

Revised Form-I
(Appendix-I of EIA Notification, 2006)

For Amendment of Environmental Clearance for
Gadarwara Super Thermal Power Project, Stage-I (2x800 MW) of
NTPC Limited

(For Change of Coal Source and Transport of
Coal by Road for a Limited Period)

I. BASIC INFORMATION

Sl. No	Item	Details
1	Name of the Project	Gadarwara Super Thermal Power Project, Stage-I (2x800 MW) - Green Field Project. Amendment in Environmental Clearance for: <ul style="list-style-type: none">• Change of Coal Source from Talaipalli Coal Mining Project (TLCMP) of NTPC to Pakri Barwadih Coal Mine (PBCMB) of NTPC;• Transportation of Coal by existing Road network from Gadarwara Railway Station to Project site till December 2018.
2.	Serial No. in the schedule	S. No. 1(d)
3.	Proposed capacity/ area/ length/ tonnage to be handled/ command area/ lease area/number of wells to be drilled	Environmental Clearance was Accorded to Gadarwara STPP vide letter no. J 13012/125/2009-IA.II (T) dated 22.03.2013 for a capacity of 1600 MW (2x800 MW). The project is in its advanced stage of completion, Unit 1 (800 MW) expected to be commissioned in June, 2017 and planned for Commercial Operation (COD) in December, 2017. Point no. (iv) of general condition of EC letter, states that <i>“Coal transportation to plant site shall be undertaken by rail and no road transportation shall be permitted.”</i> The coal shall be transported from above coal linkage to Gadarwara rail head by rail transportation. However, the Gadarwara plant is located at a road distance of 15 km from rail

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Sl. No	Item	Details
		head. NTPC is planning to transport the coal from rail head to the main plant site by this existing metalled road till the NTPC develop its own transportation route.
4.	New Expansion/ Modernization	Amendment in EC is sought for: <ul style="list-style-type: none"> ▪ <i>Change in coal source from Talaipalli Coal Mining Project (TLCMP) of NTPC to Pakri Barwadih Coal Mine NTPC.</i> ▪ <i>Transportation of coal from Gadarwara Railway station to Gadarwara STPP by road.</i>
5.	Existing capacity/ Area etc.	Capacity of the project (Stage-I) is 1600 MW which is under advanced stage of construction.
6.	Category of the project i.e. 'A' or 'B'	"A"
7.	Does it attract the general condition? If yes, please specify.	Yes
8.	Does it attract the specific condition? If yes, please specify.	No.
9.	Location	Gadarwara STPP is located in Narsinghpur District of Madhya Pradesh located at Latitude 22°51'06" N to 22°52'30" N and Longitude 78°41'24" E to 78°52'42" E respectively.
	Plot/ Survey/ Khasra No.	--
	Village	Gangai, Umariya, Mehrakheda, Chorbarheta, Dongergaon, Kudari
	Tehsil	Gadarwara
	District	Narsinghpur
	State	Madhya Pradesh
10	Nearest Railway station/ airport along with distance in Kms.	<ul style="list-style-type: none"> • The nearest rail head is Gadarwara Railway Station approximately 15 km away from the project site. • Nearest commercial airport is Jabalpur at about 155 km and Bhopal airport is about 240 km from project site
11	Nearest town, city, district	The site is located at a distance of about 115 km

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Sl. No	Item	Details
	Headquarters along with distance in Kms.	from Jabalpur towards Hoshangabad in south west and about 9 kms from Gadarwara town.
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local Body (Complete Postal Address with Telephone Nos. to be given Project site Address:	Gadarwara Super Thermal Power Project Village- Dongargaon, Post Office-Gangai, Thana Chichli, Tehsil-Gadarwara. District- Narsinghpur, State-Madhya Pradesh. Pin-487 770. Phone No- 07790-220010
13	Name of the applicant	NTPC Limited
14	Registered Address	NTPC Bhawan, Core-7, Scope Complex, Lodhi Road, New Delhi – 110 003.
15	Address for correspondence	
	Name	R. K. Baderia
	Designation(Owner/Partner/ CEO)	GM & HOD (Environmental Engineering)
	Address	Environmental Engineering Department, Engg. Office Complex (EOC) NTPC Limited, Plot No. A-8A, Sector – 24 Noida– 201 301 (U.P.)
	Pin Code	201 301
	Email	rkbaderia@ntpc.co.in
	Telephone	0120-2410325
	Fax	0120-2410506
16	Details of alternative sites examined, if any, location of these sites should be shown on a topo sheet	Not Applicable as the proposal is for amendment of EC.
17	Interlinked Projects	Not Applicable
18	Whether separate application of interlinked project has been submitted?	Not Applicable
19	If yes, date of submission	
20	If no, reason	Not Applicable
21	Whether the proposal involves approval/clearance under <i>(details</i>	

