

T@W Good Practice Form

Setting

Title: Shandong Shanxian 1*25MW Biomass Power Plant
Country: Peoples Republic of China
Location: Shanxian, Shandong Province
Start date: January 2007
Technology keyword(s): Agricultural Waste, Biomass Power
Host sector: Power sector

General description

Summary: The Shandong Shanxian Biomass Power Plant Project developed by National Bio Energy Co. Ltd is a biomass collection and utilization project in Shanxian, Shandong Province, P.R.China. The project will generate power using a 1*25MW generator unit. The central boiler system is mainly based on Danish company Burmeister & Wain Energy A/S (hereafter referred to as BWE) which developed this technology. The boiler is produced domestically based on the BWE engineering work. The fuel for this plant is expected to be a combination of cotton and corn straw, with the majority of the energy input from cotton straw. The straw was not utilised before but created a waste problem. Currently the power plant is only producing power, but it is prepared for delivery of heat for district heating as well turning it into a combined heat and power plant.

Aims: The aim of the project is to produce electricity with low emissions of CO₂ and return the ashes to the agriculture while also reducing the amount of non-utilised waste biomass in the region that would otherwise partly be burned uncontrolled or left for decay.

Summary of Results: Summary of the main results
Operation Time: The plant will operate as baseload electricity production - estimated 6000 hours/year

Energy data

Energy saved/generated: The rated generation to the grid is 127.5 GWh/year. The plant will later also produce heat, when the district heating system has been established.

Environmental data

“EAU, CER, ERU, AAU”: 127,453 CERs/year
Methodology: ACM06
Baseline The project activity involves the installation of a new power plant at a site where currently no power generation occurs;
 • The power generated by the project plant is fed into grid and would in the absence of the project activity be purchased from the grid;
 • The biomass would be in the absence of the project activity be dumped or left decay or burned

in an uncontrolled manner without utilizing for energy purposes;

Contribution to Sustainable Development:

The project reduces the need for coal in the power sector while utilising local agricultural waste that would otherwise be burned uncontrolled crating both undesired emissions and risk of wildfires.

Economic data:

Financing:	Commercial
Capital cost:	294,184,100 RMB
Operational Costs:	Select a currency (not mandatory)
Internal Rate of Return:	11 % with sales of CERs

Additional Information

Printed or electronic reports or other literature available:

Title: PDD Cost: Free

Address for download of electronic document:

http://www.netinform.net/KE/files/pdf/GSP2_20070110_Shanxian_PDD_tuv.pdf

Contact information:

Type of Organisation: Technology Supplier/Energy Engineering Company

Technology keyword(s) specific to this organisation:

Organisation / Agency: **Burmeister & Wain Energy A/S**

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Description of the Organisation for inclusion in the database of Technology and Service Providers:

BWE is an international hi-tech company which has specialized in design of advanced Ultra Super Critical (USC) steam boilers for utility power stations and in upgrading of existing boilers to improved performance. BWE also designs a wide range of auxiliary power station equipment.