Comment # 1

The competition for fuel leads to a leakage problem that is not mentioned by the project. Given biomass plants can fire up to 30% coal in case of biomass shortage, the competition for biomass from this plant could well directly lead to the use of coal in other plants. Depending on the shape of the supply and demand curves, the addition of this one facility could cause serious shifts to coal at the margin for several facilities; in theory it could nullify the carbon benefit of the project.

Private sector participation in power industry is slowly gaining momentum in the country and was limited in India when the project proponent started construction of the project activity. After announcement of the private power policy in 1991, a total capacity of only 7000 MW from private power plants has so far been commissioned (around 7% share in total installed capacity in the country) in the country. The total installed capacity of biomass power plants in the state of Andhra Pradesh is of around 100 MW before the construction start of Satyamaharshi Power plant which was around 25% of the total projected potential of 410.55 MW by NEDCAP.

The total surplus biomass availability in the Guntur District where plant is located is around 564,066 MT[1] per year. This is sufficient enough to generate power of more than 50 MW using biomass as fuel. The present installed capacity of biomass based power plants in the district as of today is 22.5 MW and the details are as given below:

Sl. No	Plant Name	Commissioned on	Plant Capacity, MW
1	Jocil Limited	March 2001	6
2	KMS Power Pvt. Ltd	July 2002	6
3	Matrix Power (P) Ltd	August 2001	4.5
4	Satyamaharshi Power Corporation Ltd (project activity)	July 2004	6
	Total		**22.5**

Based on the above statistics, it is clear that the shortage of biomass due to the installation of this project plant is nil which might force others to use coal as supplementary fuel as there is sufficient surplus biomass is available in the region. Also, as per the MNES guidelines[2] on

[1] Report on "Socio Economic impact assessment of biomass power plants in India" prepared by Administrative Staff College of India (ASCI), Hyderabad submitted to Ministry of Non Conventional Energy Sources (MNES), Government of India on 27th June 2005.
[2] Annexure – I of document 3/95/2002-CPG of Government of India, Ministry of Non-conventional Energy Sources (Power Group) dated October 22, 2002.

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usage of fuels, it states that "Mix of conventional and/or non conventional fuel, up to 30% of total yearly energy usages,

". Hence, each plant operating with biomass need to fulfill this criteria to use any coal in their plant.

Comment #2:

Secondly, related to leakage, the project states they may have to procure biomass from farther away to ensure a continuous supply – the leakage discussion ignores transport, stating that as coal is also transported, there is no difference under the project and baseline cases. However, this ignores the transport emissions per unit of fuel – biomass is delivered truck by truck to small facilities, while coal is delivered by ship and train in massive quantities, such that the per joule transport emission is likely to be much lower for coal than for biomass

Response:

Firstly, considering the sufficient biomass available in the region as per the reports, the question of procuring biomass from longer distances does not arise. Biomass is sufficiently available in the region within 50 km range (maximum as against present 30 km range). Considering the requirement of around 60000 MT of biomass per annum, the estimated emissions due to transportation are 246 tons per annum.

Biomass to be procured	60,000 MT
Average Distance between project site and biomass collection centers	50 km
Biomass load per truck	8 MT
Number of return trips	7,500
Consumption of Diesel per trip	13 liters (4km/litre)
Total Diesel consumption	93,750 liters p.a
CO_2 emission factor for Diesel	74.10 tons CO_2 / TJ (as per IPCC guidelines)
CO_2 emission per annum	246 tons

Considering the lowest emissions due to transportation, the same has been neglected. Also, as the emissions due to the transportation of coal to power plants in baseline emission calculations are also not considered, these emissions are neglected considering the emissions due to transportation of coal to power plants will definitely more than 246 tons.

