

**BEFORE THE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE, CHENNAI**

**APPEAL No. 41 OF 2017**

**IN THE MATTER OF:**

Human Rights Forum,  
R/o. Hyderabad & others

....

Applicant (s)

Versus

Union of India,  
Through the Secretary,  
MoEF&CC, New Delhi & 3 Ors.

....

Respondent(s)

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**Place: Hyderabad**

**Date: 31-01-2022.**



①

**REPORT DATED 31.01.2022 OF THE ENVIRONMENTAL ENGINEER, TELANGANA STATE POLLUTION CONTROL BOARD (TSPCB), REGIONAL OFFICE, KOTHAGUDEM (RESPONDENT No. 3) IN APPEAL NO. 41 OF 2017 FILED BY HUMAN RIGHTS FORUM.**

It is to submit that Appeal No. 41 of 2017 filed by Human Rights Forum through S. Jeevan Kumar, H.No. 3-12-117/A2/B, Pasam Satish colony, Opp: TV Studio, Ramanthapur, Hyderabad – 500 013 in Hon'ble NGT, Chennai by challenging the Environmental Clearance (EC) dated 15.03.2017 granted to Telangana State Power Generation Corporation Limited for its 4 x 270 MW Sub Critical Technology Bhadradi Thermal Power Plant at Ramanujavaram, Edullabayyaram & Seetharampuram Villages of Manuguru & Pinapaka Mandals, Bhadradi Kothagudem District, Telangana State.

Present status of M/s Bhadradi Thermal Power Plant at Ramanujavaram, Bhadradi Kothagudem District is submitted as below:

1. M/s Bhadradi Thermal Power Station (BTPS) is a Unit of Telangana State Power Generation Corporation Limited and it is a Thermal Power Plant of capacity 1080 MW (4x270 MW) located in Ramanujavaram, Edullabayyaram & Seetharampuram Villages of Manuguru & Pinapaka Mandals, Bhadradi Kothagudem District.
2. The industry obtained TOR from MoEF & CC, Govt. of India vide order dated 23<sup>rd</sup> June 2015 for conduct of Public Hearing. Copy of the same is enclosed as Annexure – I.
3. As per the TOR dated 23.06.2015 and request of the industry, the Regional office, TSPCB has conducted Environmental Public Hearing for the Thermal Power Plant on 17.03.2016 and forwarded the minutes to the MoEF & CC, New Delhi on 29.03.2016. Copy of the same is enclosed as Annexure - II.
4. The MEF & CC, New Delhi has issued Environmental Clearance vide order dated 15.03.2017 for establishment of Thermal Power Plant of capacity 1080 MW (4x270 MW). Copy of the EC is enclosed as Annexure - III.
5. The industry obtained Consent For Establishment (CFE) from T.S. Pollution Control Board vide order dated 30.03.2017 for establishment of Thermal Power Plant of capacity 1080 MW (4x270 MW). Copy of the same is enclosed as Annexure - IV.
6. The industry has obtained latest CFO vide order dated 14.10.2021 with validity period upto 31.05.2026 for 810 MW (3 x 270 MW). Copy of the same is enclosed as Annexure - V.

Submitted for kind perusal.

Date: 31.01.2022  
Place: Kothagudem

  
ENVIRONMENTAL ENGINEER



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Annexure-I : TOR Letter

Annexure -I



No. J-13012/02/2015 - IA. I (T)  
Government of India  
Ministry of Environment, Forest and Climate Change

Indira Paryavaran Bhawan, Jor Bagh Road,  
Aliganj, New Delhi-110003

Dated: 23<sup>rd</sup> June, 2015

To

M/s. Telangana State Power Generation Corpn. Ltd. (TSGENCO)  
(A Government of Telangana State Undertaking)  
Vidyut Soudha  
Hyderabad- 500 082

Tel. No. 040-233499417; Fax: 040-23499418

Sub: *Manuguru Thermal Power Project of 1080 (4x270) MW at Villages Ramanujavaram, Eddulabayyaram & Seetharampuram, Mandals Manuguru & Pinapaka, District Khammam, Telangana by M/s Telangana State Power Generation Corporation Ltd. (TSGENCO) – reg. ToR.*

Sir,

The undersigned is directed to refer your letters dated 03.02.2015, 09.02.2015 and 16.04.2015 on the above subject.

2. The proposal was considered by the Expert Appraisal Committee (Thermal Power) during its 32<sup>nd</sup> & 36<sup>th</sup> Meetings held during 23<sup>rd</sup>-24<sup>th</sup> February & 19<sup>th</sup>-20<sup>th</sup> May, 2015 respectively for determination of the Terms of Reference (TOR) for undertaking detailed EIA and preparation of EMP in accordance with the provisions of the EIA Notification dated September 14, 2006.

3. Based on the information/clarification and documents submitted by you with regard to the above-mentioned project proposal, the Committee has prescribed the following TOR for preparation of the EIA and EMP Report.

- i) *Shall explore the feasibility of installing Super Critical Technology. If subcritical is proposed, prior approval of MoP shall be submitted. Accordingly, the EIA/EMP shall be prepared.*
- ii) *Action plan for development of green belt in 33% of the area and thick green belt between the Road and the River.*
- iii) *The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.*
- iv) *Vision document specifying prospective long term plan of the project shall be formulated and submitted.*
- v) *Latest compliance report duly certified by the Regional Office of MoEF for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.*
- vi) *The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.*
- vii) *Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along*

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- with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
- viii) Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.
  - ix) The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
  - x) Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.
  - xi) Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.
  - xii) Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.
  - xiii) If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.
  - xiv) The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
  - xv) Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
  - xvi) Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.
  - xvii) Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.
  - xviii) A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
  - xix) A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
  - xx) Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash.
  - xxi) The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water

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Annexure-I : TOR Letter

- balance diagram. Details of water balance calculated shall take into account reuse and re-circulation of effluents.
- xxii) Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
- xxiii) It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.
- xxiv) Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.
- xxv) Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
- xxvi) Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
- xxvii) Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.
- xxviii) Feasibility of near zero discharge concept shall be critically examined and its details submitted.
- xxix) Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.
- xxx) Plan for recirculation of ash pond water and its implementation shall be submitted.
- xxxi) Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
- xxxii) Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.
- xxxiii) Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
- xxxiv) If the area has tribal population it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
- xxxv) A detailed CSR plan along with activities wise break up of financial commitment shall be prepared. CSR component shall be identified considering need based assessment study and Public Hearing issues.

- Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified. Separate budget for community development activities and income generating programmes shall be specified.
- xxxvi) While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CSR details done in the past should be clearly spelt out in case of expansion projects.
- xxxvii) R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.
- xxxviii) Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
- xxxix) Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conductive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.
- xl) One complete season site specific meteorological and AAQ data (except monsoon season) as per latest MoEF Notification shall be collected and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.
- xli) In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).
- xl ii) A list of industries existing and proposed in the study area shall be furnished.
- xl iii) Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.
- xl iv) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
- xl v) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.

- (vi) Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted.
- (vii) Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
- (viii) For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.
- (ix) Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
- i) EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
- ii) A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be carried out. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Mock drills shall be suitably carried out from time to time to check the efficiency of the plans drawn.
- iii) The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.
- iii) Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary with tree density of 2000 to 2500 trees per ha with a good survival rate of around 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO<sub>2</sub> and other gaseous pollutants and hence a stratified green belt should be developed.
- liv) Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months.
- lv) Corporate Environment Policy
  - i. Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.
- iv. Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.

- lvi) Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished.

- 4. Besides the above, the following general points shall be followed:
  - a. All documents to be properly referenced with index, page numbers and continuous page numbering.
  - 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. Where the documents provided are in a language other than English, an English translation should be provided.
  - d. The Questionnaire for environmental appraisal of thermal power projects as devised earlier by the Ministry shall also be filled and submitted.
  - e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/ EMP reports prepared by them and data provided by other organization / Laboratories including their status of approvals etc. In this regard circular no. F.No. J-11013/77/2004-IA-II (I) dated 2<sup>nd</sup> December, 2009 is posted on the Ministry's website <http://www.moef.nic.in> may be referred.

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 PNCA? (National CDM Authority) in the MoEF?
    - 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 shall be worked out and reported.

- 5. The Environmental Clearance shall be applied only after fuel and water linkages are firmed up.

6. After preparing the Draft EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned issues, the same shall be submitted to the SPCB for conducting the public hearing as per procedure of EIA notification 2006. The issues emerged during public hearing shall be further incorporated in the Draft EIA/EMP report. The final EIA/EMP report along with public hearing report and the requisite documents (*including written objections, if any*) shall be submitted to the Ministry for appraisal by the Expert Appraisal Committee for consideration of awarding environmental clearance under the provisions of Environmental Impact Assessment notification dated September 14, 2006.

7. The TORs prescribed shall be valid for a period of three years from the date of issue for submission of EIA/ EMP reports, after public consultation.



(B.B. Barman)  
Scientist 'F'

Copy to:

1. The Chairman, Telangana State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanath Nagar, Hyderabad- 500 018.
2. The Additional PCCF (Central), Regional Office, Ministry of Environment, Forests and Climate Change, 1<sup>st</sup> & 2<sup>nd</sup> Floors, HEPC Building, 34, Cathedral Garden Road, Nungambakkam, Chennai- 600034.
3. The District Collector, Khamman District, Govt. of Telangana.
4. Guard file.
5. Website of MoEF&CC



(B.B. Barman)  
Scientist 'F'





9  
ANNEXURE - II  
TELANGANA STATE POLLUTION CONTROL BOARD  
REGIONAL OFFICE :: KOTHAGUDEM

Beside: M.R.O. Office, 'A' Power House Basti, SCCL Head office area,  
Kothagudem – 507 101

V. Ravi Shankar, M.Tech.,  
ENVIRONMENTAL ENGINEER.

**Regd. POST**  
**WITH ACK DUE**

Ph. No. (08744) 243165  
E-mail: kgm.ro.ee@pcb.ap.gov.in

Lr.No. 429/PCB/RO/KGM/PH/2016- 1206

Date: 29 -03-2016.

To,  
The Director (IA Division),  
Ministry of Environment, Forests & Climate Change,  
Govt. of India, Indira Paryavaran Bhavan,  
Jor Bagh Road, Jor Bagh,  
New Delhi – 110003.

Sir,

Sub: TSPCB – RO, Kothagudem – Environmental Public Hearing (EPH) for the proposed 1080 MW (4 x270 MW) Thermal Power Plant of M/s Telangana State Power Generation Corporation Limited (M/s Bhadradi Thermal Power Station) at Ramanujavaram, Edullabayyaram & Seetharampuram Villages of Manuguru & Pinapaka Mandals, Khammam Dist. - Recording of EPH proceedings & CD along with representations – Communicated – Reg.

Ref: 1. Notification S.O. 1533 dt.14.9.2006 issued by MoE&F, GoI  
2. Environmental Public Hearing conducted on 17.03.2016.

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It is to submit that, as per TOR, the Environmental Public Hearing for the proposed 1080 MW (4 x270 MW) Thermal Power Plant of M/s Telangana State Power Generation Corporation Limited (M/s Bhadradi Thermal Power Station) at Ramanujavaram, Edullabayyaram & Seetharampuram Villages of Manuguru & Pinapaka Mandals, Khammam Dist. was conducted on 17.03.2016 at 10.30 AM in the premises of Bhadradi Thermal Power Station near Pylon area, Seetharampuram (V), Uppaka (GP), Pinapaka (M), Khammam District. The District Collector, Khammam District has conducted the EPH proceedings.

Further it is to submit that the Proceedings of EPH along with compact disc (CD), statement along with copies of representations and press clippings are submitted for kind perusal and necessary action.

Encl:

- 1) EPH proceedings.
- 2) CD
- 3) Statement along with representations (14 Nos.).
- 4) Press clippings.

Yours faithfully

o/c

ENVIRONMENTAL ENGINEER  
ENVIRONMENTAL ENGINEER  
T.S. Pollution Control Board  
Regional Office, KOTHAGUDEM

Copy to

1. The Member Secretary, T.S.Pollution Control Board, Head office, Sanathnagar, Hyderabad for information.
2. The Chief Engineer/Civil/Thermal, M/s Telangana State Power Generation Corporation Limited, Vidyut Soudha, Khairatabad, Hyderabad – 500 082 along with petitions for kind information. He is also requested to furnish replies to the petitions received from the public directly to the Ministry of Environment, Forests & Climate Change, New Delhi.

