



UNFCCC Secretariat
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DET NORSKE VERITAS
 DNV CERTIFICATION AS

Att: CDM Executive Board

Your ref.:
 CDM Ref 1691

Our ref.:
 MLEH

Date:
 26 June 2008

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Response to request for review

“Captive power generation through waste heat recovery system in a steel plant in Jinan City, China” (1691)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV’s request for registration of the “Captive power generation through waste heat recovery system in a steel plant in Jinan City, China” (1691), and we would like to provide the following response to the issues raised by the requests for review.

Comment 1:

The barrier analysis cannot be substantiated by means of anecdotal evidence and statements by the project participant alone. If the barrier analysis method is being used to demonstrate the additionality of the project activity, such barriers must be supported by credible independent sources.

DNV response:

The project applies “Tool for the demonstration and assessment of additionality” version 03, which accepts among others the following types of evidences:

- e) Written documentation from the company or institution developing or implementing the CDM project activity or the CDM project developer, such as minutes from Board meetings, correspondence, feasibility studies, financial or budgetary information, etc;
- f) Documents prepared by the project developer, contractors or project partners in the context of the proposed project activity or similar previous project implementations;

To our understanding there is no requirement for any independent sources. Furthermore, anecdotal evidence can be included, but *alone* is not sufficient proof of barriers.

The barriers presented were assessed in the validation report and were supported with the following evidences:

Barrier argument 1: “On the other hand, the iron/steel industry has to expand its capacity corresponding to the rapid demand growth in China. Due to the above reason, the steel/coke manufacturing companies prioritize investments aiming for capacity expansion and not for waste heat recovery.”

Evidences provided for this barrier:

- The evidence (Reference 10-1 in response from project participant) is an official survey conducted by the relevant industry association. It shows that Jigang has increased its production three-fold from 2001-2005:
 2000: 3.0303 million tonnes

2001: 3.1969 million tonnes

2002: 3.9302 million tonnes

2003: 5.0502 million tonnes

2004: 6.8690 million tonnes

2005: 10.4247 million tonnes

- The annual report of 2005 of Jigang (Evidence 11-1) shows that only 4 of 22 projects are energy efficiency projects, 2 of which are planned as CDM projects.

Barrier argument 2. “In addition JIGANG installed a different type of CDQ system in 1999, but this CDQ system did not function according to the specified performance. The management of JIGANG is therefore more reluctant to invest in CDQ due to the perceived risks involved.”

Evidences provided for this barrier:

- Evidence (References 1-1-1, 1-1-2) is a feasibility study report of Jigang CDQ energy efficiency project from 27 August 1994. The copy of the document provided to DNV was assessed and deemed sufficient evidence for that the two sets of CDQ were installed as a national demonstration project.
- Evidence (Reference 2-1-1) is facility reconstruction project problem notice issued by Development Regulation Department of Jigang and describes the equipment needed to be reconstructed, modified and retrofitted. The document is issued by Jigang, but is a formal internal document and considered satisfactory as evidence for that Jigang had to rebuild most of the equipment by themselves.
- Evidence (References 2-1-1 and 2-2-13) reports the investment costs of the reconstruction. Reference 2-1-1 is a formal internal document from the Development Regulation Department of Jigang and reference 2-2-13 was issued by Jigang to submit the reconstruction project for construction approval by local government. The amounts are consistently presented as 26.41 million RMB.
- Reference 8-1 is a formal annual report from a listed company and reference 5-1 is a part of a feasibility study report submitted to the local government. These evidences are considered satisfactory and show the expectation for a profit of 53 million RMB in total over 20 years.
- Reference 9-1 was issued in 2001 by Integrated Pollution Prevention and Control (IPPC) and shows clearly the difficulty of CDQ technology in general.

Barrier argument 3. “Although CDQ systems are implemented in some coke plants in China, those CDQ systems are implemented with the government initiative to introduce state of the art technology in the Chinese steel/coke industry. Also the CDQs installed at JIGANG in 1999 were a part of national energy saving demonstration project.”

