="checkbox"/> Negotiations phase  <input type="checkbox"/> Contracting phase (mention what contracts)</p>