



MAHENDRA

SPONGE & POWER (P.) LTD.

17-August-2007

Kind Attention
Chairman, Executive Board
UNFCCC

Subject: Clarification on request for review for "MSPPL WHR based power project at Chattisgarh, India" by Mahendra Sponge & Power Pvt. Limited; (Reference No 1140)

Dear Sir,

This is with reference to the request for review raised by Executive Board members for the project MSPPL WHR based power project at Chattisgarh, India" by Mahendra Sponge & Power Pvt. Limited; (Reference No 1140). We are enclosing herewith our clarifications on the comments raised for your consideration.

Mr. Munish Mahajan – General Manager (9893125888) would be the nodal point for all communication for this process.

Thanking you,

Yours sincerely,

Mahendra Agrawal
Director

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Reasons for Request 1:

1. The project activity commenced in December 2005 and the PDD was only published for public comment in November 2006. As required by the guidelines for completing section B5 of the PDD it should be clearly validated that "incentive from the CDM was seriously considered in the decision to proceed with the project activity".

Reply from PP:

The project activity start date as mentioned in the PDD is 06/12/2005. PP received the consent for establishment for the project activity in September 2005 from Chattisgarh Environment Conservation Board following which PP placed order for plant and machinery on 06/12/2005. PP has provided to DOE during validation evidence of CDM consideration wherein PP had decided to go ahead with the project activity after due consideration of CDM benefits (please refer annex 1). The CDM benefits were considered prior to the start of project activity to cover the risks involved on account of uncertainty in power generation as explained in the PDD.

2. As the AFBC boiler will only be installed as a result of the project activity, it should be confirmed how any net increase in emissions resulting from the operation of this boiler will be accounted for.

Reply from PP:

Approved methodology ACM0004, version 02 has been used for estimation of emission reductions from the project activity. The methodology has been used by a number of registered projects in the past with similar monitoring plan as these projects have also installed WHRBs along with AFBC boilers. A select few are listed below -

1. <http://cdm.unfccc.int/Projects/DB/SGS-UKL1146048256.38/view.html> ;
2. <http://cdm.unfccc.int/Projects/DB/SGS-UKL1139564002.3/view.html>
3. <http://cdm.unfccc.int/Projects/DB/SGS-UKL1145002776.48/view.html>
4. <http://cdm.unfccc.int/Projects/DB/SGS-UKL1147435158.71/view.html>

In the PDD, PP has estimated the power generation from the project activity (attributable to WHRB) calculated as steam fraction supplied to the turbine from the WHRB. This is done as the steam from WHRB and AFBC have same properties (pressure and temperature). However, to consider any difference in properties of the two steam (WHRB & AFBC), PP has now included monitoring of steam properties (pressure and temperature), which would be the basis of steam energy (read from steam tables directly) calculation. This has been included in the revised PDD (revised PDD version 1.2 dated 17/08/2007)

Steam energy now has been used as the basis for pro-rata power generation from the turbine attributable to steam from WHRB in the project activity (revised PDD version 1.2 dated 17/08/2007). The estimations in the PDD are ex-ante based on prorated steam energy generated from WHRB and for estimation of actual emission reductions in the project activity, the electricity generated and auxiliary consumption will be monitored directly and the net electricity will be proportioned on the basis of the steam energy.

It should also be noted here that any loss of steam between individual boilers (WHRB & AFBC) outlet and common steam header and from common steam header to the turbine inlet has been deducted from WHRB steam. This is conservative and transparent.



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In its recent ruling (EB 31; AM_REV_0033¹), EB has accepted this method for estimation of power attributable to WHRB steam in cases where turbine is fed by steam from WHRB and AFBC both.

Reasons for Request 2:

1. The project activity commenced in December 2005 and the PDD was only published for public comment in November 2006. As required by the guidelines for completing section B5 of the PDD it should be clearly validated that "incentive from the CDM was seriously considered in the decision to proceed with the project activity".
2. As the AFBC boiler will only be installed as a result of the project activity, it should be confirmed how any net increase in emissions resulting from the operation of this boiler will be accounted for.