Received  
13/3/16  
15/3/16

**PROCEEDINGS OF THE ENVIRONMENTAL PUBLIC HEARING FOR THE PROPOSED 4 X 270 MW COAL BASED THERMAL POWER PLANT BY M/S TELANGANA STATE POWER GENERATION CORPORATION LIMITED (M/S BHADRADRI THERMAL POWER STATION) AT RAMANUJAVARAM, EDULLABAYYARAM & SEETHARAMPURAM VILLAGES OF MANUGURU & PINAPAKA MANDALS, KHAMMAM DISTRICT ON 17.03.2016 AT 10.30 AM AT PYLON AREA IN THE PREMISES OF PROPOSED SITE OF BHADRADRI THERMAL POWER STATION, SEETHARAMPURAM (V), UPPAKA (GP), PINAPAKA (M), KHAMMAM DISTRICT.**

The following panel members were present:

Sl. No.	Name of the Panel Member	
1.	Sri Lokesh Kumar, D.S., I.A.S., Collector & District Magistrate, Khammam	Chairman of the Public hearing Panel
2.	Sri V. Ravi Shankar, Environmental Engineer, T.S. Pollution Control Board, Regional Office, Kothagudem.	Member of the Public hearing Panel

The following departmental officials took part in the hearing:

Sl. No.	Name & Designation
1.	Smt. D. Divya, IAS, Joint Collector & Addl. Dist. Magistrate, Khammam
2.	Sri Rajeevgandhi Hanumanthu, IAS, Project Officer ITDA, Bhadrachalam
3.	Sri M.V. Raveendranath, Sub-Collector (FAC), Paloncha.
4.	Sri D. Thirumalachary, Tahsildar, Manuguru Mandal, Khammam District
5.	Sri B. Ganya, Tahsildar, Pinapaka Mandal, Khammam District
6.	Sri M. Venkat Narsu, AEE, TSPCB, RO, Kothagudem.

The following representatives of the industry were present:

S. No.	Name & Designation
1.	Sri D. Prabhakar Rao, Chairman & Managing Director, Telangana State Generation Corporation Limited, Hyderabad.
2.	Sri K. Venkata Narayana, Chairman & Managing Director, Telangana Northern Power Distribution Company Limited, Warangal.
3.	Sri C. Radhakrishna, Director (Projects), Telangana State Generation Corporation Limited, Hyderabad.
4.	Sri A. Ajay, Chief Engineer, Civil Thermal, Telangana State Generation Corporation Limited, Hyderabad.

At the outset, the Environmental Engineer, TSPCB, Regional Office, Kothagudem, while welcoming the District Collector, Khammam District, the Joint Collector, Public representative and public, explained about the EIA Notification 2006 of the Ministry of Environment and Forests, Government of India's EIA Notification No. S.O. 1533 (E) dated 14<sup>th</sup> September 2006. The Environmental Public hearing is made mandatory for certain category of projects to obtain prior environmental clearance. He stated that M/s Telangana State Power Generation Corporation Limited (M/s Bhadradri Thermal Power Station) has proposed 4 x270MW (1080 MW) Coal based Thermal Power Plant at Ramanujavaram, Edullabayyaram & Seetharampuram ( H/o Uppaka Panchayath) Villages of Manuguru & Pinapaka Mandals, Khammam Dist.

The industry obtained TOR (Terms of Reference) from the Ministry of Environment and Forests (MoEF), GoI, New Delhi and submitted draft EIA report to the Pollution Control Board and requested to conduct public hearing.

Accordingly, a press notification was published in Telugu and English daily news papers on 13-02-2016 (i.e., Namaste Telangana Telugu Daily News paper and The Hindu English Daily News paper).

The said notification invited public suggestions, concerns, comments and objections, if any, on the proposed project. He added that the copies of Draft Environment Impact Assessment/Environmental Management Plan (EIA/EMP) report and the executive summary in Telugu & English were made available to the people as mentioned in the press notification.

He further informed that the hearing is intended only to record the views, opinions, objections and suggestions of the participants and same will be conducted in a transparent manner and the proceedings will be video recorded. The minutes of the hearing along with the representations will be forwarded to the MoEF, New Delhi for further course of action. He then requested the District Collector, Khammam to preside over the public hearing process.

A large public gathering, Hon'ble MP, Mahabubabad Constituency, Hon'ble MLA, Pinapaka Constituency and other public representatives have attended the public hearing.

**The Collector & District Magistrate, Khammam** requested the officials of the TSGENCO to explain in detail, the salient features of the proposed project.

**Sri D. Prabhakar Rao, Chairman and Managing Director- TSGENCO** welcomed the dignitaries and the public and expressed the following:

- He reported that all are aware of importance of power and power situation prior to Tealngana state formation.
- There is a power deficit of 2700 MW after formation of Telangana State for which the Government is purchasing power from other states at higher cost.
- In the ambitious goal of building a 'Golden Telangana', The Hon'ble Chief Minister has directed TSGENCO to produce additional power to overcome the power deficit and to meet the power requirement for Water Grid scheme, Lift irrigation, Industries and other needs.
- In this regard, TSGENCO has proposed to establish power plants in which 800 MW Kothagudem Thermal Power Station (Stage-VII) at Paloncha, 1080 MW (4x270 MW) Bhadradri Thermal Power Station at Manuguru in Khammam district and 4000 MW Yadadri Thermal Power Station at Damaracherla in Nalgonda district with total investment of Rs.39,000 Crores. For this, they obtained financial closure from REC and PFC which are Central Government agencies.
- Hence, the TSGENCO has proposed this 4 x 270 MW coal based thermal power project with project cost of Rs.7929.6 Crores at this location.

- Central Government Organisation, Bharat Heavy Electricals Ltd (BHEL) has come forward to complete this proposed project within 24 months, hence the construction of this project was entrusted to the BHEL so as to overcome the present power deficit.
- Application was made for Environmental Clearance to the Ministry of Environment & Forest (MoEF), Govt. of India, New Delhi in February 2015 and they issued Terms of Reference (TOR) in June 2015 for this project.
- Based on TOR, Environmental Impact Assessment study was completed in September 2015 and started the civil construction works in view of the target of the 24 months for project completion. Mean while, Human Rights Forum, Vizag has filed petition before the Hon'ble National Green Tribunal, Chennai. The Petitioner made the false propaganda on sub – critical technology which affects the environment.
- In this regard, he explained that the Thermal Power Plants have to meet the environmental standards prescribed by the MoEF & CC and State Pollution Control Board (SPCB) which are same for sub-critical technology and super critical technology. Accordingly, this project was designed and allocated Rs. 388 Crores to install Electro Static Precipitators, Effluent Treatment Plant, Ash water recovery system with recycling arrangement and Sewage Treatment Plant with latest technology for Environmental Protection.
- He informed that there is no violation of environmental norms and the project was taken up sub – critical technology and obtained consent from the Ministry of Power. The corporation adhered to the stipulated procedure in regard for the proposed power project.
- Under Corporate Social Responsibility activities, they proposed to provide roads, drainage, water supply and other activities etc. for which they allotted Rs. 29 crores. The CSR activities will be taken up in consultation with the district administration in the villages during project execution. A good green belt will be developed within the proposed plant premises.
- They deposited an amount of Rs. 59.50 crores with the District Collector for payment of compensation to the lands acquired for proposed project and they have information that most of the compensation distribution was completed. He requested the District Collector to distribute the compensation to the land owners if any one left. As per G.O. Ms. No. 98, jobs will be provided to the land losers based on their qualification. Initially they proposed 300 jobs to the project affected families and they have already given written assurance to the District Collector in this regard. They proposed to provide another 46 jobs (i.e., total of 346) by considering the request of the affected people. The jobs will be given after start of plant operations.
- The proposed project will give more direct and indirect employment, hence he requested the public strongly to extend their co-operation for the proposed project so as to complete the project early thereby lead to state development progressively.

**The District Collector** informed that R&R issues are mostly completed and few issues are pending and they received the written employment assurance from the project authority. He stated that these issues will be placed in R&R committee. He requested the management to explain the environmental issues of the project.

**Sri C. Radhakrishna, Director/Projects-TSGENCO** has expressed the following while explaining about the project:

- As per the guidelines of Central Electricity Authority (CEA), 48 months are required to complete any thermal power project. If the project is constructed speedily then the project can be completed within 46 months.
- After formation of Telangana, to overcome the present power deficit, the state government has allotted the proposed 4 x 270 MW (1080 MW) Coal based Thermal Power Plant to M/s Bharat Heavy Electricals Ltd (BHEL) as they have given commitment to complete this proposed project within 24 months.
- In the present situation, the issue was sub critical and super critical technologies in the proposed power plant.
- Now, the country has installed power generation capacity of around 2.5 lakh MW. In which 90% power generation is with the sub – critical technology. The power plants with super critical technology are started since 2014 in India.
- The power plants with 660 MW and above have super critical technology and below 660 MW power plants falls under the sub critical technology. In sub – critical technology, a drum exists in the boiler which produces steam to build required pressure for generation of power. For Super critical technology, no drum for boiler and only turbine have circuits and have three pumps to generate steam which leads to additional cost.
- 4% coal consumption in super critical technology is less than sub critical technology. Efficiency increases from 38 % to 42 % for super critical technology.
- Regarding environmental aspects, the environmental standards prescribed by MoEF & SPCB for super critical and sub critical technologies are same. The Suspended Particulate Matter (SPM) which is present in the flue gas emissions generated in combustion of coal. The SPM standard is prescribed as 50 mg/Nm<sup>3</sup>. Based on this norm, the boiler chimney is proposed for the height of 275 mts for better dispersion of flue gases in the surrounding environment.
- Regarding Sulphur dioxide (SO<sub>2</sub>), there is no sulphur content in the coal mines existing in India. Sulphur content exists in the imported coal which is in the range of 1.8 to 2 %. There is a technology called FGD plant to control sulphur emissions.
- Regarding NO<sub>x</sub> (i.e. Oxides of Nitrogen), there is a limit of 760 mg/Nm<sup>3</sup> for NO<sub>x</sub> in the flue gas emissions. They reduced the NO<sub>x</sub> emissions to 100 mg/Nm<sup>3</sup> by adopting CR (Catalytic Reactors) technology in the proposed project for which they provide equipments and change the boiler design. The rules & norms will be prescribed by the MoEF and accordingly they design the proposed project.

- Hence, he requested not to have any apprehension on sub-critical and super-critical technologies. There is no major difference between these technologies except design and efficiency.
- 765 KVA power transmission lines are required evacuation for super critical technology based power plants which are not exist at present and having only 400 KVA power transmission lines. These transmission lines are maintained by the Power Grid Corporation and they requested them to provide 765 KVA lines in view of the proposed power plants of KTPS, Bhadradri Power Plant and Damarcherla Power Plant. But, Power Grid Corporation informed that they have to take up 765 KVA in next Five Year Plan i.e. 13<sup>th</sup> Plan which will be started in April 2017. Hence, power evacuation has to be carried in existing 400 KVA transmission lines. Hence, the design of the project was taken up based on these aspects only.
- As per the 12<sup>th</sup> Five Year Plan which will end on 31.03.2017, there are 12 Power Projects with sub critical technology, which are under progress and 37 Power projects with sub critical technology are under construction which are to be completed in 13<sup>th</sup> Plan i.e. after 01.04.2017. Hence, there are 49 power projects with sub critical technology under progress all over India.
- The differences between sub-critical and super-critical technologies are drum, coal consumption and efficiency from 38 % to 42 %.
- He requested the public to extend their cooperation for the proposed project for Telangana State and TSGENCO so as to complete two units by 31.03.2017 as per target of the TSGENCO.

**The District Collector** has expressed that the project authority explained on the sub critical and super critical technology in detail and he opined that this will clear the apprehension among the public. He requested the management that they can explain further on sub critical technology. He requested the Hon'ble Member of Legislative Assembly, Pinapaka constituency to express his views in respect of the proposed thermal power plant.

