

CDM Executive Board
DNV

03 November 2006
Ref. CRM/UNFCCC/0561
Ref. CRM/UNFCCC/0576

Dear Sir, Madam,

Response to the requests for review for

- **0561 Saihanba East 45.05 MW Windfarm Project**
- **0576 Saihanba North 45.05 MW Windfarm Project**

We are disappointed to hear that the EB has requested review for our projects which lead to a delay in the registration of two good projects with clear developmental benefits to the host country. We are particularly disappointed as we believe that the review is unnecessary as the methodology has been applied correctly and exactly in line with other projects in China recently registered by the EB, including for example project 0544 registered only a week ago (although we are using newer data including data for the year 2004).

We will clarify each of the issues raised below.

The first issue raised in the request is:

- (a) The application of the baseline methodology does not comply with the CDM EB approved methodology, ACM0002. The estimation of the build margin (BM) emission factor is not based on the guidelines as stipulated in ACM0002. Instead BM has been reported to be estimated based on the “substitute method as accepted by the EB”. However no reference has been provided in the PDD to support this substitute method. In this regard, the validation report also refers to the CDM EB guidance on the applicability of AM0005 and AMS I.D in China but no reference has been provided relating the same to ACM0002.

Response to this first issue:

The Build Margin is calculated in exactly the same manner as other projects in China, including 0544, and is based on the latest statistical data available.

The term “substitute method” is used, as the (accepted) calculation uses annual statistics rather than the exact latest 20% of added generation capacity, information which is not publicly available in China.

On 7 October 2005, DNV submitted a request for guidance to EB: Application of AM0005 and AMS-I.D in China¹. In the response letter of EB to DNV titled “Several projects in China (application of approved methodology AM0005) - DNV”², it says:

“The Board took notice of the request for deviation in use of methodology AM0005 by several project activities in China, which were as follows:

- 1) Use of average efficiency of existing power plants in the grid as proxy for estimating fuel consumption.*
- 2) Use of capacity additions during last 1 - 3 years for estimating the build margin emission factor for grid electricity.*
- 3) Use of weights estimated using installed capacity in place of annual electricity generation.*

The Board did not accept deviation listed in 1) above. The Board while rejecting the suggested deviation from the suggested method in AM0005, suggested that the project participants use the following alternative solutions in absence of data:

- (i) For small-scale project activities, use the average emission factor of the grid as described in the AMS-I.D,*
- (ii) Use 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.*

The Board agreed to accept the proposed deviations in 2) and 3) above.”

From this response letter, it can be seen that EB has adopted the substitute method used for calculation of BM. Regarding the applicability of this method to ACM0002, it is reasonable, because AM0005 was valid from 14 April 2004 to 2 March 2006 and, after this period, it was replaced by ACM0002. The calculation procedure of OM and BM in ACM0002 is the same as described in AM0005. Therefore, it is reasonably concluded that this substitute method for BM calculation can be applied to ACM0002.

The second issue raised in the request is:

¹ <http://cdm.unfccc.int/UserManagement/FileStorage/6POIAMGYOEDOTKW25TA20EHEKPR4DM>

² http://cdm.unfccc.int/UserManagement/FileStorage/AM_CLAR_QEJWJEF3CFBP1OZAK6V5YXPQKK7WYJ

(b) Further, the BM has used single Carbon Emission Factor (CEF), applicable for coal (25.8 tC/TJ) which is the highest of other fuels' CEFs, comprising the grid, the lowest being 13 tC/TJ. This leads to overestimation of the BM based baseline emissions. Hence it is suggested that BM should be re-estimated by either using the respective CEF based on the fuel type or using a weighted average CEF.

Response to this second issue:

First, we are using exactly the same calculation method as other projects that have recently been registered, including 0544.

Secondly, the respective capacity data for fossil-fuelled power plants other than coal fired ones in China is not publicly available.

Thirdly, it is true that the Northeast Power Grid includes the power plants firing varied types of fossil fuels. However, according to China Energy Statistical Yearbook (2000-2002, 2004, and 2005 editions), it can be found that the emissions from burning coal to generate electricity accounts for majority of the total emissions from fossil fuelled power plants. In 2002, 2003 and 2004 respectively, 98.3%, 98.7% and 98.1% of total emissions were from coal fired power plants.

