

**Form-I for Extension of Validity of EC for Nabinagar STPP Accorded Vide Letter
No. J-13012/127/2007-IA.II (T), Dated 27.12.2010.**

FORM – I
(Appendix-I of EIA Notification, 2006)

(I) Basic Information

S. No.	Item	Details
1	Name of the Project:	Nabinagar Super Thermal Power Project
2	S. No. in the Schedule	1(d)
3	Proposed capacity/ area length /tonnage to be handled/ command area/ lease area / number of wells to be drilled	3x660 MW based on Super Critical Technology
4	New/ Expansion/ Modernization	New project
5	Existing Capacity/ Area	Nil
6	Category of the project	A
7	Does it attract the General condition? If yes, please specify	No
8	Does it attract the special condition? If yes , please specify	No
9	Location	The project is located on right bank of Sone river near Majhiyan village in Nabinagar tehsil, Aurangabad district of Bihar at a latitude of 24°46'30" N and longitude of 84°09'16" E.
	Plot / Survey/ Khasra No.	Land in Village Sasna, Raghunathpur, Ankorha, Shivanpur, Kusumha, Chaurahi, Rahra, Majhiawan of Nabinagar Block and Village-Saduri, Bela, Meh, Baghi, Nararikhurd, Nararikala, kundwan, dariyabad of Barun Block
	Village	Majhiawan
	Tehsil	Nabinagar
	District	Aurangabad
	State	Bihar
10.	Nearest railway station / airport along with distance in kms.	Nearest Railway Station: Ankorha (<i>about 1 Km. from project site</i>) Nearest Commercial Airport: Gaya (<i>about 80 Km. from project site</i>)
11.	Nearest Town, City, District Headquarters along with distance in kms.	Nearest Town: Dehri-on-Sone (<i>about 14 Km.</i>) Nearest City: Aurangabad (<i>about 20 Km.</i>) Nearest District Headquarter: Aurangabad (<i>about 20 Km.</i>)
12.	Village Panchayats, Zila Parishad, Municipal Corporation, Local body (complete postal addressed with telephone nos. to be given)	Nabinagar Super Thermal Power Project NPGC office, PO - RS- Ankorha Village- Majhiawan, District- Aurangabad, Bihar. Phone: 0612-2504010
13.	Name of the applicant	Nabinagar Power Generating Co. Pvt. Ltd. (NPGCL)
14.	Registered Address	NTPC Bhawan, Core-7,

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S. No.	Item	Details
		SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi – 110 003.
15.	Address for correspondence	Nabinagar Power Generating Co. Pvt. Ltd 1 st Floor, Vidhyut Bhawan, Bailey Road, Patna, 800 001.
	Name	M P Sinha
	Designation (Owner/ Partner/ CEO)	Chief Executive Officer
	Address	Nabinagar Power Generating Co. Pvt. Ltd 1 st Floor, Vidhyut Bhawan, Bailey Road, Patna, Bihar - 800 001.
	Pin Code	800 001
	E-mail	mpsinha1326@gmail.com
	Telephone No.	0612-2504010
	Fax No.	0612-2504098
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a toposheet.	Not applicable. Environmental Clearance (EC) for 3x660 MW Nabinagar STPP was accorded by MOEF&CC vide letter no. J-13012/127/2007-IA.II (T) dated 27.12.2010, subsequent to which, construction activities were initiated and are in advanced stage of progress. The anticipated commissioning schedule for the Unit #1 is March, 2018.
17.	Interlinked Projects	None
18.	Whether separate application of interlinked project has been submitted?	Not applicable
19.	If yes, date of submission	Not Applicable
20.	If no, reason	Not Applicable
21.	Whether the proposal involves approval/ clearance under: If yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980 (b) The Wildlife (Protection) Act, 1972 (c) The C.R.Z. Notification, 1991	No forest land has been acquired for project.
22.	Whether there is any Government Order/ Policy relevant / relating to the site?	To the best of our knowledge, no such order exists.
23.	Forest land involved (hectares)	Nil
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	Nil

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S. No.	Item	Details
	proposed project.	