**Sri Payam Venkateswarlu, Hon'ble Member of Legislative Assembly, Pinapaka constituency** while welcoming the proposed thermal power project, he explained following the events behind realising the dream of power plant in his constituency area:

- Earlier, the people made agitation with a demand for establishment of power plant by M/s NTPC in Mondikuntta area.
- He informed that he raised the need of power plant in Manuguru area in the first session of the Hon'ble Assembly after formation of Telangana State as this area is resourced with Railway line, River Godavari water and Coal. He reported that the Hon'ble CM has informed that there is a power deficit of 2700 MW and required to establish the power plants for state development and have Bangaru (Golden) Telangana, hence the Hon'ble CM has given assurance for establishment of power plant in Manuguru area and immediately directed the concerned to prepare the project reports.

- He made efforts in convincing the public to extend their co-operation for establishing the power plant in this area through canvassing in his constituency and also in preparing the project report and coal & water availability reports. He reported that the District Administration has extended their cooperation in materialising the project at the earliest.
- He emphasized the need of industries and to do justice to land losers. He reported that he expressed thanks to the Hon'ble CM for sanctioning the power project and requested to make justice for project affected people i.e. Tribals, Schedule Caste, Back word class and other castes etc.
- There is an apprehension on sub critical and super critical technology among the public and the officials of the project authority have clarified on this issue.
- The industry proposed to install Electro Static Precipitators (ESPs) for control of smoke emissions from the chimney.
- He requested the industry's management to implement latest technology in providing ESPs and increase their capacities periodically to control air pollution to the surrounding environment thereby save the health of the surrounding public.
- He requested to take strong decision in controlling the pollution to avoid affect on agricultural crop, land and water.
- The District Administration has completed compensation to the land losers for which they spend about Rs. 50 Crores. The TSGENCO has given Rs. 59.50 crores to the District Collector for payment of compensation to the lands losers. But, some of the actual land losers are not received compensation so far due to some mistakes by the local Revenue officials.
- He appreciated the District Administration and TSGENCO for their cooperation in giving the compensation. He requested to give compensation to genuine cases and also to people who irrigated in Government and private lands.
- He also requested to give compensation to the people who have lands under Pasupu – Kunkuma (land donated to the daughter during her marriage) and to the villagers residing outside due to their livelihood who are having lands in the village.
- He has noticed that compensation payment cheques are not served to the land losers who are residing outside the village and he requested to give cheques to the land losers even though they are residing outside.
- He requested the industry and District Administration to extend benefits to the youth even though some of them have 2 to 3 months less to the age of 18 years on humanitarian grounds.
- He requested the Revenue officials to finalise the list of land losers and submit to the District Collector as there are only 181 – 182 persons and also requested to give compensation to all.

- The youth have hope on 346 jobs as proposed by the industry and they also having worrying and apprehension in getting job.
- He requested to made agreement in providing jobs and joining to duty from the date operation of the plant at a time so as to provide self confidence and trust in the youth.
- He requested the management to give revised agreement to the District Collector for providing 346 jobs instead of 300 jobs as proposed earlier. He also requested to provide jobs to the children of workers and farmers who are lost their lands.
- He also requested provide jobs to the Rythu Coolies in Civil works and other works taken up by the project management at least on contract basis.
- He opined that there will be 1000 to 1200 direct employments and 2000 to 3000 indirect employment if the project starts its operations.
- The industry conducted environmental study in the radius of 10 kms. and villages in this area will affect due to pollution problems. He requested to adopt the villages located in the radius of 10 kms. such as Seethampuram, Chikkudugunta, Potireddypalli, Bayyaram, Uppaka, Bommarajupalli, Venkannagudem and Sambaigudem and also other villages in the area. He requested to give priority to adopt the immediate surrounding villages for integrated village development.
- He requested to develop the villages under CSR programme and spend more amount to maximum extent possible.
- He requested to provide Corpus fund for development of the Tribal area in accordance with the rules of the Central Government.
- He requested to take all steps in giving compensation, providing jobs and environmental protection.
- He requested to take steps in completion of the project as early as possible and develop this area.

**The District Collector** informed that the Hon'ble MLA has covered all issues such as R&R package, compensation, employment and environmental. He added that the district administration has covered 85-90% of compensation issues and the remaining will also be done in due course. He reported that the Joint Collector will address the R&R package issues. He also reported that the Hon'ble MLA and industry representatives have covered issues and clarified the apprehensions. He then requested the gathering to express specific points as most of the issues have already been covered and not to repeat the issues already rose as more people are aspiring to express their views. He further stated the project authorities will clarify the issues before concluding the hearing.

**Sri ERM Nehru, President-Telangana Vidyut Engineers' Association** has expressed the following:

- Hon'ble Chief Minister laid foundation stone for this thermal power project after formation of Telangana state as first project in the State.

- He expressed happiness in materialising the project which is their long-cherished dream as he pursuing since several years to establish the power plant in this area.
- Earlier i.e. in the year 1972, the public requested to establish the power plant as there is only power generation of 2280 MW and this area people is carrying irrigation through Bore wells and facing several problems even though River Godavari is flowing very near to them and the area become arid lands.
- He appreciated the local people and Hon'ble MLA for their efforts in brining this project.
- Issue of critical and sub critical is confusion matter and they were already deceived. Hence, there is a necessity to support this project so as to get jobs and livelihood.
- The smoke emissions due to coal combustion can be controlled by installing ESP which will work efficiently. The ESP will minimise the pollutants before let out into atmosphere thereby no affect to the surrounding environment and human health.
- He requested the public to welcome the project as this project will give thousands of direct & indirect employment.

**Dr. Sammaiah, R/o Manuguru** requested the public to utilise this opportunity for welcoming the project.

**Sri Ramgopal Reddy, R/o Burgampadu** expressed the following:

- There is an apprehension that the agricultural lands will affect due to ash from the proposed project as this area is with the delta lands which gives two crops and the agricultural lands in the 10 km radius will be affected.
- These paddy lands are yielding 30 to 35 quintal per acre.
- He has no objection if they will not cause any pollution.
- He requested not to cause any ash problems to the agricultural lands as they already facing several problems.

**Sri T. Narender, TRS Leader** has expressed the following:

- He emphasized the need of industries in the girijan corridor (Tribal area).
- The Hon'ble MP, Hon'ble MLA and Government officials have made efforts to bring this project and this project helpful to the Tribals and develop this area.
- There will be some minor issues regarding environmental problems and this has to be rectified.
- Some Tribals will have patta lands and others are not and he requested to help the all tribals.
- He requested to involve the Tribals in development of the area.

**Sri Penukonda Naresh**, Student and land looser's son has expressed the following:

- The youth in this area are having B.Tech, M.Tech and other qualifications and he requested to give jobs to all according to their qualifications.

- He is a MBA professional and now studying ITI course so as to get job in the proposed project.
- He requested to give assurance letter for employment in the project and a cheque of Rs. 50,000/-. They will not ready to accept the cheque of Rs. 50,000/- without job assurance letter.

**Sri N. Nageswara Rao** has expressed the following:

- He questioned the industry management that why this public hearing has not conducted earlier prior to start of the project works. The public hearing might be conducted earlier. Is it right to conduct public hearing after stopping the works in response to petition filed in the court.
- Earlier, some promises were made to provide jobs during PK – I Coal Mining project implementation in the year 1974, but not given jobs to most of the land losers.
- For the coal mine projects in the year 1989, jobs are not provided to the land losers of Manuguru area.
- M/s Heavy water plant affected people are still protesting to solve their problems for last 25 years.
- He expressed happiness for announcing 346 jobs by the industry and he requested to give all 346 jobs in first phase only.
- The TSGENCO has released an amount of Rs. 59 Crores and 89 Lakhs for compensation to affected persons and the same was not reached to all the affected people.
- The project authorities has acquired agricultural lands from the farmers and he requested to give better compensation to them.
- He requested to do justice to the Tribals as this area fall under the 1/70 Act.
- He requested to give job opportunity to the high qualified youth such as MBA, MCA, Law etc., if possible instead of taking manpower from other states.
- He demanded for jobs for their local youth and livelihood to public and render justice to them unlike the previous projects.

**Sri Kataboina Nageswara Rao, Divisional Secretary, CPI(M) Party & Ex. Sarpanch, Samithisingaram** expressed the following:

- He welcomed the project even though some farmers are affected. But, there is a discrimination in giving compensation to the affected people.
- He questioned that when will be the compensation given to the left over people, for which he requested assurance.
- Most of the land losers are tribals and their sole lives on the land. Hence, he requested to give another land in addition to the compensation package as there is a provision in the Act. But, not implemented in earlier projects such as Singareni and other projects.

- The tribals are losing their lands and also livelihood as they are not educated for getting jobs in the proposed project. Most of the Tribals are not having even ITI. Hence, he requested the District Administration to look into these issues and do justice to the tribals.

**Sri Pathuri Lingaiah, R/o Sambaigudem** complained against some unauthorised pass books, who are claiming rights over the lands. He requested the District Collector to consider their plight and resolve the grievance.

**Sri Rega Kantha Rao, Ex-MLA, Pinapaka** expressed the following:

- The tribals and other community people are present here and no one is objecting the proposed project. But, they opposed the way of conducting the public hearing.
- In the year 2009, the Central Government has framed certain guidelines for the power projects with above 600 MW. There is a guideline that not to adopt Sub critical technology and hence he questioned the industry why the sub-critical technology is adopted. The industry is going forward with the sub-critical technology even though oppose from the public.
- The industry started the project works without obtaining prior permissions on war foot and he demanded for the reasons for implementing the project. The project should be approved after consent of the 80% people in the Grama Sabha.
- The project authority clarified that there is not much difference between sub critical and super critical technologies. But, the public are having apprehensions on this issue and there is a necessity to clarify and required to have a debate on this issue.
- The industry informed that they allotted Rs. 29 crores towards CSR activities for which he expressed happiness. But, this will become first and final.
- There is a need to calculate by the Government how much CSR funds are to be allotted by the major projects like ITC, Singareni, Heavy Water Plant for public health and development programmes from their establishment based on their profits. Accordingly, the project authority has to clarify on allocation of CSR funds and how to believe the industry.
- The affected tribal people are still doing agitations before Kothagudem Thermal Power Plant (KTPS) to solve their issues but, not resolved so far and we afraid that same situation will be arose for this project also. But, we are not taking any steps to oppose the project.
- The land losers are tribals and he requested to provide jobs to all tribal people by implementing Tribal Empowerment Policy.
- He requested the management to provide 346 jobs instead of 300 jobs as proposed earlier. He requested to made agreement in providing jobs and joining to duty from the date operation of the plant.

- The compensation was given to the land losers and some of the cheques of compensation were taken back due to lock of houses of the beneficiary. And now officials are moving with cheques to handover to beneficiary. There is discrepancy in the list of beneficiary and to the Gazette notification of the land acquisition. He requested for enjoyment survey for the lands and their party has demanded to give compensation to the actual enjoyer. But, the compensation cheques were given to the pattadar instead of enjoyer. Due to this, the actual enjoyer has fallen on road and lost their livelihood.
- The issues raised by Hon'ble MLA, like Pasupu-Kunkuma and requested to solve these issues and they will not oppose the project and participate in area development.
- The public are welcoming the project even though they fallen on road and lost their livelihood and hence, he requested the industry management that replace the machinery taken for the power plant units of sub critical technology with super critical technology machinery so as to reduce the pollution.
- He requested to adopt new technology to save the environment as the world is adopting pollution free technologies.

**Sri Vongeti Bhadraiah, Congress leader & PACS Chairman** expressed the following:

- He requested to list out all the land losers category wise i.e. Patta land, Government land etc., so as to avail compensation package.
- He requested to do justice to all land losers in providing jobs, compensation and other benefits, otherwise they will fight in the support of land losers.

**Sri B. Ayodhya, CPI leader, Manuguru** expressed the following:

- The farmers in this area are having 1 acre, 2 acre, 3 acre & 4 acre which are acquired for the project and the lands are irrigated for two crops. The area is endowed with rich fertile lands.
- The farmers have supported the survey for the project even paddy crop is exists.
- They have not objected the project and created awareness among the public regarding area development when project comes.
- The farmers are faced the problems from the local officials and same was brought to the notice of the District Administration. But, not solved the problems so far.
- He opined that all issues such as compensation and jobs may be settled before this hearing which will give happy for project affected people.
- He complained against the officials responsible in delaying the payment of compensation to the project affected families even several months after the completion of the land survey. They explained their problems even during the four successive PESA gram sabhas. There is a discrepancy in inclusion and exclusion of the affected people which leads to distress of the farmers.

