

**STATE EXPERT APPRAISAL COMMITTEE**  
**GOVERNMENT OF PUNJAB**  
**(Office of the Secretary)**

Vatavaran Bhawan, Nabha Road, Patiala-147001.

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**No. SEAC/111/39832**

**Dated : 31/10/2008**

**Speed Post**

To

M/s Green Planet Energy Pvt. Ltd.,  
142-143, 2<sup>nd</sup> Floor,  
Sector 34-A, Chandigarh.

**Sub: Application for grant of environmental clearance of M/s Green Planet Energy Pvt. Ltd. to establish a 10 MW Biomass based power plant at Vill. Pakho Kalan, Tehsil and Distt. Barnala.**

This has reference to your application for grant of environmental clearance for setting up a 10 MW (Rankine Cycle 6 MW and Otto cycle 4 MW) Biomass based power plant to be established at Vill. Pakho Kalan, Tehsil and Distt. Barnala.

The case was discussed in the 13<sup>th</sup> meeting of State Expert Appraisal Committee held on 11/10/2008. Sh. N.S. Thethi, Project Director informed that no construction has been started at this site.

After deliberations on the project details and the proposed Terms of Reference given by the industry, it was decided by the Committee to categorise the project into B1 category. After further deliberations, the Committee approved the following Terms of Reference for conducting Environmental Impact Assessment Study of the proposed project:-

1. All the coordinates of the plant site should be provided with toposheet.
2. The study area should cover an area of 10 km radius around the proposed site.
3. Land use of the study area as well as the project area shall be given.
4. The detailed process flow sheet diagram of the process should be given.
5. Location of any National Park, Sanctuary, Elephant / Tiger Reserve (existing as well as proposed), eco-sensitive area, interstate boundary, migratory routes, if any, within 10 km. of the project site shall be specified and marked on the map.
6. Layout map of 500 metre radius around the project site indicating important buildings, existing residential areas, if any.
7. Land requirement for the project to be optimized. Item wise break-up of land requirement and its availability to be furnished alongwith complete layout plan of the site indicating proposed locations of different machineries / utilities etc.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Impact of the project on drainage of the area and the surrounding area should be given.
10. Information regarding surface hydrology and water regime and impact on the same, if any, due to the project should be provided.
11. Source of water and its availability. Commitment regarding availability of requisite quantity of water from the competent authority.
12. Ground water potential including water harvesting, recharge and water balance of the area: Ground water recharge and balance available for present and future use.

13. Details of rainwater harvesting and how it will be used in the plant.
14. Sustainability study for groundwater in the existing tubewells and quality of groundwater as per BIS: 10500 (drinking water standards) should be provided.
15. Quantum of wastewater generation from various sources, treatment scheme and mode of disposal. Also, impacts of wastewater on the environment should be given.
16. Water conservation measures proposed in the project should be given.
17. Re-circulation and reuse of treated effluents within the plant. In case of any proposed discharge, its quantity, quality and point of discharge, users downstream etc. should be provided.
18. Details of water balance taking into account the reuse and re-circulation of effluents.
19. Model study for prediction of ground water contamination and suggested mitigating measures to minimize the pollution level.
20. One season site-specific climatological and meteorological data (except monsoon) shall be provided. The climatological data should be in respect of temperature, humidity, wind speed and directions, wind rose and rainfall.
21. One season Ambient Air Quality (AAQ) data (except monsoon) to be given alongwith the dates of monitoring. The parameters to be covered shall include SPM, RPM, SO<sub>2</sub> and NO<sub>x</sub>. Monitoring shall be carried out for at least 6 different locations all around the project within 10 km. radius. The location of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors including reserved forests. There should be at least one monitoring station in the upwind direction.
22. Impact of the project on the AAQ of the area, details of the model used and the input data used for modelling should also be provided. The air quality contours may be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The wind roses should also be shown on this map. It may be kept in view that SPM in the stack emissions are to be restricted within 150 mg/Nm<sup>3</sup>.
23. Complete analysis of each fuel to be used alongwith assessment of quantity of such fuels required, its source and mode of transportation.
24. Detailed description of bio-mass collection centers, if any, collection area and storage, transportation of bio-mass to the plant site and pre-conditioning of the bio-mass before its use in the plant and its impact on the environment such as air, water, land and ecology.
25. Assessment of ash and solid residue generation and detailed management plan for disposal / utilization of such ash / solid residue.
26. Availability of land for storage / disposal of ash and solid residue in environmentally appropriate manner, for a period of at least five years and proper ash management plan such as removal of this ash and its disposal etc. so that sufficient land is available for ash and solid residue disposal for the life of the project.
27. Details of flue gases such as its quantum, particulate matter concentration/ distribution and velocity etc.
28. Feasibility report of the proposed air pollution control device to be installed, its efficiency and efficacy etc.