(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.):

S. 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)	Yes	The land acquired for the construction of main plant, township and ash disposal areas was mostly moderately undulating. The land use has now been permanently changed under Industrial category.
1.2	Clearance of existing land, vegetation and buildings?	No	No buildings or vegetation existed on the land acquired therefore no clearing was envisaged. However, site development activities have already been carried out.
1.3	Creation of new land uses?	Yes	Land use for acquired land has already been changed to industrial use.
1.4	Pre-construction investigations e.g. bore holes, soil testing?	Yes	Pre-construction investigations such as Topographical survey, Geotechnical survey etc. are already completed.
1.5	Construction works?	Yes	Construction works for main plant and associated facilities are underway.
1.6	Demolition works?	No	Not applicable.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Construction workers are being accommodated in Temporary colony with necessary infrastructure facilities.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Main plant and township buildings are located above ground level. Earth work involving excavations, cut and fill activities were done for construction of the project.
1.9	Underground works including mining or tunneling?	No	Not applicable
1.10	Reclamation works?	No	Not applicable
1.11	Dredging?	No	Not applicable
1.12	Offshore structures?	No	Not applicable
1.13	Production and manufacturing processes?	Yes	Thermal power generation to the tune of 1980 MW from coal based on super-critical technology.
1.14	Facilities for storage of goods or materials?	Yes	Storage of coal, water, fuel oils, chemicals etc. is envisaged.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	A comprehensive Environmental Management Plan has been formulated, which covers solid waste management as well as liquid effluent treatment and

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S. No.	Information/ Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			disposal facilities. The measures have been highlighted in the EIA report already submitted to MOEF&CC during EAC meeting based on which EC has been accorded. However, as per the revised environmental norms, the necessary arrangements are being planned to ensure zero liquid discharge (ZLD).
1.16	Facilities for long term housing of operational workers?	Yes	Various Residential and Non-residential Buildings within the township is being established.
1.17	New road, rail or sea traffic during construction or operation?	Yes	During construction phase, no new road, rail or sea traffic is envisaged due to the project. However, during operation phase, coal shall be transported through Indian railways while Fuel oils shall be transported through rail/ road. The sea traffic is not applicable.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	Yes	The railway siding is under construction and approach road has already been constructed.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	No such activities are undertaken.
1.20	New or diverted transmission lines or pipelines?	Yes	New Transmission line (D/c 400KV Nabinagar-Gaya and Nabinagar-Patna) for evacuation of power is being construction by CTU/ PGCIL. A make-up water pipeline from Indrapuri Barrage on Sone river (approx. 3 Kms) is being laid for drawl of water.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	No such activity was undertaken.
1.22	Stream crossings?	No	Not applicable
1.23	Abstraction or transfer of water from ground or surface waters?	Yes No	The project shall draw water from Indrapuri Barrage on Sone river (approx. 3 Kms. from project). Water Resource Department (WRD) has allocated 125 Cusecs of water for the ultimate capacity of Nabinagar STPP (Stage-I and II). Water agreement with WRD, Bihar has already been executed. No ground water shall be extracted for

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S. No.	Information/ Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			operation of the plant.
1.24	Changes in water bodies or land surface affecting drainage or run-off?	No	Nil
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	During construction, Main Plant Equipment, Construction Material, Fuel and Labour force etc. are transported through railways/ roadways. During operation phase, coal shall be transported through Indian Railways while Fuel Oil, Chemicals etc. shall be transported through rails/ roads.
1.26	Long-term dismantling or decommissioning or restoration works?	No	No such work involved.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	None
1.28	Influx of people to an area in either temporarily or permanently?	Yes	The project is generating various indirect employment avenues during construction such as construction labour, allied services and service sector facilities. Therefore, the influx of people to the project area has increased.
1.29	Introduction of alien species?	No	Native species are being planted, however some ornamental species will also be planted.
1.30	Loss of native species or genetic diversity?	No	As most of the land acquired was agricultural, no major vegetation was required to be cleared.
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):