- He informed that he already requested the project authority to issue job assurance letters to the affected people and not only cheque for Rs.50,000/- so as to provide trust in the youth. But, the management informed that they will look into the matter later.
- In response to this, the CMD, TSGENCO has clarified that they proposed to provide employment of 346 to the unemployed youth of the project affected families for which they already given assurance to the District Collector for 300 jobs and they will give 346 jobs including 46 jobs which are as per the request of the Hon'ble MP, Hon'ble MLA and speakers. This will be recorded in the minutes.
- On continuation, Sri B. Ayodhya has expressed happiness for providing 346 jobs and he clarified that his intention is only on the job assurance letters for youth of the affected families.
- He expressed that public have apprehension on providing jobs as affected people of the Kondapur Coal Mine project are not get jobs so far.
- The farmers have not expressed objection even after initiation of the project.
- He opined that the project may be established in barren lands available in the region instead of fertile agricultural lands.
- He is first person to welcome the project in this area.
- He requested the management to clarify the apprehensions among the public and also requested to inform how the surrounding villages are adopted and what are the benefits to be provided to the public and to take responsibility for anything happened in future. He requested to record the same in the minutes.

**Sri Mukkula Venkata Narasareddy, R/o Edulla Bayyaram** expressed the following:

- Everyone has expressed happiness for this project in this area and all farmers are cooperated in acquisition of valuable lands.
- He requested to give desired compensation to all farmers as the compensation amount is not considerable amount to the government.
- He narrated the plight of the non-tribal people living in the vicinity and requested to keep in mind and solve their problems.
- He requested to do justice to all Tribal and non Tribals.
- He admitted that all of them are in favour of the project.

**Sri Ravi Kumar, Convenor of Small Scale Industries, Khammam** expressed following:

- He requested Project Authority that such a massive project is coming up in the backward area and also requested the district administration to stipulate mandate to use only the products produced in the district for the proposed thermal power plant.
- He further requested the District Administration to establish industrial estate in this tribal area so as to encourage for establishing the small scale industries.

**Sri Baig, TRS Party** expressed following:

- He welcomed the project and informed that the proposed project gained support unanimously. He also stated that this proposal has to come up in this area three decades back. But, could not happen due to misleading by previous Government in united state.
- He deplored the contention of some people over sub-critical technology and project authority has clarified clearly.
- He has information that there is an injustice to the project affected families in compensation issue, jobs to local youth and other benefits. He requested to give compensation to all affected people including land enjoyer.
- He also requested to provide jobs to all unemployed youth as they already bitter experience not getting jobs in the issue of Paloncha Power plant. Hence, he requested not to repeat the same for this project.
- He requested to provide jobs to local people only and if any shortage, recruited from surrounding villages but not from other states.

**Sri Koleti Bhavani Shankar, TDP Leader** expressed following:

- He stated that there are two major issues with regard to the proposed project i.e. compensation to the land losers and apprehensions on the project.
- The government has paid compensation who are not having lands but not paid compensation to actual beneficiary.
- He requested the district administration to resolve grievances of genuine affected families.
- The people have apprehensions over sub-critical technology and the project authority has already clarified that there is no much difference between sub critical & super critical technologies. But, TSGENCO has proposed to adopt super critical technology in case of KTPS power plant and requested to examine the possibility of the same so as to avoid ash problems to the surrounding environment.
- We have no objections for the proposed project and already informed that this project will develop this area.
- He requested to give written assurance for 346 jobs to the youth of affected families so they can feel happy.
- He requested to depute one officer exclusively to oversee the implementation of compensation to land losers.

**Smt. Aliyamma, ZPTC member- Eturunagaram, Warangal district** expressed following:

- She stated that the people are unanimously welcoming the proposed thermal power plant, but they have some dissatisfaction regarding compensation and jobs.

- The Administration is not allowing compensation to the assigned lands and enjoyment lands in this area. This problem already faced by us in case of National Highway project in Warangal District and the Central Government has approved for this similar case. Hence, she requested the administration to give compensation to all affected people.
- The management should instil confidence in local educated youth and take them into mainstream by way of providing jobs so as to avoid them in going wrong way.
- She added that the state government is determined to provide nine-hours of power supply to agriculture and also giving continuous power to other sectors and there is requirement for establishment of power plants to overcome the power crisis.
- She requested to give support to this project for development in this area and also requested to give jobs to affected people.

**Sri Chanda Lingaiah Dora, Ex-MLA, Burgampahad** expressed following:

- He stated that earlier speakers are explained briefly and elaborately on the project.
- This area people are having much interest on this project so they can get jobs, compensation and other facilities.
- He requested the management to take appropriate steps to address the issues regarding compensation so as to clear the apprehensions.

**Sri Thati Purnachander Rao, Sarpanch- Ramanujavaram** expressed following:

- He informed that they have no objection to the plant being set up in their area but they are only concerned about a fair deal of compensation to the project affected families.
- He requested to accord top priority to the people, who are parting with the land for enabling the establishment of the project.
- He requested the management to rectify the problems if any.
- He added that the local people are unable to understand the technical implications of the super-critical and sub-critical technologies. Hence requested the industry to ensure that there should not be any harm to the public.
- He requested to do justice to all affected people for providing compensation and jobs.
- He requested to take steps towards safe environment and public health.

**Sri Kunja Venkateswarlu, Sarpanch- Uppaka** expressed following:

- There is an apprehension that there will be ash problems to the surrounding agricultural lands but the project authority has clarified that there is no ash problem.
- All are supporting this project.
- He requested to provide compensation to the affected people and give job assurance letters to the unemployed youth.
- The management noticed five gram panchayaths such as Manuguru, Pagideru, Uppaka, Bayyaram and Gummugudem in Cherla mandal that means there will be smoke affect

upto Gummugudem which is apprehension of them. He requested the management to clarify the same.

**Sri Yadari Ramesh, MPTC Member-Manuguru** expressed that there is not necessary to say anything as the Hon'ble MLA has already explained.

**Smt. Komaram Sammakka, MPP, Pinapaka** expressed following:

- She welcomed the project.
- She informed that certain people are unhappy for not getting compensation and she requested to give compensation to all affected people.
- She requested to take precautionary measure in implementing the project for the sake of their health and environment.
- She requested to provide hospital in their area and provide free treatment.

**Smt. Chidem Anjamma, President-MPP, Manuguru** expressed following:

- She informed that there will not be any issue if the project authority provides written assurance on jobs and a cheque of RS. 50,000/- as they are pursuing for last 1-2 years.
- She requested to consider female child in the project affected families and render them justice on par with others.
- She also requested to considered other children in the family in providing jobs as the management is giving to one child only.
- She also requested to provide livelihood to the coolies of this area in civil works of the project.
- She insisted that latest technology should be adopted in the project in order to avoid problems.
- She requested project authority to provide all the basic amenities to the surrounding villages which makes happy them then they will not raise any issue.

**Sri K. Shiva, MPTC , Manuguru** expressed following:

- He requested to understand the legitimate concerns expressed by the people gathered at the venue.
- He stated that about 8 PESA gram sabhas were conducted in their area with regard to the proposed project and given resolution on the project.
- Nobody is opposing the project but expecting jobs from this project.
- He requested to implement the package to all affected people.
- He requested to provide any job to these local panchayat only as they given their fertile lands and they suffering problems from poverty.

**Sri Kondeti Ramu, MPTC , Uppaka Grampanchayat** expressed following:

- This agency area will develop from this project and not to bother on the project.

- The affected farmers should not bother regarding compensation as the Hon'ble MP has assured in this matter.
- He requested the district administration to look into the matter of illegal real estate establishments in this area.
- He requested to provide 50% jobs to the local peoples of Manuguru and Pinapaka mandals.

**Smt. Palvancha Durga, ZPTC member- Manuguru** expressed thanks to the Hon'ble CM for sanctioning this project to their mandal and Khammam Dist. The compensation package was given to the affected and still some of people have not received the package. The farmers have given their lands with good intension and they expected for jobs to their children. She requested to give written assurance on jobs and a cheque of Rs. 50,000/-. She requested to give compensation to affected people and provide jobs to all affected people even casual labour jobs.

**Dr. Azmeera Seetaram Naik, Hon'ble Member of Parliament, Mahabubabad Constituency** expressed the following:

- He appreciated efforts made by the CMD of TSGENCO & Transco and his staff for giving power to the farmers and public.
- The EE, Pollution Control Board will record the minutes and vedio graph the entire proceedings of the public hearing and the same will be sent to Central Government.
- The Hon'ble MLA and Ex. MLAs are expressed their views for supporting the project unanimously irrespective of political party affiliation.
- The Central Government approves the projects when they incorporate all mitigation measures for environmental protection.
- At present the issue is not pertaining to environment and establishment of this project in this area as they requested the Hon'ble CM to sanction this project in this area.
- This are falls under 5<sup>th</sup> schedule and no autonomous status and custody with the Hon'ble President of the India and Hon'ble State Governor.
- Already discussed with the CMD and District Collector to form the committee in first week of April to address the problems.
- Even though this area falls under 1/70 Act, there is a necessity to give compensation to the non tribals who are irrigating since long period as these non tribals have faith on the Government to help them. Hence, the Hon'ble CM also has intention to help all the people including non tribals. Hence, the Government has allotted Rs.50,51,54,153/- to give compensation for Government & Assigned lands.
- He requested the industry to appoint Public Relation Officer and resolve the issues and also clarify apprehensions through media.
- Already there is a committee consisting of myself, Hon'ble MLA, three Sarpanches, the District Collector and Joint Collector and the committee will give clarity on the lands and

ascertain the actual owner as we have an amount of Rs.9 Crores which will be distributed towards compensation within 15 days. He requested the District Collector to take subsequent action.

- He reported that there is rule to provide atleast 80% jobs to the local people and not to bring any employees from other states. He informed that he will monitor the project for every 2 to 3 months and support in completion of the project.
- The Government already giving ITI training to the 150 students so as to get the jobs in the proposed project. The technician jobs are for ITI qualified person only and not to higher qualified persons.
- The committee will take a policy decision on providing jobs. Having apprehensions regarding jobs among the affected families is not wrong as they already experienced with the Singareni projects.
- When the promises are fulfilled then there will not be any issues from the locals.
- He requested to distribute all pending cheques to the land losers.
- He reported that no one stop the issue of your cheques.
- He reported that 346 jobs will be finalized through policy decision in the committee and he requested the management to give 346 jobs at the start of the plant and also give any other jobs including contract / casual labour jobs to this area people only and there is no right to others to have job in this area.
- The land issues will be addressed by the committee consisting of the Joint Collector & the RDO.
- This project should be completed by 31.03.2017 as the Government has plan to supply power to the farmers for 9 hours and also proposing to take up the water grid scheme in 11 constituencies and hence requested to support this project. He appreciated the decision to support the project by the public.
- He aggrieved against filing of the cases on the proposed project as this project already approved under provisions of PESA Act.
- He requested the industry to provide hospital under CSR funds as sought by MPP, Pinapaka similarly to your Bhoopalapalli hospital.
- He requested to observe the plant in Ramagundam which is operating with sub critical technology and there is no problem at all. If necessary all of us will have visit of the Ramagundam plant so as to clarify the doubts.

**The District Collector** has requested the management to clarify issues raised by the speakers such as compensation and R&R package even though they already clarified. He stated that the Joint Collector will explain about the implementation of R&R package.

**Sri C. Radhakrishna, Director/Projects-TSGenco** gave a explanation to the issues raised by the speakers as follows:

- 1) He explained that they have to make application to the MoEF for the proposed project and the environmental expert committee will review the application then they will accord Terms of Reference (ToR). As per ToR, the project authority has to prepare draft Environmental Impact Assessment (EIA) studies in the radius of 10 kms. of the project. We have to appoint consultant to conduct this EIA study. Subsequently we have to conduct public hearing and approach the MoEF to obtain Environmental Clearance. Mean while we received the stay on the project.
- 2) Regarding effect due to ash emissions, there is a latest technology to control ash emissions as proposed by the environmental department and equipment supplier. Ash will be generated due to burning of coal and ash is two types one is bottom ash and another one is fly ash. The bottom ash which is at 1000 °C to 1200 °C and same will be crushed and sent with water to the ash pond. The ash water will be re-circulated through Hydro bins. The separated ash can be utilized for road works and embankment. The fly ash will be collected through the ESPs which is equipped with 8 or 12 fields depending on the plant capacity. The ash is collected based on electro static phenomena with hammer mechanism. The ash is collected in the silos through vacuum system and same will be disposed to cement units and brick units. Hence there will be 100 % fly ash utilization. Hence he requested not to have apprehensions as he has several years of experience in power plants and already worked in KTPS plant.
- 3) He requested to support the project.
- 4) In response to the question raised by a participant, he stated that about 2500-3500 tonnes of ash will be generated and the same will be collected in silos. Each silo capacity is 1500 to 2000 tonnes. The ash is disposed to outside through tankers. The MOEF will ask clarification on this issue. The ash will be disposed to cement plants located in neighbouring Nalgonda district.
- 5) The participant has questioned that how much gaseous emissions are generated.