29. Representation of SPM, RSPM, SO<sub>2</sub> and NO<sub>x</sub> to be indicated in a tabular form given below:

S.N.	Locations of Monitoring Station (name, distance & directions)	Background Level	Predicted conc.	Resultant conc.	Air quality Standards
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30. Details of green belt i.e. land with not less than 1000 trees per hectare giving details of species, width of plantation, planning schedule etc. and the details of the model with which this green belt has been designed, alongwith input parameters.
31. Details of hazardous waste to be generated and its disposal vis-à-vis impacts on the environment.
32. Impact due to present and future surface transportation activities by road.
33. Details regarding infrastructure facilities such as sanitation, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
34. Public hearing points to be raised and commitment of the project proponent on the same. An action plan to address the issues raised during public hearing and the necessary allocation of funds for the same should be provided.
35. Measures of socio economic influence to the local community proposed to be provided by project proponent. As far as possible, quantitative dimensions to be given.
36. Details of flora and fauna duly authenticated should be provided. In case of any scheduled fauna, conservation plan should be provided.
37. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure would need to be constructed and the agency responsible for the same with time frame.
38. Detailed Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with itemwise cost of its implementation.
39. Impact of various chemicals to be used in the process of the industry on the environment of the area and the mitigation measures to be adopted thereof.
40. Risk assessment to be undertaken and based on the same, proposed safeguard measures should be provided.
41. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.
42. A detailed environmental protection budget would also be presented and earmarked.

The source of getting secondary data, wherever applicable, should be intimated alongwith its reference. Generic structure of Environment Impact Assessment Document, given in Appendix III of EIA Notification 2006 shall be followed in preparation of Rapid Environmental Impact Assessment report.

Besides the above, the following general points / guidelines will also be followed:

- a) All documents to be properly referenced with index, page numbers and continuous page numbering. A uniform system of units to be used while reporting data.
- b) Where data is presented in the report especially in table, the period in which the data was collected and the source should invariably be indicated.

- c) The questionnaire for environmental appraisal of thermal power projects as devised earlier by the Ministry of Environment & Forests shall also be filled and submitted.
- d) The list of abbreviations used in preparing the report should be given in a separate index.

In addition to the above, information on the following may also be incorporated in the EIA report.

1. Is the project intended to have CDM-intent?
  - (i) If not, then why?
  - (ii) If yes, then
    - (a) Has PIN (Project Idea Note) {or PCN (Project Concept Note)} submitted to the ?NCA? (National CDM Authority) in the Ministry of Environment & Forests?
    - (b) If not, then by when is that expected?
    - (c) Has PDD (Project Design Document) been prepared?
    - (d) What is the ?Carbon Intensity? from your electricity generation projected (i.e. CO<sub>2</sub> Tons/MWH or Kg/KWH)
    - (e) Amount of CO<sub>2</sub> in Tons/year expected to be reduced from the baseline data available on the CEA?s web-site ([www.cea.nic.in](http://www.cea.nic.in))
2. Notwithstanding 1 (i) above, data on (d) & (e) above to be worked out and reported.

The industry should prepare draft EIA / EMP Report for its project based on above Terms of Reference (TOR) and apply to the Chairman, Punjab Pollution Control Board for conducting public hearing as per EIA Notification, 2006 on submitting EIA / EMP prepared by the industry as per TORs.

After completing the process of public hearing / public consultation, the industry should submit final EIA / EMP Report alongwith Executive Summary to the State Expert Appraisal Committee after incorporating all the issues raised during public hearing / public consultation for Appraisal of its project.

**Endst. No.** \_\_\_\_\_

**Secretary (SEAC)**  
**Dated** \_\_\_\_\_

A copy of the above is forwarded to the following for information and necessary action :-

1. The Secretary to Govt. of India, Ministry of Environment & Forests, Govt. of India, CGO Complex, Lodhi Road, New Delhi.
2. The Director, Northern Regional Office, Ministry of Environment & Forests, Bays No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh.
3. The Member Secretary, State Environment Impact Assessment Authority, Vatavaran Bhawan, Nabha Road, Patiala.
4. The Member Secretary, Punjab Pollution Control Board, Vatavaran Bhawan, Nabha Road, Patiala.
5. The Senior Environmental Engineer (Computer), Punjab Pollution Control Board, Head Office, Patiala. He is requested to display the approved Terms of Reference given to the industry on the website of State Environment Impact Assessment Authority.

**Secretary (SEAC)**