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Sl. No	Item	Details
	<i>of the same and their status to be given) :</i>	
	(a) The forest (Conservation) Act, 1980	Not Applicable
	(b) The Wildlife (Protection) Act, 1972	Not applicable
	(c) The C.R.Z. Notification,1991	Not applicable
22	Whether there is any Government Order/ Policy relevant/ relating to the site	No such order exists to the best of our knowledge.
23	Forest land involved (hectares)	Not Applicable
24	Whether there is any litigation pending against the project and/ or land in which the project is proposed to be set up? a. Name of the Court b. Case No. c. Orders/Directions of the Court, If any and its relevance with the proposed Project	Not Applicable

- *Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)*

II. ACTIVITY

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	No	Proposed amendment (coal transportation by road) shall not result in change in land use, as no major infrastructure is required to carry out loading, unloading activities for trucks/dumpers and roads/PWD road already exist for transportation of coal by road. However, the nearest Public Works Department (PWD) road is approachable by a metalled road to site. The route (copy of Sketch enclosed as Figure-I) that is proposed to be followed for coal transportation through trucks/ dumpers.
1.2	Clearance of existing land, vegetation and buildings?	No	Not applicable as the infrastructure required for the afore-mentioned activities is already in place.
1.3	Creation of new land uses?	No	Not applicable
1.4	Pre-construction investigations e.g. bore holes, soil testing?	No	Not applicable
1.5	Construction works?	No	Infrastructure facilities i.e. roads are already in place and being used by various users.
1.6	Demolition works?	No	No demolition work is envisaged.

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Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.7	Temporary sites used for construction works or housing of construction workers?	No	--
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Above ground buildings, structures or earthworks including linear structures etc. are not applicable.
1.9	Underground works including mining or tunneling?	No	No underground mining or tunneling is envisaged.
1.10	Reclamation works?	No	No reclamation works are envisaged.
1.11	Dredging?	No	No dredging is involved.
1.12	Offshore structures?	No	No new facility is being created and only a part of existing one is intended to be used.
1.13	Production and manufacturing processes?	No	The proposed activity for amendment in EC does not involve any production or manufacturing process. The use of coal as the fuel in Gadawara STPP has already been accorded EC. Only change in source of coal and change in mode of transportation of coal through road is envisaged.
1.14	Facilities for storage of goods or materials?	Yes	Storage of coal and secondary fuel, water, chemicals & oil etc. are envisaged.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	No	No solid or liquid waste is envisaged due to transportation of coal by road from Railway Station to Gadawara STPP. However, a comprehensive Environmental Management Plan for Gadawara STPP, Stage-I including treatment and disposal of liquid effluents is being implemented.
1.16	Facilities for long term housing of	Yes	A full-fledged township is being

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Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	operational workers?		constructed at Gadarwara STPP.
1.17	New road, rail or sea traffic during construction or operation?	Yes	<p>In order to cater to the initial coal requirement of Gadarwara STPP, Stage-I (2x800 MW), coal will be sourced from Pakri Barwadih coal block of NTPC located in Jharkhand district as an interim arrangement through rail up to Gadarwara Railway station.</p> <p>Further, as the MGR system for transportation of coal from Gadarwara railway station to the plant site is not ready and likely to take some more time, the transportation of coal to Gadarwara STPP is envisaged by existing road network.</p> <p>Existing Public Works Department (PWD) road is approachable by a metalled road is being used for transportation of construction material and the same shall be used for coal transportation also.</p> <p>Considering the movement of truck for transportation of coal will generate additional traffic on road.</p>
1.18	New road, rail, air, waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Not applicable
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Existing Road Network shall be used for transportation of coal.
1.20	New or diverted transmission lines	No	Not applicable as the proposal is for