Evidences provided for this barrier:

- Evidence (References 1-1-1, 1-1-2) is a feasibility study report of Jigang CDQ energy efficiency project from 27 August 1994. The copy of the document provided DNV was assessed and deemed sufficient evidence for the that two sets of CDQ was installed as a national demonstration project.

Barrier argument 4. “The project’s CDQ technology of the advanced type is a thoroughly new technology for China and needs more than forty specially trained personnel to operate. NSC will provide this training as a technology provider with broad experience of CDQ as stated in the agreement regarding the provision of engineering including training, among Nippon Steel Corporation, Nippon Steel Engineering and JIGANG on 11 May 2005 /17/.”

Evidences provided for this barrier:

- Evidence (Reference 12-1) is the engineering provision agreement between Nippon Steel, Nippon Steel Engineering and Jigang, which was verified during the validation and deemed sufficient to prove that necessary engineering and training will be provided from Nippon Steel Corporation to Jigang.

EB Comment 2:

The DOE is requested to explain the basis for updating the emission factor which has been published by China on the basis of country specific information.

DNV response:

The PDD was published in November 2006 with the latest data for calculation of the grid emission factor at the time. This was updated at the time of requesting registration of the project to the latest data available, including data from 2005. The calculation is furthermore in accordance with the calculation of the combined margin emission factor published by the DNA of China.

The assessment of the grid emission factor of NCPG is as follows:

The grid emission factor of the North China Power Grid (NCPG) is determined *ex-ante* for the 10 years crediting period following ACM0002 version 6, based on the most recent information available. It has been calculated as the weighted average (1:1) of the operating margin and the build margin.

For the operating margin (OM) emission factor, simple OM was selected because data are not available for applying the dispatch data analysis and low-cost/must-run resources constitute less than 50% of the total grid generation. Aggregated generation and fuel consumption data are used due to the fact that more specific data for the power plants are not available in the NCPG. Country specific data for net calorific value (NCV_i) of each type of fossil fuel, country specific data for emission factors for the fuel, IPCC 2006 default values for the oxidation factor of each type of fossil fuel and the total electricity delivered to the NCPG were selected and deemed reasonable. OM was calculated to be 1.1207 tCO₂e/MWh as a generation weighted average for the years 2003, 2004 and 2005.

Because plant specific fuel consumption and electricity generation data are not publicly available in China, the guidance requested by DNV from the CDM Executive Board for a deviation of the baseline methodology of AM0005 has been applied for calculation of the build margin (BM) emission factor for this project:

- Use of capacity additions from the years 2003 to 2005 is chosen and reaches 23.78% of the total installed capacity.
- Use of weights estimated using installed capacity in place of annual electricity generation. Thermal power plant accounts for 99.28% of the total installed capacity additions in this period. Since specific data for each technology is not available, the fraction of fuels (coal 99.17%; natural gas 0.74%; oil 0.08%) was estimated from the CO₂ intensity for the fuels used in NCPG.
- Use of the efficiency level of the best technology commercially available in the provincial/regional or national grid of China, as a conservative proxy, for each fuel type in estimating the fuel consumption. This is 35.82% for coal power plants and 47.67% for oil power plants and gas power plants.

Country specific net calorific value of each kind of fuel, country specific emission factor of each fuel and IPCC 2006 default values of oxidization factors are used to calculate the BM. The data applied are considered as the best data available for calculating the BM in the NCPG. The official supporting documentation has been verified. BM is calculated to 0.9397 tCO₂e/MWh.

The resulting combined margin emission factor is 1.0302 tCO₂e/MWh.

The latest data used to calculate OM and BM are derived from China Energy Statistical Yearbooks 2004 to 2006 and from China Electric Power Yearbooks 2004 to 2006. The selection of the parameters is complete and transparent.

The calculation is furthermore in accordance with the calculation of the combined margin emission factor by the DNA of China published on 9 August 2007.

We sincerely hope that the Board accepts our above explanations.

Yours faithfully.

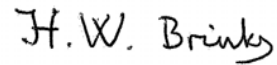
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