A weighted average CEF, using the shares of emissions from solid, liquid and gas-fired plant as in 2004, would be about 25.6 tC/TJ. We believe that the use of weighted average CEFs adds unnecessary complications for a less-than-one-percent change in the BM, and less than half of one percent change in the approximate emissions factor, especially as we have used very conservative calculations as shown below.

Fourthly, our calculation is significantly more conservative than that proposed by the Chinese DNA³. It states the shares of oil and gas to be 0.34% and 1.58% respectively. However, the fuel consumption of the best available technology is significantly above the estimate used in our calculations and derived from projections for the year 2010. Indeed, the fuel consumption of the best available coal plant is given as 336.66 grammes of coal equivalent (gce) while we use the projections of 320 gce per kWh. Overall the Build Margin, including the relevant shares of oil and gas generation, is calculated by the DNA as 0.905 tCO₂e/MWh, whereas the emissions factor calculated in our PDD is significantly lower at only 0.775 tCO₂e/MWh, i.e. 14% lower than the number proposed by the DNA.

³ <http://cdm.ccchina.gov.cn/web/index.asp>

The third issue raised in the request is:

- (c) The project considers Northeast Power Grid as the project boundary to which it is connected for transmission of power without significant transmission constraints. Hence the baseline emissions from the several local grids (namely Heilongjiang power grid, Jilin power grid, Liaoning power grid and eastern Inner Mongolia power grid) connected to Northeast Power Grid has been estimated. However due to non-availability of power generation data from the EIMPG province, the same has been excluded for estimation of the baseline emissions. The PDD justifies that exclusion of the EIMPG province is insignificant with no impact on the conservativeness of the baseline emissions estimated. This approach is not in line with the applicability as stipulated in ACM0002 which states that “the geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available”. The project proponent has to ascertain and report the level of uncertainty of GHG emissions based on the above issue besides conforming the acceptability of the above deviation by METH Panel / CDM EB through DOE.

Response to this third issue:

Firstly, according to ACM0002:

“Where the application of this methodology does not result in a clear grid boundary, given country specific variations in grid management policies:

(a) Use the delineation of grid boundaries as provided by the DNA of the host country if available; or

(b) Use, where DNA guidance is not available, the following definition of boundary:

- *In large countries with layered dispatch systems (e.g. state/provincial/regional/national) the regional grid definition should be used. A state/provincial grid definition may indeed in many cases be too narrow given significant electricity trade among states/provinces that might be affected, directly or indirectly, by a CDM project activity;*
- *In other countries, the national (or other largest) grid definition should be used by default.”*

Therefore, the delineation of Northeast Power Grid (NPG) boundary provided by China DNA should be applied in priority. According to the grid emission factor

calculation issued by China DNA recently⁴, the NPG is comprised of Liaoning, Jilin and Heilongjiang power grids, excluding of eastern Inner Mongolia Power Grid (EIMPG). Therefore, the grid boundary definition in this PDD is justified and correct.

Secondly, exclusion of EIMPG is conservative as described in the PDD and discussed with DNV prior to submission to the EB for registration. The conservativeness of the calculation excluding EIMPG was proven to the DOE by comparing calculation results of the scenarios with and without EIMPG in the NPG. The emissions factors including the Inner Mongolia region would be approximately 3% higher than if the region is excluded, as suggested by the DNA and applied in the PDD. Therefore, the grid boundary definition in this PDD is justified and conservative.

Conclusion

In conclusion, the project proponents have followed the accepted methodology for calculating the emissions factor for renewable energy projects in China, following guidance from the EB, the Chinese DNA and the DOE. Having provided the required reference and shown that our calculations are significantly more conservative, 14% and 3% for the two issues respectively, we hope that the EB accepts these clarifications and approves the project without further delay.

Yours sincerely,

Christiaan Vrolijk

⁴ <http://cdm.ccchina.gov.cn/web/index.asp>