

Comment 1

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A reading of the PDD reasonably elaborates the project activity however, despite of great detail over the presumptions that have been used to justify the CDM candidature of the project, the following areas in the PDD are still not clear. We would be grateful if the DOE and the project proponent could please go through the following observations

Para 3, Page 2 of PDD: After commissioning of all waste heat recovery boilers in the project activity, the generation of power was only around 70 MW even at maximum coke oven plant utilization. Due to this, the project activity had to be altered to use excess waste gas from the steel plant to augment heat for power generation for which JSW Steel placed the order on M/s Coen Bharat Limited (CBL) to supply four numbers of Hot Air Generators (HAGs). The above explanation obviously suggests that the Project proponent had no plans of installing the additional HAGs but had to undertake the additional investment after looking at the performance of the waste heat boilers. However upon reviewing the PDD one can notice that the decision to invest in the 130 MW power plant was undertaken in February 2004 whereas the decision to invest in the HAGs was undertaken in 2005. In short, it seems to be an effort worthy of commendation that the project proponent could, within one year of the investment decision making, achieve financial closure, finalize project design, finalize suppliers, procure, erect and commission the waste heat recovery boiler and achieve a long enough track record of operations that would justify the additional investment in HAGs.

All this can either mean that the engineering skills of people involved in the project are beyond human caliber or the data given in the PDD is fabricated. We hope the DOE would investigate this further and clarify.

Further, the project proponent has written that about 70 MW of power comes from waste heat recovery from coke ovens and 60 MW power is derived from waste heat recovery of Corex and Blast Furnace Gases. It is interesting to note that the project proponent (JSW Steel) has a registered CDM project activity (UNFCCC reference no. 325) relating to electricity generation from combustion of Corex and Blast Furnace Gases. It would therefore appear that the project has been conveniently portrayed as one relating to waste heat recovery of from coke ovens so that the project proponent can reuse the same technological barrier arguments in this PDD also.

Last Para, page 7 and Para 3, page 28:

“Also the project activity is a first of its kind to generate power by mixing of hot gases from coke oven plant and hot air from HAG.

“The project activity is unique as it uses both, waste heat from non recovery coke ovens and waste gases from Corex/blast furnace for power generation unlike waste gas or waste heat based power plants, who generate power either using waste heat or waste gas.

We request you to refer to project reference no. 351 available on the UNFCCC website. This project also relates to electricity generation from waste heat recovery from non-recovery type coke ovens. You would also be surprised to note that this project belongs to Jindal

Steel and Power Limited. In response to a review comment by the CDM-EB, the project proponent has mentioned that there are four such projects in India (electricity generation from waste heat from non recovery type coke ovens).

Waste heat recovery has been in use (in India and elsewhere) for ages and the technology enjoys fairly deep proliferation so much so that waste heat is also used by small time players for meeting their energy demand. The uniqueness of a project lies in the novelty and uniqueness of the technology it uses. The PP argues and the DOE may / can agree that the project is unique just because there is a common steam header for coke oven waste heat boiler and corex/BFG waste heat boiler. It is also quite amusing to note that the PP has mentioned that mixing steam from all 8 WHRSGs and feeding a single turbine is very difficult and needs highly skilled personal. Can the PP please elaborate how this is very difficult and how the personnel operating the setup are required to have a higher degree of skills than what is otherwise required for operating their existing waste heat power plants.

To our understanding, this is the only WHR project that came up in 2004 at Terrengalu village / town, Bellary district, therefore if the PP's rationale were to be extended, is this not sufficient to make the project unique?

We hope the DOE takes a note of such misrepresentations by the PP.

Para P5 Page 16: Hydro based generation is not a realistic and credible alternative for the project

We still don't understand how hydro power generation is not a plausible alternative to the project activity. The PP has cited a Karnataka Government report that says the reason for power shortage in the state in the year 2003-04 was the dependence on hydro power and thus on rainfall in the catchment areas. This was taken from the first paragraph of the report. The second para of the same report states that Karnataka has a 7750 MW of hydro potential of which only 3282 MW has been harnessed so far. This fact has been conveniently ignored by the PP. At the same time PP has been harping on the concern for environment while taking the decision to invest in the project. Hydro power would not only have been more environment friendly but also significantly cost effective for the PP. Still this option has not been considered as a plausible alternative.

Table 1 Page 26: Cost of waste gas based generation.

The investment analysis is surprising and carries manipulation and misrepresentation of facts. My grievance is more with the DOE as a third party independent agency, they have responsibility to ensure that the PDD is factually correct and in principle complies to CDM rules and at a very basic level the most commonly known principles of financial analysis. The sheer ignorance has been demonstrated towards the methodology ACM 0012 and towards common principles of investment analysis.

Kindly read the waste gas definition of Waste Gas given in page 2 of the methodology document:

To repeat verbatim, by-product gas/heat of machines and technical processes for which no useful application is found in the absence of the project activity and for which it can be demonstrated that it has not been used prior to, and would not be used in absence of the CDM project activity. Waste gases are wasted with a low energy

level in several of the processing units and in normal operational processes are diverted to the flares. This is because recovering them for energy use is not feasible in the baseline scenario (e.g. because of low pressure, heating value or quantity available). In the project scenario, this waste gas is recovered to achieve a condition that makes it useful as a fuel.