S. 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)	Yes	Majority of the land acquired/ required is agricultural land.
2.2	Water (expected source & competing users) unit: KLD	Yes	Water requirement: approx.144000 KLD. Source: Indrapuri Barrage on Sone river. WRD has already allocated and signed agreement for supply of water considering other users such as medium industries, irrigation facilities in nearby areas, drinking water supply system etc.
2.3	Minerals (MT)	Yes	Coal: 11.25 Million Tons Per Annum considering GCV of 3400 kcal/kg and 90% PLF.

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S. No.	Information/checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.4	Construction material – stone, aggregates, sand/ soil (expected source – MT)	Yes	The project shall have several components like main plant building, coal handling system, fuel oil handling system, water treatment and reuse system, cooling towers, chimney, ash handling system, switch yard, residential buildings & infrastructural facilities. Most of these units are commissioned on a turn key contract system. Therefore, item-wise detailed quantities of construction material is difficult to estimate.
2.5	Forests and timber (source – MT)	No	-----
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	The construction power is being met from nearby sub-station of State Govt. Fuel Oil (LDO, HFO and HSD) will be used for boiler start-up and lightening only, whenever required. The approximate quantity of Auxiliary fuel is 17000 KL/yr.
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:

S. 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)	Yes	Petrol, LDO and HSD is being used and stored at site during construction phase. Petrol, LDO and HSD, Hydrochloric Acid, Caustic Soda, Liquid Ammonia, Liquid Chlorine, shall be stored at site during operation phase.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	No water borne diseases anticipated since due precautions for treatment and disposal waste water is being taken.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	The population in surrounding area has already started getting benefited due to increasing infrastructure as a result of the construction of Nabinagar STPP.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	-
3.5	Any other causes	No	-

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

S. 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	Nil
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Small quantity of domestic waste is being generated, which is being disposed off in environment friendly manner.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Used oil/ waste oil, lead battery etc. shall be generated during the construction and operation phase. These wastes shall be disposed off in accordance to the applicable rules and regulations.
4.4	Other industrial process wastes	Yes	Fly ash and bottom ash will be generated due to combustion of coal. Dry Ash: about 2.96 MTPA & Bottom Ash: about 0.74 MTPA (Total Ash: about 3.7 MTPA)
4.5	Surplus product	No	-
4.6	Sewage sludge or other sludge from effluent treatment	Yes	The sewage sludge or other sludge shall be disposed off in an environment friendly manner complying with statutory requirements.
4.7	Construction or demolition wastes	Yes	Construction waste is being accumulated and disposed off in accordance to the statutory requirements. No demolition activity is being undertaken.
4.8	Redundant machinery or equipment	No	----
4.9	Contaminated soils or other materials	No	----
4.10	Agricultural wastes	No	----
4.11	Other solid wastes	No	----

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

S. 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	Stack emissions shall comprise of Particulate Matter, SO ₂ , NO _x and CO ₂ due to combustion of coal.
5.2	Emissions from production processes	Yes	In order to mitigate these emissions and to ensure compliance to revised environmental norms of air emission following measures are envisaged: PM: ESP has been designed to meet the limit of PM < 30mg/Nm ³ . SO _x : FGD shall be installed for limiting SO ₂ emission within 100mg/Nm ³ . NO _x : Pilot test is being conducted to decide the technology to be used for limiting NO _x values within 100mg/Nm ³ .