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Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	or pipelines?		change in mode of coal transportation.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not applicable as the proposal is for change in mode of coal transportation.
1.22	Stream crossings?	No	Not applicable
1.23	Abstraction or transfers of water from ground or surface waters?	No	Not applicable
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Not applicable The proposal is for change in mode of coal transportation.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	No	Not applicable as the proposal is for change in mode of coal transportation and infrastructure required for transport of coal i.e. road, is already existing. Movement of workers and other personnel to the operation site takes place through the existing networks only.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable as the proposal is for change in mode of coal transportation through an existing road network.
1.28	Influx of people to an area in either temporarily or permanently?	Yes	There may be influx of a small number of personnel as Drivers, Cleaners, Helpers engaged in coal transportation by road through considerable truck movement (to and fro) are anticipated for full capacity (2x800 MW). One Driver and a helper shall be associated with each truck/dumper

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Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			and it will be a moving population.
1.29	Introduction of alien species?	No	--
1.30	Loss of native species or genetic diversity?	No	--
1.31	Any other actions?	No	--

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Sl. No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	The activity is for transportation of coal by road, through Public Works Department (PWD) road approachable by a metaled road till the NTPC develop its own transportation route. Therefore, no additional use of land either agricultural or barren is envisaged.
2.2	Water (expected source & competing users) unit: KLD	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.
2.3	Minerals (MT)	Yes	The coal requirement for Gadawara STPP, Stage-I, is about 8 MTPA (at 90% PLF) which will be met from Pakri Barwadiah Coal Mine Block (PBCMP).
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.
2.5	Forests and timber (source – MT)	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.

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2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	No	For requirement and source of coal please refer Para 2.3 above.
2.7	Any other natural resources (use appropriate standard units)	No	--

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	--
3.3	Affect the welfare of people e.g. by changing living conditions?	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source. However, construction of Gadarwara STPP, Stage-I has already provided employment potential under unskilled, semi-skilled and skilled categories. Further, it will also improve the power supply position in Madhya Pradesh and nearby states, which is vital for economic growth as well as improving the quality of life. The improved power supply will reduce the dependence of general public and commercial establishments on DG Sets and water pump for irrigation in rural area.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the	No	--

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	elderly etc.		
3.5	Any other causes	No	--

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	--
4.2	Municipal waste (domestic and or commercial wastes)	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source. However, the municipal wastes that will be generated at Gadarwara STPP shall be disposed off in environmentally safe manner.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source. However, the hazardous waste that will be generated at Gadarwara STPP shall be disposed off in environmentally safe manner.
4.4	Other industrial process wastes	No	--
4.5	Surplus product	No	--
4.6	Sewage sludge or other sludge from effluent treatment	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.
4.7	Construction or demolition wastes	No	--
4.8	Redundant machinery or equipment	No	--
4.9	Contaminated soils or other materials	No	--
4.10	Agricultural wastes	No	--

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5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources.	Yes	Emissions of pollutants i.e. PM, CO, Pb, Sox etc. due combustion of diesel in trucks/ dumpers are anticipated. Also, the change in mode of coal transportation by road is only for a limited period.
5.2	Emissions from production processes.	No	The emissions from production processes are not likely to change due to change in mode of coal transportation. However, fugitive dust from coal handling and road transportation of coal through trucks/dumpers is may occur.
5.3	Emissions from materials handling including storage or transport.	Yes	Fugitive dust emission from Coal handling, transportation by trucks/ dumpers and storage areas are anticipated. However, adequate mitigation measures shall be adopted to minimize the impacts. Guidelines on Ash Transportation by MoEF&CC have been referred and applicable precautions like covering of truck/ dumpers with tarpaulin, GPS monitoring of truck movement etc. has been envisaged. Further, during transportation of coal by road through truck/ dumpers, the specified norms/ guidelines prescribed by Madhya Pradesh Pollution Control Board (MPPCB) shall also be followed keeping the view of transportation in environmentally sound manner.
5.4	Emissions from construction activities including plant and equipment.	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.