The representative of CPI(ML) New Democracy party sought to clarification on certain issues and project authority informed that they submitted a detailed report to the MoEF.

**The District Collector** has requested the CMD to give some answer on this.

**Sri D. Prabhakar Rao, Chairman and Managing Director- TSGENCO** stated that all are wholeheartedly welcomed the propose project and thanked the all on behalf of TSGENCO and the Government. The following issues raised by the speakers:

- Adopt of latest technology for the prevention of pollution.
- Revenue officials are unable to distribute the compensation.
- To take the 346 jobs on the date of start of the plant operation for which they sought agreement.

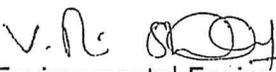
- To extend technical training support to the ITI people.
- To give suitable employment to the children of the affected families base on their qualification.
- To prove work to the local coolies.
- To adopt the surrounding villages for integral development.
- To provide Corpus fund as per the rules of the Govt. of India as this project fall under the tribal area.
- Apprehension of damage to the agricultural land due to ash.
- To give opportunity to Non locals with having land, Pasupu-Kunkuma, and already having employment.
- Why the project started without prior permission.
- Yester day, the issues already clarified before press meeting.
- A total of 346 jobs to the unemployed youth from the project affected families will be provided in the proposed power plant for which they given consent. These jobs will be provided on the day of commissioning of the plant as they proposed to commission two plants at a time and the same are recorded in the minutes. There is no possibility to give job assurance letters now as per the request of the affected people as these minutes has to submit to the MOEF and take necessary permissions. He assured the 346 jobs will be given at any cost.
- Regarding CSR activities, they proposed to take CSR activities for schools, drainage, water works within the radius of 10 Kms. after taking clearance from the internal committee. They proposed to allot not only Rs.29 Crores and subsequently, earmarked the 2% of the profits to carry CSR activities on continuous basis and assured the same.

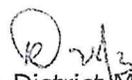
**The Joint Collector & Addl. District Magistrate** stated that some seven categories of issues emerged in respect of land acquisition. Those are R & R package, local vs non-local, Pasupu-Kunkuma, family member enjoyment, employee & pensioner, small extents, job to cash and cash to job and there are 6 type of applications are with them and same will be addressed by constituting the special teams comprising of PO & RDO within a fortnight. It will be placed before the District Level Committee for review.

The District Collector, Khammam & the Chairman of the Public hearing Panel has concluded the hearing with a positive note as all the public who attended the public hearing have welcomed the project.

**EE, TSPCB** has expressed vote of thanks.

The representations (14 Nos.) received and the statement is annexed.

  
Environmental Engineer, 28/3/2016  
T.S. Pollution Control Board,  
Regional Office, Kothagudem

  
Collector & District Magistrate  
Khammam

Statement of representations received w.r.to Environmental Public Hearing (EPH) held on 17.03.2016 for proposed 1080MW (4 X270MW) Thermal Power Plant By M/s Telangana State Power Generation Corporation Limited (M/S Bhadradi Thermal Power Station) at Ramanujavaram, Eddulabayyaram & Seethampuram Villages Of Manuguru & Pinapaka Mandals, Khammam District

S. No	Representation given by	Date of receipt	Content of the representation
1.	Sri Datla Venkata Subba Raju, Sambaigudem Village, Manuguru Mandal, Khammam Dist.	08-03-2016	Expressed the objections for the project as they are not willing to give lands for the proposed project and requested to return their lands.
2.	1) Sri D.V. Narsimha Raju & 2) Sri D. Ramakrishna Raju, Sambaigudem Village, Manuguru Mandal, Khammam Dist.	08-03-2016	Expressed the objections for the project as they are not willing to give lands for the proposed project and requested to return their lands.
3.	Sri Datla Venkata Subba Raju, Manuguru Mandal, Khammam Dist.	10-03-2016	Repeated representation at Sl.No. 1 without signature.
4.	1) Sri D.V. Narsimha Raju & 2) Sri D. Ramakrishna Raju, Sambaigudem Village, Manuguru Mandal, Khammam Dist.	10-03-2016	Repeated representation at Sl.No. 2
5.	1) Sri D. Vijay Kumar Raju 2) Sri D. Seethe Ram Raju 3) Sri D. Surya Laxmana Kumar Raju 4) Smt. P. Satya Kalavathi, Manuguru Mandal, Khammam Dist.	10-03-2016	Expressed the objections for the project as they are not willing to give lands for the proposed project and requested to return their lands.
6.	Sri H. Madhu Babu, Rural Environment Education and Health Awareness Society (REEHAS), Manuguru, Khammam Dist.	15-03-2016 (Through E-mail)	He given suggestions to the project. proponent and also expressed the benefits.
7.	Sri Prasad Khale, Executive Trust, Conservation Action Trust, Mumbai- 400 086.	16-03-2016 (Through E-mail)	He furnished the comments and questions on the proposed project regarding EIA study and EMP etc.
8.	Sri Ashok Kumar, Secretary, CPI (ML), New Democracy, Manuguru SDLC, Aswapuram (V&M), Khammam Dist.	16-03-2016	He raised certain questions (42 Nos.).
9.	Dr. K. Venkat Reddy, Scientist (Retd), H.No. 12-13-418/1, Tarnaka, Hyderabad – 500017.	16-03-2016 (Through E-mail)	He expressed the queries on Draft EIA for the proposed power plant.
10.	Sri Prasad Khale, Executive Trust, Conservation Action Trust, Mumbai- 400 086.	17-03-2016 (Through E-mail)	Repeated representation at Sl.No. 7
11.	Sri V.S. Krishna, General Secretary, Human Rights Forum	17-03-2016	He appeals to stop proceeding of the Public hearing for the Thermal Power Plant and not to consider for issue of EC.
12.	Sri Prasad Khale, Executive Trust, Conservation Action Trust, Mumbai- 400 086.	18-03-2016 (Through MoEF)	Repeated representations at Sl.No. 7 & 10
13.	Sri Ch. Ravi Kumar, Advocate., Hyderabad	18-03-2016 (Through MoEF)	He raised queries on EIA study, Fly ash utilization, starting construction of the project without prior EC & CFE etc.,
14.	Dr. K. Venkat Reddy, Scientist (Retd), H.No. 12-13-418/1, Tarnaka, Hyderabad – 500017.	18-03-2016 (Through MoEF)	Repeated representation at Sl.No. 9



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Annexure - III



J-13012/02/2015-IA.I (T)  
Government of India  
Ministry of Environment, Forest and Climate Change

Indira Paryavaran Bhawan, Jor Bagh Road,  
Aliganj, New Delhi-110003.

Dated: 15.03.2017

To

The Chief Engineer/Civil/Thermal  
M/s Telangana State Power Generation Corporation (TSGENCO) Ltd.,  
(A Govt. of Telangana State Undertaking)  
Vidyut Soudha, Khairatabad, Hyderabad-500 082,  
Telangana State.

Tel No. 0401-23499417; Fax No. 040-23499418; E-mail: cecthermal2@yahoo.com.

**Sub: 4x270 MW (1080 MW) Coal based Bhadradi Thermal Power Station (BTPS) at Villages Ramanujavaram, Eddulabayyaram & Seetharampuram, Mandals Manuguru & Pinapaka, District Bhadradi Khothagudem (erstwhile Khammam dist.), Telangana by M/s Telangana State Power Generation Corporation (TSGENCO) Ltd. - reg. Environmental Clearance.**

Sir,

This has reference to your online application dated 08.04.2016 and the additional documents submitted vide letter dated 11.11.2016, 29.12.2016 w.r.t the aforesaid project.

2. It has been noted that Terms of Reference has been issued for the above mentioned project on 23.06.2015 for preparation of EIA/EMP studies and carrying out Public Consultation. It has been inter-alia noted that the proposal is for setting up of 4x270 MW (1080 MW) Coal based Bhadradi Thermal Power Station (BTPS) at Villages Ramanujavaram, Eddulabayyaram & Seetharampuram, Mandals Manuguru & Pinapaka, District Bhadradi Khothagudem (erstwhile Khammam Dist.), Telangana State.
3. A total land requirement for setting up of the above power plant, ash dyke, township, greenbelt and other facilities is 936.92 acres (Main plant area: 332.52 acres; ash dyke: 250 acres; Township: 50 acres & Greenbelt: 304.4 acres). As per CEA norms, the land requirement for the proposed project is 1177.2 acres. However, the land requirement has been minimised to 936.92 acres. 87% of the land is Government land and remaining 13% is the private land. 80% of the total land is single crop agricultural land and remaining 20% is covered with roads and drainage system, etc. There are no forest lands, grazing lands, community lands within the project site. Land acquisition is completed and is in possession by TSGENCO. In addition, 30 acres of the land, outside the project area is required for RoW for laying of raw water pipeline corridor (~9 km) and 326.17 acres of land for railway line corridor (~22 km).
4. There are no National Parks, Wildlife Sanctuaries, any other protected areas and Eco-Sensitive Zones, etc within 10 km radius of the project. Authenticated map showing project location and Kinnerasani WLS and its Eco-sensitive zone by DFO Wildlife Management, Paloncha is furnished. There are no Schedule-I flora and fauna species found in the project area. However, one reptile species and 10 avifaunal species (Schedule-I fauna) are found in the study area. Nearest Railway station is Manuguru and is located at 15 km. SH-12/NIH-221 is at 37 km. River Godavari is at 0.8 km East. Project is 800 m away from the HFL of Godavari river. Elevation of the

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plant site varies between 65.5-75 m above MSL. HFL of Godavari is at 63.5 above MSL. Kondayyagudem Reserve Forest is located at 1.8 km South, RF near Venkatarapeta (4.6 km, NNW), Janapet RF (5.5 km, WNW), Subbampet RF (6.7 km, NE), Kalvanagaram RF (7.9 km, W), Cherla RF (8.2 km, NE). Singareni Opencast Coal Mine is at 7 km near Manuguru.