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Comment # 3:

It is not clear which version of SSC methodology I.D is used; the PDD mentions version 5, which is no longer valid. But the validation report states that it has reviewed version 07, from 28 November 2005. If the version used in the PDD is version 5, it has to be adjusted to current version 8, valid from 3 March 2006 onwards. Furthermore, the calculation of the baseline does not fulfill the requirements of the methodology as the PDD states on p.36 "As per the availability, actual generation figures as against the sector wise installed capacity were used. Wherever the break up of generation was not available, proportionate calculated figures were used so as to match the total energy availability." This approach would have required a request for deviation..

Response:

Version 07 of AMS I.D is only used in the PDD and the text for the same is not changed in the PDD. Baseline emission factor is calculated as per the latest data available for all the years considered and are based on the actual data available for each type of generation (coal, gas, oil, renewable etc). As per the suggestions from DOE, the baseline development methodology revised and emission factor estimated based on the actual generation figures as against the sector wise installed capacity and no proportionate calculated figures were used anywhere in the calculations. Supporting documents for all the values used in the calculations are available and verified by DOE. The text highlighting the baseline development procedure has not been changed in the PDD as per the revised procedure adopted based on latest version of methodology. The baseline emission factor calculation sheet for the plant indicates the above mentioned approach.

Comment # 4:

The baseline data excel sheet mentioned n the PDD as "Enclosure II" is not available in the PDD.

Response:

Enclosure II in the PDD is attached separately and is not a part of the PDD.

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Comment # 5:

The monitoring plan in the PDD does not specify how and how often the carbon content of coal will be measured. In India, carbon content of coal varies strongly according to the mine and there is recurring discussion on misreporting about coal quality. Furthermore, the monitoring plan does not specify monitoring the type of biomass which is key in checking whether the biomass is from a sustainable source.

Response:

The monitoring plan in the PDD specifies that the measurement of carbon content of coal will be done for every batch of the coal received in the plant. This will be done by the reputed laboratory approved by the Government of India or Government of Andhra Pradesh. In addition, the plant also monitors the calorific value of coal for every batch received in the plant by reputed laboratory. These values are well documented and are available for the verification at any time.

Plant monitors each type of biomass used in the plant and well documented all the details related to the various biomass material used in the plant. Records of the same are verified by DOE during the validation visit. Based on the report prepared by ASCI, Hyderabad on Socio economic impact assessment of biomass power plants, the total surplus biomass availability in the Guntur District where plant is located is around 564,066 MT per year. This is sufficient enough to generate power of more than 50 MW using biomass as fuel. The present installed capacity of biomass based power plants in the district as of today is 22.5 MW. Hence the question of usage of non permitted biomass materials by NEDCAP and AP Forest Department in the plant does not arise. Biomass fuels like Juliflora, Casuarina, Subabul, Eucalyptus, Mango Cuttings, Cashew Cuttings and Saw Dust, Rice Husk, Bengal gram and Black gram stalks, Maize stalks, Palmoil Wastes, Coconut shell and logs, Chilli stalks, Bagasse etc. are allowed as per the NEDCAP guidelines (proof for the same is submitted to DOE). Since from the beginning, plant uses only permitted biomass fuels in the plant. Most of the plants in the state have applied to pollution control board to increase the fuel types in their consent as per the guidelines available from the NEDCAP. As the plant maintains stricter compliance with the regulations of the forest department and uses only permitted biomass fuels by NEDCAP and forest department, it is well established that use of other non permitted fuels is nil in the plant. Also, please note that there is no forest cover in the region within 80 kms from the plant location.

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Comment # 6:

The PDD says that up to 30% can be fired by coal under MNES rules, while the validation report says that figure is 25%, and the 30% is taken for conservativeness. One must be wrong, but more to the point, if 25% is the legal maximum, there is no point in taking 30%, as it wouldn't be allowed anyway..

Response:

As per the guidelines from Ministry of Non conventional Energy Sources (MNES), Government of India, usage of 30% mix of conventional and/or non conventional fuel, of total yearly energy usages is allowed. And as per the consent from AP Pollution control board, 25% coal usage is permitted. To be on conservative estimation, the guideline from MNES is followed. However, as the plant is answerable to AP Pollution board on usage of coal in the plant, calculations will be revised as per 25% coal allowance.

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