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Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
5.5	Dust or odors from handling of materials including construction materials, sewage and waste.	Yes	Fugitive dust is anticipated during handling of coal in trucks/ dumpers. Adequate mitigation measures such as sprinkling of water on haul roads, tarpaulin cover for trucks/ dumpers, limiting of speed to 40 Km/hr etc. shall be adopted to minimize the impacts.
5.6	Emissions form incineration of waste.	No	--
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris).	No	--
5.8	Emissions from any other sources.	No	--

6. Generation of Noise and Vibration, and Emissions of Light and Heat

Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
6.1	From operation of equipment e.g. engines, ventilation plant, crushers.	Yes	Apart from noise generation from main plant, there will be a minimal increment in the decibel level due to transportation of coal by road. However, the arrangement for transportation of coal by existing Road network from Gadarwara Railway Station to Project site is anticipated till December 2018.
6.2	From industrial or similar processes.	Yes	
6.3	From construction or demolition.	Yes	
6.4	From blasting or drilling	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.
6.5	From construction or operational traffic.	Yes	Noise, vibration & heat get generated in course of operation of vehicles including machineries. These will be maintained within acceptable limits.
6.6	From lighting or cooling systems	No	--

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Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
6.7	From any other sources.	No	--

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
7.1	From handling, storage, use or spillage of hazardous materials.	No	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Not applicable as the proposal is for change of coal source and change in mode of coal transportation.
7.3	By disposition of pollutants emitted to air into the land or into water.	Yes	Fugitive dust emission and vehicular emission of air pollutant due to combustion of diesel is anticipated during handling of coal in trucks/dumpers.
7.4	From any other sources.	No	--
7.5	Is there a risk of long term buildup of pollutants in the environment from these sources?	No	--

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment.

Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
8.1	From explosions, spillages, fires etc. from storage, handling, use or production of hazardous	Yes	Not applicable as the proposal is for change in mode of coal transportation and change in coal source.

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Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
	substances.		
8.2	From any other causes	No	--
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc.)?	No	Not applicable as the proposal is for change of coal source and mode of coal transportation. The project site is not susceptible to floods, landslides or cloud bursts. Further, the project site is located in Earthquake Zone–III of India. However, adequate care has already been taken during design and construction to avoid any disaster like earth quake.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
9.1	Lead to development of supporting, facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g. Supporting infrastructure (roads, power supply, waste or waste water treatment etc.). <ul style="list-style-type: none"> • Housing development • Extractive industries • Supply industries • Others 	No	Not applicable

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Sl. No.	Information / Checklist confirmation	Yes / No.	Details thereof (with approximate quantities / rates, wherever possible) with source of information data.
9.2	Lead to after-use of the site, which could have an impact on the environment.	No	Not applicable
9.3	Set a precedent for later developments.	No	--
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects.	Yes	There may be a slight increment in the baseline ambient air quality due to vehicular movement for transportation of coal, and will be for a limited period of time. The impacts shall be minimized by adopting adequate mitigation measures.

III. ENVIRONMENTAL SENSITIVITY

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	No
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	Nil
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	--
4	Inland, coastal, marine or underground waters	No	Nil
5	State, National boundaries	No	Nil
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	--
7	Defence installations	No	--
8	Densely populated or built-up area	No	--
9	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)	No	--
10	Areas containing important, high quality or scarce resources (<i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i>)	No	--
11	Areas already subjected to pollution or environmental damage. (<i>those where</i>	No	--

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S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project location boundary
	<i>existing legal environmental standards are exceeded)</i>		
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (<i>earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions</i>)	No	--

I hereby give an undertaking that the data and information given in the application and enclosure are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Date: 07.06.2017

Place: Noida



R. K. Baderia
GM & HOD (Env. Engg.)
NTPC Limited