5. Sub-critical boilers will be installed which will be coal fired. Boiler is designed for 50% domestic coal and 50% imported coal. Coal will be fired in a high pressure boiler to produce steam at about 155 kg/cm<sup>2</sup> at 5400C temperature. Annual Coal requirement is 4.2 MTPA of G-9/G-10 grade domestic coal which will be sourced from M/s Singareni Collieries Company Limited (SCCL). Initially, it was planned to source 50% domestic coal and 50% imported coal. However, M/s SCCL has agreed to supply 100% domestic coal. An MoU is made between M/s TSGENCO and M/s SCCL on 4.4.2016. Expected GCV of the domestic coal is 4600-4900 kcal/kg, moisture: 12%, Ash: 27.5%, Sulphur: <0.5%, Fixed Carbon: 23-25%, Volatile matter: 25-30%, etc. Station Heat Rate of plant is 2300 kcal/Kwh at PLF-85%. Coal transportation will be done by rail route only.
6. Total water requirement for proposed project is 3, 291 m<sup>3</sup>/hr and will be sourced from Godavari River. Intake water structure will be set up at a distance of 8.6 km along with pipeline to transport water to the plant site. As the River Godavari is perennial, allocation has been made by Govt. of Telangana for drawing 1.4 TMC/annum of water throughout the year vide their letter dated 7.1.2015. The proposed withdrawal is estimated to be around 20% flow during lean season from the daily discharge data of CWC at Perur and Bhadrachalam Gauge and discharge stations.
7. Baseline Environmental Studies were conducted during pre-monsoon i.e. from March to May, 2015. The pre-dominant wind direction is South during study period. AAQ monitoring has been carried out at 10 locations. Results indicated that the values of different air quality parameters such as PM<sub>10</sub>: 31-53.7 µg/m<sup>3</sup>, PM<sub>2.5</sub>: 14.1-26.5 µg/m<sup>3</sup>, SO<sub>2</sub>: 7.9-12.7 µg/m<sup>3</sup>, NO<sub>x</sub>: 10.1-17.4 µg/m<sup>3</sup>, CO: 133-382 µg/m<sup>3</sup>, O<sub>3</sub>: 2.1-6.8 µg/m<sup>3</sup> and Hg: BDL. AAQ is within the NAAQ Standards. Five groundwater samples have been analysed in the study area. pH: 7.3-7.6, Total Hardness: 192-620 mg/l (Within limit of 600 mg/l except Pinapaka Village), Chlorides: 30-425 mg/l (Within permissible limits except plant location and Pinapaka village), Fluoride: 0.2-1.8 mg/l (Within the permissible limits except at proposed plant site and Manuguru village). Heavy metals are within the limits. Surface water samples were analysed from six locations. pH: 6.9-7.7; DO: 5.7-6.2 mg/l and BOD: <3 mg/l except 15 mg/l at Elchireddipalle Cheruvu. COD at Godavari River downstream, Talperu river and Elchireddipalle Cheruvu are 20 mg/l, 20 mg/l and 60 mg/l respectively. Noise levels are in the range of 42.7-50.1 dBA for daytime and 36.1-43.1 dBA for nighttime. Cumulative air quality impact is predicted for both the proposed power plant and the Manuguru Opencast Mine located within 10 km radius. The maximum incremental ground level concentration is predicted for PM is 1.83 µg/m<sup>3</sup> and the total resultant concentration is 55.53 µg/m<sup>3</sup> which is within limits. RCC Bi-flu Stack height of 275 m will be set up for dispersion of pollutants. ESP (99.9% efficiency), dust suppression system at coal handling points, ETP and STP are the major pollution control measures which have been proposed in the plant.
8. Intake water system will be provided with infiltration galleries and designed with maximum recycle/reuse of water. Only a small quantity will be drawn as make up water. Closed cooling system with cooling towers and clarified water as make-up will be utilised. The optimum COC of 5 has been arrived after evaluating several factors such as chemical dosage, scaling, fouling, etc. Zero discharge will be adopted and no plant effluent will be discharged into any open nallas and rivers. Two seasonal nallas are passing through proposed project, i.e. one through power house block and another through the ash pond area. Nalla passing through ash pond areas will

suitably diverted without affecting its natural drainage pattern. Irrigation and CAD dept., Govt. of Telangana has accorded the permission for its diversion vide letter dated 30.12.2016. However, nalla passing through power house block will not be diverted.

9. Total ash generation is 3603.138 TPD (Dry flyash: 2882.5 TPD & Bottom ash: 720.62 TPD). Flyash will be utilised for brick manufacturing, road development and cement manufacturing. Letter of Intent from various Cement manufacturing industries has been furnished. Bottom ash will be used for brick manufacturing, construction of embankments, filling of low lying areas, etc. M/s SCCL has agreed to use bottom ash in mine stowing and given a Letter of Intent (LoI) to use bottom ash. All the buildings in the project and residential complexes of TSGENCO will be constructed by using flyash bricks. Balance amount of bottom ash, if any, will be stored in the ash pond. Ash water recovery system is proposed to recover decanted water and shall be reused in the plant. Air cooled condenser (ACC) is not envisaged as dry cooling system will result in reduction of plant output by 6-7%. Peizometers will be set up at 6 locations around the ash pond for monitoring groundwater quality. Sludge from oil storage tank with quantity of 0.5 TPA is generated and will be sold to Authorised Recyclers.

10. Risk assessment and failure scenarios of pool fire for LDO (2x500 KL) and HFO (2x2000 KL) tanks have been predicted and risk mitigation measures have been proposed. On-site emergency plan has been prepared.

11. Livelihood of 655 families in three villages (Ramanujavaram, Sitaramapuram and Edullabayyaram) will be affected. R&R package of total Rs.17,38,00,000/- (Seventeen Crore Thirty Eight Lakhs) along with SC/ST development plan has been awarded by the District Collector. About 346 local people will get direct employment in the plant based on their qualification.

12. Greenbelt will be developed in 304.4 acres which is about 33% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 3,07,875 saplings will be planted and nurtured in 304.4 acres in five years.

13. Public Hearing has been conducted by Telangana State Pollution Control Board on 17.3.2016 in the premises of proposed Bhadradi Thermal Power Station, Secetharampuram village, Uppaka Gram Panchayat, Pinapaka Mandal, in erstwhile Khammam District (Now Bhadradi Kothagudem Dist.). Timebound Action plan along with financial allocation has been prepared and will be implemented for addressing the issues raised by the public during the hearing.

14. Estimated Project cost is Rs.7,290.60 Crores, Budget earmarked for implementation of Environment Management Plan is Rs.388 Crores (Capital expenditure) and Rs.15.25 Crores (Recurring expenditure). A detailed CSR study has been conducted by the Centre for Management and Social Research (CMSR), Hyderabad. CSR activities with the budget of Rs.29.04 Crores will be implemented in 18 villages.

15. The proposal was considered in the 60<sup>th</sup> EAC, 63<sup>rd</sup> EAC and 2<sup>nd</sup> Re-constituted EAC meetings held on 27.07.2016, 29-30.08.2016 and 20.01.2017. Based on the site visit reports made by Regional Office, Chennai on 09.01.2016 and Sub-committee during 17-19.08.2016 and information, clarifications, documents submitted and presentations made by you before the Re-constituted *Expert Appraisal Committee (Thermal Power)* in its 2<sup>nd</sup> Meeting held on 20.01.2017, **the Ministry hereby accords environmental clearance** to the above project under the provisions of EIA Notification dated September 14, 2006 and subsequent amendments therein subject to compliance of the following Specific and General conditions:

**A. Specific Conditions:**

- (i) As per the Revised Tariff Policy notified by Ministry of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality/ local bodies/ similar organization located within 50 km radius of the proposed power project to minimize the water drawl from River Godavari.
- (ii) A legal undertaking shall be given that Project Proponent owns the EIA/EMP and other documents submitted for appraisal.
- (iii) Feasibility study of Merry Go Round (MGR) System for coal transportation shall be explored and submitted to the Ministry. In any case, Coal transportation shall be through rail only.
- (iv) Explore alternate technologies so that water consumption is further reduced. As recommended by the NIH, Kakinada, appropriate lining shall be done for ash pond area to safeguard groundwater quality and reduce leaching impact towards proposed township.
- (v) Fly ash transportation shall be done through tarpaulin covered trucks only.
- (vi) Cycle of Concentration (COC) of 6.5 shall be achieved by setting up of RO for treating cooling tower blow-down water.
- (vii) The project proponent will submit to the Ministry a copy of the impact assessment carried out by Ministry of Irrigation of Govt. of Telangana regarding possible downstream impact of withdrawal of 1.5 TMC of water per year from the Godavari.
- (viii) The Environmental Clearance is subject to the Hon'ble NGT Southern Zone Order dated 11.07.2016 & final orders in the application no.206 of 2015 (SZ) and the final orders of the Hon'ble Court of Judicial Magistrate of First Class at Manuguru, Bhadradi Kothagudem Dist., Telangana in the matter of SR No.646/2016 (CC no.43/2017).
- (ix) MoEF&CC Notification S.O. 3305(E) dated 7.12.2015 shall be implemented with respect to specific water consumption, zero liquid discharge and revised emission standards. The PM, SO<sub>2</sub>, NO<sub>x</sub> and Hg emissions shall not exceed 30 mg/Nm<sup>3</sup>, 100 mg/Nm<sup>3</sup>, 100 mg/Nm<sup>3</sup> and 0.03 mg/Nm<sup>3</sup> respectively. The specific water consumption shall not exceed 2.5 m<sup>3</sup>/MWh and zero wastewater discharge shall be achieved.
- (x) MoEF&CC Notification G.S.R 02(E) dated 2.1.2014 regarding use of raw or blended or beneficiated or washed coal with ash content not exceeding 34% shall be complied with, as applicable.
- (xi) MoEF&CC Notifications on flyash utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 and subsequent amendments shall be complied with.
- (xii) As proposed, all the buildings in the project and residential complexes of TSGENCO shall be constructed by using flyash based bricks. Bottom/flyash ash shall be used for construction of embankments, and civil construction works for lift irrigation schemes in consultation with irrigation department. Remaining quantity of bottom ash shall be used for stowing in underground mines of M/s SCCL.
- (xiii) Separate Environmental Clearance may be obtained for the proposed Township as applicable under EIA Notification 2006.
- (xiv) As proposed, Afforestation shall be carried out in the barren lands within 10 km radius of the project. A dedicated nursery shall be developed for this purpose. Plantation shall be carried out within the RoW of water pipeline and along the railway corridor.
- (xv) Location of intake water system shall be finalised in consultation with reputed national institute to minimize the impact on downstream ecology of the river. As proposed, infiltration galleries to be provided. Bank erosion protection measures

shall be carried out near the intake water structure and the report shall be submitted to the Ministry and its Regional Office in this regard.

- (xvi) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.
- (xvii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.
- (xviii) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.
- (xix) Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.
- (xx) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 mg/Nm<sup>3</sup> or as would be notified by the Ministry, whichever is stringent. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system.
- (xxi) Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- (xxii) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.
- (xxiii) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.
- (xxiv) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant *except the nalla passing through ash pond proposed for diversion without affecting the natural drainage.*
- (xxv) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
- (xxvi) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.
- (xxvii) No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.
- (xxviii) Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be

- mitigated and suitable compensation provided in consultation with the local Panchayat.
- (xxix) Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80 %.
  - (xxx) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
  - (xxxi) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.
  - (xxxii) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
  - (xxxiii) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.

**B) General Conditions:**

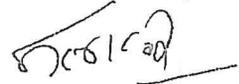
- (i) The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.
- (ii) A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.
- (iii) Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.
- (iv) Storage facilities for auxiliary liquid fuel such as LDO/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.
- (v) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (vi) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.
- (vii) Regular monitoring of ambient air ground level concentration of SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>2.5</sub> & PM<sub>10</sub> and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location



- of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.
- (viii) Utilization of 100% Fly Ash generated shall be made from 4<sup>th</sup> year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.
  - (ix) Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
  - (x) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at the Website of MoEF&CC at <http://envfor.nic.in>.
  - (xi) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
  - (xii) The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM (PM<sub>2.5</sub> & PM<sub>10</sub>), SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.
  - (xiii) The environment statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.
  - (xiv) **The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to MoEF&CC, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, MoEF&CC.**
  - (xv) The progress of the project shall be submitted to CEA on six monthly basis.
  - (xvi) Regional Office of the MoEF&CC will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. **Criteria pollutants levels including NO<sub>x</sub> (from stack & ambient air) shall be displayed at the main gate of the power plant.**

- (xvii) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.
- (xviii) The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.
- (xix) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry / CPCB/ SPCB who would be monitoring the compliance of environmental status.
- C) An as built or as completed report on EMP to be submitted stating the scope/extent of work envisaged in the EIA along with estimated cost vis-à-vis the actual completed works and cost incurred. A certificate/completion certificate accordingly, shall have to be submitted before commissioning of the TPP.
16. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.
17. The environmental clearance accorded **shall be valid for a period of 7 years** from the date of issue of this letter to start operations by the power plant.
18. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
19. In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.
20. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.
21. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Yours faithfully,

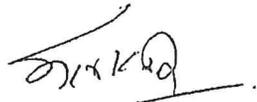


(Dr. S. Kerketta)  
Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.

4. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai- 600034.
5. The Principal Secretary, Department of Environment, Forests, Science and Technology, Govt. of Telanangana, Telangana Secretariat, Tank Bund, Basheer Bagh, Near NTR Gardens, Hyderabad, Telangana-500022.
6. The Chairman, Telangana State Pollution Control Board, Paryavaran Bhawan, A-3, Industrial Estate, Sanathnagar, Hyderabad-500018.
7. The District Collector, Bhadradi Kothagudem, Govt. of Telangana, Writer Basti, Opposite Kothagudem Club, Kotagudem, Telangana-507101.
8. Guard file/Monitoring file.
9. Website of MoEF&CC.