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			Mercury: shall be complied by limiting the concentration within 0.03mg/Nm ³ .
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive dust to coal and ash handling and storage. However, dust suppression and extraction system are envisaged to mitigate these emissions.
5.4	Emissions from construction activities including plant and equipment	Yes	Fugitive dust from construction site due to loosening of soil. The impact is temporary and insignificant in nature but regular dust suppression measures are being adopted. Exhaust emission from construction equipment.
5.5	Dust or odors from handling of materials including construction materials, sewage and waste	Yes	Dust emissions will be limited to construction, material handling and storage area etc. Odour from sewage will be negligible.
5.6	Emissions from 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:

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	The predicted level at project boundary is about 39.86 dB (A). As the ambient noise levels are higher than the predicted noise levels, due to masking effect, there will be no increase in the ambient noise levels during operation of Nabinagar STPP. However, adequate mitigation measures such as acoustic enclosures, cushion padding etc. are also envisaged.
6.2	From industrial or similar processes	Yes	From Turbines, Fans, Pumps etc.
6.3	From construction or demolition	Yes	During construction phase, noise level of the order of 85 dB (A) is being generated.
6.4	From blasting or piling	Yes	During piling, noise level of the order of 90 dB (A) is generated. However, the piling work is already complete.
6.5	From construction or operational traffic	Yes	Due to vehicular movement there is slight increase in the ambient noise level. However, it is temporary in nature.
6.6	From lighting or cooling systems	Yes	The noise level due to operation of Cooling Towers will be of the order of 75

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
			dB (A).
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:

S. 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	Yes	All due care will be taken to avoid spillage of hazardous materials/ chemicals. Hazardous materials shall be handled in accordance to the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Sewage and all plant effluents will be treated adequately to conform to regulatory limits to avoid impact on water or land.
7.3	By deposition of pollutants emitted to air into the land or into water	No	Not expected as suitable pollution control measures shall be provided.
7.4	From any other sources	No	----
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not expected, as suitable pollution control measures shall be provided.

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

S. 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 substances	Yes	On-site and Off-site Disaster Management Plans shall be prepared and implemented before operation to mitigate such risk of accident.
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)?	Yes	The project is situated in Seismic Zone – III (moderate damage risk zone). However, adequate care has been taken during design and construction to resist natural disasters like earthquakes etc.

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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:

S. 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 utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: <ul style="list-style-type: none"> o Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) o Housing development o Extractive industries o Supply industries o Other 	Yes	The project will promote establishment of ancillary and small scale industries and service sector in the area to meet the requirement of the project. This will lead to improvement of livelihood of the people.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	----
9.3	Set a precedent for later developments	Yes	Construction of project in a green field site may lead to commercial / municipal development in the nearby areas.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	The EC was accorded to project on 27.12.2010 and project is already in the advanced stage of construction. No new major industry is planned nearby, hence no cumulative impact assessment required.

(III) Environmental Sensitivity:

Vicinity Map is enclosed at Exhibit-I.

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	None exists in the surrounding area to the best of our knowledge.
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	No ecological sensitive areas within 10 Km of the project site. However, Kaimur Wildlife Sanctuary is located at about 12 Km from the project boundary. Sone river flows approx. 2.5 Km from the project site.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over	No	----

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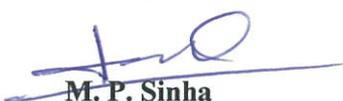
S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from proposed project location boundary
	wintering, migration		
4	Inland, coastal, marine or underground waters	Yes, River	Sone River at a distance of about 2.5 Km.
5	State, National boundaries	No	----
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	----
7	Defense installations	No	----
8	Densely populated or built-up area	Yes, Towns & Villages	Surrounded by densely populated villages and towns.
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	These facilities are located within 15 km.
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No	----
11	Areas already subjected to pollution or env. damage. (those where existing legal environmental standards are exceeded)	No	----
12	Areas susceptible to natural hazard which could cause the project to present env. problems (earth-quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No	The project is located in Seismic Zone-III. Adequate care has been taken during design and construction to prevent any damage due to disaster.

(IV) Proposed Terms of Reference for EIA Studies: Not Applicable

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: 13.10.2017

Place: Nabinagar


M. P. Sinha
 Chief Executive Officer
 NPGCL
M P SINHA
 Chief Executive Officer
 Nabinagar Power Generating Co. Pvt. Ltd.
 P.O.- Ankorha RS, Aurangabad, Bihar