Also read table 2 on page 17 of your PDD:

The baseline alternative as identified by you for waste gas use is "Waste gas is released to the atmosphere after incineration". And while calculating the cost of power generation you have very conveniently taken a value for the waste gas.

Let me reiterate, Waste Gas by definition is waste, for which no alternative can be found in the baseline scenario. We request the EB and DOE to take a note of this approach as this will have a bearing on all subsequent WGR/WHR projects. Coming back to the justification of why this has been done i.e. the CEA guidelines, the PP has managed to get something so blatantly wrong from the CEA. All other WGR power plants in India that supply to grid are paid a single part tariff, only in case of the JSW project this exception was made.

Further, the CEA guideline was specifically applicable 300 MW JSW project and not any other project. In fact the division bench of Karnataka High Court that passed the order on this matter had noted that the two part tariff treatment (and therefore a cost relating to waste gas to be charged to power cost) was being given to the said JSW project (300 MW) because the project was considered as an Independent Power Producer and not a Captive Power Producer. Whereas the candidate CDM project is a captive power plant, surely the PP is feigning ignorance or completely misrepresenting the facts in order to demonstrate additionality of the project.

The DOE may also note, that if the cost of waste gas is taken out, the proposed CDM project would by far be the most economically option and hence the baseline and hence not additional.

Table 1, page 26: Heat Rate 2900 kCal/kWh

The source for the Heat Rate data is given as the PPA between JSW Power and JSW Steel, both JSW Power and JSW Steel have same owners infact the PDD mentions that JSW Power has been merged into JSW steel in 2005. In light of this the PPA is essentially an in-house document and hence the norms can not be used for financial analysis, as the money is just going from one entity to the other within the same organization / establishment and thus the numbers (in PPA) have no sentity.

Para 2, Page 28: The waste heat available in coke oven gas is utilised for producing steam in waste heat recovery boilers. Utilizing this type of waste heat itself is a new technology and did not have any proven base.

The proposed project is about a 130 MW WHR plant that generates electricity from waste heat drawn partly from non recovery type coke ovens, and partly from corex and BFG gases. As already mentioned the PP has two power projects running on Corex and BFG waste heat recovery. The DOE is requested to take a note of this inlight of the PP's statements relating to technical barriers that have inhibited

the project.

It is also worth noting that the barrier presented above pertains to the type of waste heat from the non-recovery type coke ovens, whereas the project is to use waste heat and generate electricity. The PP needs to explain why the waste heat released from non recovery type coke ovens are different than other types of waste heat and what are the technological changes that have been made to the boiler and the turbine to account for such complexities. The DOE is requested to check the claims and submissions made by the PP.

Para 1, Page 29: At the time while the decision was being taken to install the 9th Boiler, it was claimed that while it will be fired using blast furnace gas, it would not require any support fuel at full load. It was a risky proposition for the project proponent as :

1. There was no proven track record with the boiler supplier with similar boiler capacity to assure the project proponent.
2. In case the boiler failed to run independently with blast furnace gas at full load as claimed by the supplier, the project proponent would have to rely on Corex as a support fuel on a continuous basis. This further added uncertainty to the whole power generation system as Corex availability depends on consumption patterns within the steel plant and after meeting the internal requirements of the steel plant, it is allowed to be used in the power plant.
3. The Project proponent had already experienced shut downs of HAGs due to corex unavailability, and hence going ahead with the decision to install the 9th boiler without any proven track record was a major barrier for the project proponent.

It would be useful to note here that the 9th boiler is fired by Corex and BFG. The PP already has two power projects that run on these gases. The PP has been running these projects for last 8 years. However despite of 8 years of experience in setting up and operating similar projects the PP as it appears didn't have sufficient experience and expertise to check the veracity of the claims made by the boiler manufacturer, especially when the boiler manufacturer had no such similar track record. Now isn't this interesting.

How can unavailability of corex and BFG be a barrier, this should have been considered while making the capacity planning. If the PP felt that the waste gases were no sufficient to generate 130 MW of power then the capacity should have been reduced, rather than the saying the project faces barrier because of lack of availability of waste gas.

Para 2, page 45: Local stakeholder consultation meeting to discuss stakeholder concerns on the proposed Clean Development Mechanism (CDM) project – waste gas use for electricity generation at JSW Steel, was held at 11:00 a.m. on 26th May 2007 at J Max, JVSL Township, Vidyanagar, Dist. Bellary, Karnataka, India.

The Project is said to have been implemented in 2004, stakeholder consultation should ideally be carried out in two levels, once at pre-implementation stage and then at post-implementation stage. The PDD doesn't mention anything about the pre-implementation stakeholder consultation. We are also not able to understand why the stakeholder consultation was held in 2007 i.e. after a delay of four years from the project implementation. The PP has two more registered CDM projects both of which entered the CDM pipeline

some time in 2005,clearly the PP can not claim ignorance to CDM rules and procedures for reasons of delay in holding the stakeholder consultation.