  
(Dr. S. Kerketta)  
Director





REGD.POST WITH ACK.DUE

CONSENT ORDER FOR ESTABLISHMENT – RED CATEGORY

Order No.59/TSPCB/CFE/RO-KGM/HO/2017 - 3680

Dt. 30.03.2017



**Sub:** PCB – CFE – M/s Bhadradi Thermal Power Station (BTPS) (Unit of Telangana State Power Generation Corporation Limited), Ramanujavaram (V) & Edullabayyaram (V), Manuguru Mandal and Seetharampuram (V), Pinapaka Mandal, Bhadradi Kothagudem District – Consent for Establishment of the Board under Sec.25 of Water (Prevention & Control of Pollution) Act, 1974 and Under Sec.21 of Air (Prevention & Control of Pollution) Act, 1981 – Issued – Reg.

- Ref:**
1. EC Order No.J-13012/02/2015-IA.I(T) dated 15.03.2017 issued by MoEF&CC, Gol.
  2. Proponent's CFE application dated 23.03.2017.
  3. RO's Inspection Report dated 23.03.2017.
  4. The CFE Committee meeting held on 27.03.2017.
  5. Industry's Lr.No.CE/C/Th/TSGENCO/SE/TCD-I/EE/F.BTPS CFE/D. No. 372/2017, dated 27.03.2017.

\* \* \*

1. In the reference 2<sup>nd</sup> & 5<sup>th</sup> cited, an application was submitted to the Board seeking Consent for Establishment (CFE) to establish Thermal Power Station (BTPS) (Unit of Telangana State Power Generation Corporation Limited) to produce the following with installed capacities as mentioned below, with an investment of Rs.7290.60 Crores.

Sl. No.	Name of the Product	Capacity
1	Electric Power	1080 MW (4 X 270 MW)

2. As per the application, the above activity is to be located at the following:

Villages	Government & Assigned Land	Private Land
1. Ramanujavaram Village & Gram Panchayat, Manuguru Mandal, Bhadradi Kothagudem District.	Survey Nos: 853/2/1 to 52, 853/3/1 to 118, 853/3, 853/7/1 to 256, 853/7, 1084/2/1 to 38, 1084/3, 1084/4, 1084/2, 1131/2/ 1 to 111 & 1131/2.	Survey Nos: 1056, 1057, 1058/2, 1060/2, 1070 to 1083, 1085, 1086, 1087, 1088/1, 1088/2, 1088/3, 1089/1, 1090 to 1117, 1119, 1123/2, 1124/2, 1125/2, 1129, 1130 and 1054/2.
2. Edulla Bayyaram Village & Gram Panchayat, Pinapaka Mandal, Bhadradi Kothagudem District.	Survey Nos: 670	Survey Nos: 494/2, 495/2, 496/2, 638/2, 640/2, 641/2, 651/2, 658/2, 659 to 668.
3. Seetharampuram Village, Uppaka Gram Panchayat, Pinapaka Mandal, Bhadradi Kothagudem District.	Survey Nos: 47	----

SCHEDULE - A

1. Progress on implementation of the project shall be reported to the concerned Regional Office, T.S. Pollution Control Board once in six months.
2. Separate energy meters shall be provided for Sewage Treatment Plant (STP) to record energy consumed.
3. The proponent shall obtain Consent for Operation (CFO) from TSPCB, as required Under Sec.25/26 of the Water (Prevention and Control of Pollution) Act, 1974 and under sec. 21/22 of the Air (Prevention and Control of Pollution) Act, 1981, before commencement of the activity.
4. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec. 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions by the Board.
5. The consent of the Board shall be exhibited in the project premises at a conspicuous place for the information of the inspecting officers of different departments.
6. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
7. Rain Water Harvesting (RWH) structure (s) shall be established on the project site. Effluent shall not enter the RWH structures.
8. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public Liability Insurance Act, 1991 shall be followed.
9. This order is valid for period of 5 years from the date of issue.

SCHEDULE - BWater:

1. The source of water is River Godavari. The specific water consumption shall be maintained 2.53 m<sup>3</sup>/MWH and the maximum permitted water consumption is 65,760 KLD.

Sl. No.	Purpose	Quantity (KLD)
1.	Cooling tower (CT) makeup	57504 KLD
2.	DM water for Boiler feed	2448 KLD
3.	Service water (AC makeup in ESP building, AHP seal water, AC make in air washer unit, TG building, service water for plant building, washings & toilets, mill quenching & CHP)	5472 KLD
4.	Clarifier sludge water from raw water treatment.	144 KLD
5.	Potable water	192 KLD
	<b>Total</b>	<b>65,760 KLD</b>

7. The industry shall obtain separate EC & CFE for their proposed Township. The proponent shall construct building & township by using flyash bricks.
8. Separate magnetic flow meters with totalisers to necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below.
  - a. Industrial cooling, boiler feed.
  - b. Domestic purposes.
  - c. Processing, whereby water gets polluted and pollutants are easily bio-degradable.
  - d. Processing, whereby water gets polluted and the pollutants are not easily bio-degradable.

**Air:**

**Emissions from fuel burning:**

Sl. No	Details of Stack	Common stack 1		Common stack 2		Stack – 3 to 6
a)	Attached to:	Boiler	Boiler	Boiler	Boiler	DG sets – 4 Nos.
b)	Capacity of Boiler / Furnace / Kiln / Incinerator / D.G. set / Others	865 TPH	865 TPH	865 TPH	865 TPH	750 KVA each
c)	Fuel form: Solid / Liquid / gaseous	Coal	Coal	Coal	Coal	LDO
d)	Fuel quantity: (L /kL per day)	479.4 Tons/hr (11506 TPD) by using indigenous coal of G9 / G10 Grade coal & 4600 – 4900 K.cal/kg				--
e)	Stack height:					--
	i) Above the roof	--	--	--	--	--
	ii) From ground level	Common stack of 275 mts with twin flue (i.e. separate flue for each boiler)		Common stack of 275 mts with twin flue (i.e. separate flue for each boiler)		3 mts
f)	Diameter / size, in m.	4.7 mtrs (flue dia.)		4.7 mtrs (flue dia.)		--
g)	Details of Air Pollution Control Equipment:	ESP comprising of two passes with 32 fields.	ESP comprising of two passes with 32 fields.	ESP comprising of two passes with 32 fields.	ESP comprising of two passes with 32 fields.	Acoustic enclosure to each DG set
h)	Emissions at Outlet of Chimney:	SPM – 30 mg/Nm <sup>3</sup> SO <sub>2</sub> – 100mg/Nm <sup>3</sup> NOx – 100 mg/Nm <sup>3</sup> Hg – 0.03 mg/Nm <sup>3</sup> .	SPM – 30mg/Nm <sup>3</sup> SO <sub>2</sub> -100mg/Nm <sup>3</sup> NOx – 100 mg/Nm <sup>3</sup> Hg – 0.03 mg/Nm <sup>3</sup> .	SPM – 30 mg/Nm <sup>3</sup> SO <sub>2</sub> – 100mg/Nm <sup>3</sup> NOx – 100 mg/Nm <sup>3</sup> Hg – 0.03 mg/Nm <sup>3</sup> .	SPM – 30 mg/Nm <sup>3</sup> SO <sub>2</sub> – 100mg/Nm <sup>3</sup> NOx – 100 mg/Nm <sup>3</sup> Hg – 0.03 mg/Nm <sup>3</sup> .	---

9. Fugitive Emissions: The industry shall install Coal Handling Plant (CHP) consisting of two parallel streams (one working and one standby) with capacity of 1617 TPH each. The industry shall provide Dust extraction system followed by Bag filters to meet SPM Standards and vent height of 10 mts.

The industry shall provide water sprinkling / spraying system to control fugitive dust emissions at all dust generating sources.

10. Online stack monitoring systems shall be provided for all the boiler stacks as per CPCB norms and the data shall be connected to the CPCB & TSPCB Servers.
11. Continuous Ambient Air Quality monitoring (CAAQM) stations shall be installed as per CPCB norms in consultation with the R.O, Kothagudem and data shall be connected to the CPCB & TSPCB Servers.
12. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MoEF, Gol vide notification No.GSR 826(E), dated 16.11.2009 during construction and regular operational phase of the project.

4.	Waste lubricating oil	20 KL/Annum	Shall be disposed to Authorized oil re-processors.
5.	Grease	100 TPA	Shall be disposed to Authorized oil re-processors.
6.	Solid Waste (Municipal) generation from Plant	20 TPM	Shall be disposed in secured place and converted to vermin compost for usage.

- 19. The industry shall provide 1000 micron thick HDPE lining for the proposed ash pond to avoid ground water contamination in the nearby area.
- 20. Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be ensured from 4<sup>th</sup> year operation as per EC.
- 21. Adequate safety measures shall be provided in the plant area to check / minimize spontaneous fires in coal yard, especially during summer season.
- 22. Storage facilities for auxiliary liquid fuel such as LDO /HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the Disaster Management Plan. Sulphur content in the liquid fuel shall not exceed 0.5 %.
- 23. The following rules and regulations notified by the MoE&F, GoI shall be implemented.
  - a) Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
  - b) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
  - c) Fly ash notification S.O.2804 (E), dt. 3.11.2009.
  - d) Batteries (Management & Handling) Rules, 2010.
  - e) E-Waste (Management) Rules, 2016.

**Other Conditions:**

- 24. Greenbelt shall be developed atleast in an extent of 304.4 Acres of land (plant premises, Ash pond (dyke) and township area) as per EC.
- 25. The proponent shall transport fly ash through closed tankers for major users. In case of small quantity, flyash shall be transported through Tarpaulin covered vehicles, as committed.
- 26. The proponent shall ensure that there shall not be any change in the process technology and scope of working without prior approval from the Board.
- 27. The proponent shall comply with all the directions issued by the Board from time to time.
- 28. Concealing the factual data or submission of fabricated data and failure to comply with any of the conditions mentioned in this order attracts action under the provisions of relevant pollution control Acts.
- 29. The Board reserves its right to modify above conditions or stipulate new / additional conditions and to take action including revocation of this order in the interest of public health and environment protection.

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TELANGANA STATE POLLUTION CONTROL BOARD  
PARYAVARAN BHAVAN, A - 3, INDUSTRIAL ESTATE,  
SANATHNAGAR, HYDERABAD - 500 018

Annexure - V

Phone: 23887500  
Fax: 040 - 23815631  
Website: tspcb.cgg.gov.in

CONSENT & HWA ORDER (RED CATEGORY)  
(RENEWAL FOR UNIT 1& 2 & FOR 3<sup>RD</sup> UNIT)

Consent Order No: 21082302609

Date: 14.10.2021

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation / Renewal of Authorisation under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules 2016 & Amendments thereof.

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof, and Authorisation under the provisions of HW (MH & TM) Rules, 2038 (hereinafter referred to as 'the Acts', 'the Rules') and amendments thereof and the rules and orders made there under to M/s. Bhadradi Thermal Power Station (BTPS) (Unit of Telangana State Power Generation Corporation Limited), Ramanujavaram, Edullabayyaram & Seetharampuram Villages of Manuguru & Pinapaka Mandals, Bhadradi Kothagudem District (hereinafter referred to as 'the Applicant / Industry') and the industry is authorized to operate and to discharge the Effluents and the quantity of Emissions from the chimneys, by operating pollution control equipment, as detailed below,

i) Out lets for discharge of Effluents:

Sl. No.	Source of Effluent	Quantity (KLD)	Mode of final disposal
1.	Cooling tower (CT).	6624	After treatment, shall be re-used for cooling tower makeup.  RO reject shall be used for Ash Handling Plant / dust suppression measures.
2.	Boiler blow down & DM plant regeneration effluent	720	After treatment, shall be used for Ash handling plant / dust suppression.
3.	Clarifier sludge water	108	After treatment, shall be used for Ash handling plant / dust suppression.
4.	Decanted water from Ash pond	8100	After treatment, shall be used for Ash handling plant / dust suppression.
5.	Domestic	90	After treatment in STP of capacity 120 KLD, shall be used for greenbelt development.

ii) Emissions from chimneys:

Chimney No.	Description of Chimney
1	Attached to Coal fired boiler of 3 x 865 TPH
2	Attached to D.G.Set of capacity 2 x 750 KVA

iii) HW Authorisation No21082302609

Date: 14.10.2021

HAZARDOUS WASTE AUTHORISATION  
(FORM - II)  
[See Rule 6 (2)]

M/s. Bhadradi Thermal Power Station (BTPS) (Unit of Telangana State Power Generation Corporation Limited), Ramanujavaram, Edullabayyaram & Seetharampuram Villages of Manuguru & Pinapaka Mandals, Bhadradi Kothagudem District is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

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• HAZARDOUS WASTES WITH RECYCLE OPTION:

S. No	Name of the Waste	Stream	Quantity	Disposal option
1	Fly ash from Boilers		0.66 TPA	Shall be disposed to brick making units / cement units / M/s SCCL (mines) for stowing in mine.  The balance quantity of bottom ash if any will be stored in the ash pond.  Utilization of 100% flyash generated shall be made from 4 <sup>th</sup> year of operation as per EC.
2	Bottom ash		0.166 TPA	
3	Sludge from oil storage tank	5.1 of Schedule - I	0.375 TPA	Shall be disposed to Authorized Recyclers. The waste may be disposed to cement plant for co-processing.
4	Waste lubricating oil	5.1 of Schedule - I	15 KL/Annum	Shall be disposed to Authorized oil re-processors.
5	Grease	5.1 of Schedule - I	75 TPA	Shall be disposed to Authorized oil re-processors.

