



Sustainability action · Project Renewable Energy and Energy Efficiency

Nangong Biomass Plant, China

Nangong Biomass Plant uses agricultural waste residues for the production of clean renewable electricity for the Chinese North Power Grid. Before the power plant was constructed the agricultural residues were left to decay or burned in the open air.

Project

The National Bio Energy Nangong Biomass Power Plant has a capacity of 30 MW and utilises local surplus biomass residues (mainly cotton residues and wood waste) for electricity generation. A 130 t/h biomass-fired boiler, one turbine and a generator are installed at the site. All components were manufactured domestically in China. The plant delivers over 190'000 MWh of electricity to the North China Power Grid (NCPG) utilising about 300,000 tons of biomass waste per year. The agricultural waste is all

collected from the area nearby the project. Before the construction of the power plant, the agricultural residues were burnt or left to decay in an uncontrolled manner. Construction of the plant started on the 25/10/2009. It was put into operation on 26/10/2010.





Location

The power plant is located to the north of Boli village, in Nangong county, Hebei province, People's Republic of China. Nangong County is a rural region of China that is very rich in agricultural resources. It is one of the biggest bases for cotton and other agricultural produce in Hebei province.

Project achievements

Socio-economic impact

- The biomass power plant generates over 190'000 MWh of clean electricity per year for local residents and thus meets the energy needs of approximately 164'000 people in the Nangong region of Hebei province.
- The project contributed to the creation of 133 job positions, including 72 people from local ethnic minority groups and 33 female workers. The total salaries of the employees were 4,616,057 RMB in 2010. Furthermore, all employees attend health and safety trainings several times a year and receive an annual free health examination.
- Peasants' incomes increased, as they can sell their agricultural waste to the power plant. The power plant purchased 21,251,028 RMB worth of biomass residues in 2010.
- Located in a rural area with a weak power grid, the project improved the power supply and stability of the grid. Before the implementation of the power plant, the local community was facing electricity cuts, which were particularly damaging during the spring plough periods.

Environmental impact

- The project significantly reduces the use of fossil fuels, particularly coal in the Chinese power sector. Furthermore, the plant avoids CH₄ emissions, as the agricultural residues would otherwise be dumped, left to decay or burnt in an uncontrolled manner without utilising them for energy production. The estimated annual GHG emission reductions of this project are 147'000 tCO₂e of greenhouse gases per year.
- The project was initially developed as a Gold Standard Verified Emission Reduction project. The auditor Re-consult Ltd. validated the additionality of the project, showing that the project would not have reached financial closure without the additional revenues generated from the sale of environmental attributes. Full financial analysis of the project is publicly available on the Markit website
- The project reduces smoke pollution from the open burning of biomass residue, as well as sulphur dioxide (SO₂), nitrogen oxides (NOx) and particulate matter that are typically associated with the burning of fossil fuels.



Checklist Project 300930

Commercial Operation Date

October 2010

Total capacity

30 MW

Estimated Annual Electricity Generation

approx. 190'000 MWh

Quality Assurance and Verification

In accordance to the I-REC Code

I-REC Registration

Registered on 25 November 2015, with retroactive effective date of 1 January 2015

Transparency

I-RECs listed in I-REC Registry (<https://registry.irecservices.com/Public/Home/>)

Marketing material

High-resolution pictures available

Reportability

Meets GHG Protocol Scope 2 Guidance criteria

I-RECs Standard



I-RECs reportable under



<http://thesouthpolegroup.com/sustainability-solutions/renewable-energy>

Natalia Gorina
Sales Director Carbon & Renewables

Phone +41 43 501 35 50
sales@thesouthpolegroup.com