Reply from PP:

Same answered against Request 1 above.

Reasons for Request 3:

1. The project activity commenced in December 2005 and the PDD was only published for public comment in November 2006. As required by the guidelines for completing section B5 of the PDD it should be clearly validated that "incentive from the CDM was seriously considered in the decision to proceed with the project activity".
2. As the AFBC boiler will only be installed as a result of the project activity, it should be confirmed how any net increase in emissions resulting from the operation of this boiler will be accounted for.

Reply from PP:

Same answered against Request 1 above.

¹ http://cdm.unfccc.int/UserManagement/FileStorage/AM_REC_MVA0P355FK7ZLTJ39U9ENNIYPEFA6V



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Annex 1



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Minutes of meeting held on 5-4-05 at the registered office of Mahendra Sponge & Power Pvt. Limited.

Present:

Ishwar Agrawal
Mahendra Agrawal
Munish Mahajan

Following points were discussed at the meeting:

1. Mr. Mahendra Agrawal informed that the company got the loans approved from IREDA for the 8 MW power plant at the sponge iron unit. He also informed that this plant would generate power from waste heat of sponge iron kilns and from coal fired boiler. The expected investment in the project would be approximately Rs 2750 lakhs
2. He also informed that power generation from waste gases from the kilns is considered clean power as this effects in avoidance of coal combustion in coal fired boilers for the equivalent power generation and that clean energy projects such as this are potential CDM projects.
3. He further explained that though power generation with waste gases from kilns can not be guaranteed as it is directly dependent on kiln operation and so carbon credits from CDM would also help reducing the financial uncertainty in the project.
4. Discussed the future plan of action and it was resolved that
 - a. Company should initiate the process of equipment procurement as early as possible.
 - b. All formalities for IREDA loans should be completed as listed in the approval documents
 - c. Mr. Mahendra Agrawal should initiate dialogue with reputed consultants in CDM area

Next meeting would be held on 9-5-2005 at the same venue.

For, Mahendra Sponge & Power (P) Ltd.

M. Agrawal
Director



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Annex 2

Monitoring Plan for Estimation of Power Generation attributable to steam generated in Waste Heat Recovery Boiler in the project activity

Power generation from WHRB:

In the project activity, steam from WHRB and coal based AFBC is fed to the turbine through a common header. Steam flow meters are installed at respective boiler outlets and also at turbine inlet. Gross power generation from turbine is measured directly. Net generation is calculated by deducting auxiliary power consumption from gross power generation. The quality of steam from WHRB and AFBC i.e. temperature and pressure are same and so power linked with WHRB steam will be calculated pro-rata for the fraction of total steam supplied to the turbine.

Data to be monitored:

1. Steam quantity from WHRB in project activity to common header
2. Steam quantity from AFBC to common header
3. Steam quantity at turbine inlet
4. Gross power generation from turbine in power plant
5. Auxiliary power consumption in power plant
6. Pressure and temperature from WHRB and AFBC boilers

Calculation for net power generation attributable to steam from WHRB in project activity:

Step1: Net power generation from turbine in project activity

Net power generation from turbine = Gross power generation – aux power consumption

Step 2: Fraction of steam energy supplied due to WHRB

Option 1:

Fraction of steam energy from WHRB = Steam energy supplied from WHRB to common header / total steam energy input at turbine inlet from common header

Option 2:

Fraction of steam energy from WHRB = (total steam energy input at turbine inlet from common header - Steam energy supplied from AFBC to common header)/ total steam energy input at turbine inlet from common header

Choose from option 1 & option 2; whichever is less. **This gives conservative estimations as any loss of steam in the way to turbine has been accounted towards WHRB steam.**

Step 3: Net power generation from WHRB steam

Net power generation due to WHRB = Fraction of steam from WHRB X net power generation from the turbine



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Estimation of steam energy

Steam energy = Quantity of steam X Steam enthalpy