This consent order is valid for generation of power along with quantity as mentioned below only.

S. No	Products	Quantity
1.	Thermal Power Generation	810 MW (3 X 270 MW)

This order is subject to the provisions of 'the Acts' and the Rules' and amendments made thereunder and further subject to the terms and conditions incorporated in the schedule A, B and C enclosed to this order.

This order of Consents and Authorization is valid for a period upto 31<sup>st</sup> May, 2026.

Sd/-  
MEMBER SECRETARY

To  
M/s. Bhadradi Thermal Power Station (BTPS)  
(Unit of Telangana State Power Generation Corporation Limited),  
Ramanujavaram, Edullabayaram &  
Seethampuram Villages of Manuguru & Pinapaka Mandals,  
Bhadradi Kothagudem District.

///T.C.F.B.O///

*[Handwritten Signature]*

SENIOR ENVIRONMENTAL ENGINEER(FAC)

SCHEDULE - A

1. The applicant shall make applications through online for renewal of Consent (under Water & Air Acts) and Authorisation under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts for obtaining Consent & HW Authorisation of the Board. The applicant can also apply for Auto Renewal of the CFO atleast 30 days before the expiry of this order as per the procedure and eligibility stipulated in the Board Circular dt.19.11.2015 & 08.12.2015 (available in Board's Website: <http://tspcb.cgg.gov.in/Pages/Circulars.aspx>).
2. This order is issued in line with Board's CFE order dated 30.03.2017 and CFO & HWA order dt. 01.02.2021. Concealing the factual data or submission of false information/fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts. The industry shall comply with all other conditions of CFE order dated 30.03.2017 and CFO & HWA order dt. 01.02.2021 still applicable.
3. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water (Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.
4. The industry may explore the possibility of tapping the solar energy for their energy requirements.
5. The industry shall comply with the all the directions issued by the Board from time to time.
6. The Board reserves its right to modify above conditions or stipulate any further conditions and to take action including revoke of this order in the interest of protection of public health and environment.

SCHEDULE - B

1. The Water consumption shall not exceed 49,320 KLD

S No.	Purpose	Quantity (KLD)
1	Cooling tower(CT) makeup	43128
2	DM water for Boiler feed	1836
3	Service water (AC make up in ESP building, AHP seal water, AC make in air washer unit, TG building, service water for plant building, washings and toilets, mill quenching & CHP)	4104
4	Clarifier sludge water from raw water treatment	108
5	Potable water	144
	Total	49,320

2. The Treated Effluent Discharged shall not exceed the following prescribed standards

Outlet No.	Parameter	Standards (mg/l except for pH and Temperature)
1 to 4	pH	6.5 - 8.5
	Temperature	Not more than 5°C higher than intake
	TSS	100
	Oil & Grease	10
	Copper (total)	1.0
	Iron (total)	1.0
	Zinc	1.0
	Chromium (total)	0.20
	Phosphate	5.00
	COD	250
	BOD	30
	TDS	2100

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5	pH	5.5 - 9.0
	TSS	200
	BOD	100
	TDS	2100

3. The Emission shall not exceed the following prescribed standards

Chimney No.		Parameter	Emission Standards
1	Attached to Coal fired boiler of 3 x 865 TPH	Particulate Matter*	30 mg/Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )*	100 mg/Nm <sup>3</sup>
		Oxides of Nitrogen (NO <sub>x</sub> )*	100 mg/Nm <sup>3</sup>
		Mercury (Hg)*	0.03 mg/Nm <sup>3</sup>
2	Attached to D.G. Set of capacity 2 x 750 KVA	SPM	115 mg/Nm <sup>3</sup>

\* MoEF&CC Notification No. S.O. 3305 (E) dt. 07.12.2015

4. The industry shall comply with ambient air quality standards of PM<sub>10</sub> (Particulate Matter size less than 10µm) - 100 µg/ m<sup>3</sup>; PM<sub>2.5</sub> (Particulate Matter size less than 2.5 µm) - 60 µg/ m<sup>3</sup>; SO<sub>2</sub> - 80 µg/ m<sup>3</sup>; NO<sub>x</sub> - 80 µg/m<sup>3</sup>, outside the factory premises at the periphery of the industry.

Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009.

Noise Levels: Day time - (6 AM to 10 PM) - 75 dB (A)  
Night time - (10 PM to 6 AM) - 70 dB (A)

- The industry shall not manufacture any un-consented products or exceeding capacities without obtaining prior Consent for Establishment (CFE) and Consent for Operation (CFO) of the Board.
- The industry has paid CFO fee of Rs. 13,85,104/- for a period upto 31.05.2022.
- The industry shall pay balance consent fee annually as per rates notified in G.O.Ms.No.22. The payment of annual consent fee shall be made at the concerned RO for every financial year (i.e., April to March) within the stipulated time period i.e., 1st quarter of every financial year (April to June) is mandatory for the industry / project, failing which, the validity of the Consent Order automatically stands cancelled and operation industry / project without valid consent attracts penal action under the provision of Water Act, Air Act & Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
- The industry either paying annual fee or total fee for Consented period, shall pay the balance fee as per the revised rates as applicable from time to time.
- The industry has to pay balance CFO fee of Rs. 7,14,896/- . The industry shall pay balance fee of Rs. 7,14,896/- within two months.
- The industry shall provide and maintain separate water meters for recording water consumption for various purposes and also maintain daily records.
- The industry shall maintain flow meters for recording wastewater generation and disposal and maintain daily records.
- The industry shall take measures to control fugitive emissions by water sprinkling by using mobile tankers and commission the permanent water sprinkler system at crusher house and coal storage area.
- The industry shall provide online stack monitoring system for boiler stack emissions as per the CPCB norms and connect the data to the CPCB & TSPCB servers.

13. The industry shall treat the wastewater in the neutralization tanks provided at DM plant and complete the construction of full-fledged ETP as committed.
14. The industry shall provide and maintain 4 AAQM stations in consultation with RO, Kothagudem as committed.
15. The industry shall properly collect the ash for its disposal and complete the construction of 2 fly ash storage silos, as committed.
16. The industry shall provide STP for treatment of domestic effluents from plant as committed.
17. The STP sludge of capacity 10 TPM shall be used as manure. The Solid waste shall be properly disposed / used to avoid pollution problems, as per the Rule 4 (7) of Solid Waste Management Rules, 2016.
18. The industry shall submit time bound action plan for disposal of fly ash so as to comply with EC condition on fly ash utilization.
19. The industry shall install and maintain coal handling plant consisting of two parallel streams (one working on standby) with capacity of 1,617 TPH each
20. The industry shall provide and maintain dust extraction system followed by Bag filters to meeting SPM standards and vent height of 10 mts.
21. The industry shall reduce the specific water consumption upto maximum of 2.5 m<sup>3</sup> / MWh within a period of two years from the date of publication of the Notification issued by the Ministry of Environment, Forests & Climate Change, Govt. of India, vide S.O. No. 3305 (E), dt.07.12.2015, under the Environment (Protection) Rules, 1986.
22. As per the Directions issued by the Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi in Original Application (OA) No. 199 of 2014 vide Judgment dt. 22.12.2016, in the matter of Management of Municipal Solid Waste in Local Bodies, the industry shall buy and use Refused Derived Fuel (RDF) as fuel in the Power Plant, generated from the RDF Plants located within a 100 Km radius of their Power Plant."
23. The industry shall use raw (or) blended (or) beneficiated coal with ash content not exceeding 34%, on quarterly basis and comply with MOE&F Notification GSR 02 (E), dt. 02.01.2014.
24. The industry shall provide and maintain greenbelt of 33% of total area.
25. The industry shall maintain dust suppression system at all fugitive dust generating points to meet the AAQM standards.
26. The industry shall maintain separate energy meters for recording energy consumption for air pollution control equipments and maintain record for daily energy consumption.
27. The industry shall maintain ESP tripping details and log book for ESP operation and submit monthly report to RO, Kothagudem.
28. A sampling pot with removable dummy of not less than 15 cm diameter shall be provided in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends, etc. A platform with suitable ladder shall be provided below 1 meter of sampled port to accommodate three persons with instructions. A 15 AMP 250 V plug point shall be provided on the platform.
29. The industry shall ensure that the Port hole and ladder facility for the Stacks is safe to carry out Stack monitoring. In place of monkey ladder, spiral type/scaffold ladder shall be provided to ensure safety of monitoring.
30. The industry shall maintain records for recording quantity of generation of ash, quantity of ash disposed to fly ash users, on daily basis and submit monthly reports to RO, Kothagudem.
31. The industry shall transport fly ash through closed tankers for major users. In case of small quantity, flyash shall be transported through Tarpaulin covered vehicles, as committed.

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32. The industry should establish appropriate RWH structure on the available up-stream portion of the plant site.
33. The industry should comply with the directions issued by Task Force from time to time.
34. The applicant shall submit Environment statement in Form V to the Regional office before 30th September of every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.
35. The conditions stipulated in this order are without any prejudice to rights and contentions of this Board in any Hon'ble court of Law.

SCHEDULE - C

[see rule 6(2)]

[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING  
HAZARDOUS WASTES]

1. The industry shall give top priority for waste minimization and cleaner production practices.
2. The industry shall not store hazardous waste for more than 90 days as per the Hazardous and other Wastes (Management, Handling and Transboundary Movement) Rules, 2016 and amendments thereof. The industry shall maintain 6 copy manifest system for transportation of waste generated and copies of receipt of Consignee shall be submitted to the Concerned Regional office. The industry shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 20(2) of the Hazardous and other Wastes (Management, Handling & Transboundary Movement) Rules, 2016 and amendments thereof.
3. The industry shall dispose /sell the Hazardous Waste to only industries/agencies authorized by the State Pollution Control Boards. The industry shall verify the authorization of the Board given to the Party before disposing its waste to the External Party.
4. The industry shall maintain proper records for Hazardous Wastes disposal and its concurrence with authorization. In case of variation in generation, industry shall submit explanation and obtain amendment in Environmental Clearance/ CFE/CFO in this regard.
5. The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal. Waste oils shall be disposed to the authorized Reprocessors/ Recyclers and Used Lead Acid Batteries shall be disposed to the manufacturers / dealers on buyback basis. The industry shall take necessary practical steps for prevention of oil spillages and carryover of oil from the premises. The industry shall check the Certificate/ Authorisation/order of MoEF issued to the Re-user/Recycle units while disposing the waste oil.
6. The industry shall dispose of e-waste to the authorised recyclers only.
7. The industry shall maintain good house keeping.
8. The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.

Sd/-  
MEMBER SECRETARY

To  
M/s. Bhadradi Thermal Power Station (BTPS)  
(Unit of Telangana State Power Generation Corporation Limited),  
Ramanujavaram, Edullabayyaram &  
Seetharampuram Villages of Manuguru & Pinapaka Mandals,  
Bhadradi Kothagudem District.

///T.C.F.B.O///

*[Handwritten Signature]*

✓ SENIOR ENVIRONMENTAL ENGINEER(FAC)