

# SIX MONTHLY COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE

**1320 (2×660) MW PENCH THERMAL POWER PLANT**

At

**CHAUSARA VILLAGE, CHAURAI TEHSIL,  
CHHINDWARA DISTRICT  
MADHYA PRADESH**

Submitted to:

**Western Regional Office  
Ministry of Environment & Forests,  
Central Pollution Control Board, New Delhi &  
Madhya Pradesh Pollution Control Board, Bhopal**

The logo for Adani, featuring the word "adani" in a lowercase, sans-serif font. The letters are colored in a gradient from blue on the left to red on the right.

*Submitted By:*

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**PERIOD: April'2015 – September'2015**

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# ADANI PENCH POWER LIMITED

## Introduction

Adani PENCH Power Ltd (APPL), a wholly owned company of Adani Power Limited (APL), proposes to set up a 1320 (2x660) MW Coal-based Thermal Power Plant near Chausara Village of Chhindwara District in Madhya Pradesh. The power plant is proposed to be based on supercritical, energy efficient & environment friendly technology.

Adani Power Limited (APL) has signed MoU with Energy Department, Government of Madhya Pradesh on 8<sup>th</sup> July, 2009 for developing a Thermal Power Project of 1320 MW capacity near Chausara, District Chhindwara, Madhya Pradesh. For this purpose Adani Power Limited (APL) has registered Adani PENCH Power Limited (APPL), as a subsidiary company to Adani Power Limited (APL). 2x660MW Super-Critical Coal-Based Thermal Power Plant is under development phase by APPL. The proposed site is located at approximately 150 km from Nagpur and 30 Kms from Chhindwara.

APPL has been granted Environmental Clearances & Consent to Establish from Ministry of Environment & Forest & Madhya Pradesh Pollution Control Board. APPL also obtained all necessary statutory / mandatory clearance respectively.

The total requirement of land for the power project is around 300 Ha. The possession of 300 Ha has been already transferred with infrastructure by MPEB, Govt. of Madhya Pradesh to APPL, 5.27 MTPA of Imported Coal is to be made available for interim arrangement, due to non-availability of domestic coal linkage. Coal linkage is under consideration. Meanwhile, APPL has tied up imported coal from Indonesia, South Africa etc to be used as an interim arrangement

Water will be drawn from the PENCH Diversion Project which is located at a distance of about 4.5 km from project site. Water will be brought to the site through a dedicated pipeline from PENCH Diversion Project to Plant site. Water allocation of 33.29 MCM has been received from Water Resource Department, Govt. of Madhya Pradesh.

Adani Power Limited has commissioned the first supercritical 660 MW unit in the country. Mundra is also the World's First supercritical technology project to have received 'Clean Development Mechanism (CDM) Project' certification from United Nations Framework Convention on Climate Change (UNFCCC).

**The Thermal Power Project construction is yet to start, we have started some infrastructure development, boundary wall and some enabling works.**

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**COMPLIANCE STATUS ON ENVIRONMENTAL CLEARANCE**

**1320 (2×660) MW Coal Based Thermal Power Plant**

**Vide letter No. J 13012/30/2010-IA-II (T) dated 16/10/2012**

Sr. No	A. Specific Conditions	Status
i	Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.	Vision Document already submitted along with Compliance Report.
ii	Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.	65 nos. of Solar Lights already installed along the approach road and nearby villages. Further Solar Lights have been considered for detailed engineering of the Plant Layout.
iii	A study shall be undertaken through a reputed Govt. Organization / Agriculture University on the impact on vegetation within 10 Km radius of the plant due to fly ash generated and action taken shall be submitted to the Ministry. The study shall be completed within one year of operation of the proposed plant.	Noted Compliance assured during the plant operation.
iv	In case source of fuel supply is to be changed at a later (now proposed imported coal from South Africa) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change. In such case necessity for re-conducting public hearing may be decided by the Ministry in consultation with the Expert Appraisal Committee.	Noted Compliance assured.
v	Sulphur and ash content in the coal to be used in the project shall not exceed 0.5% and 29% respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.	Noted Compliance assured.
vi	A wildlife conservation plan shall be formulated in consultation with the Office of the Chief Wildlife Warden and duly vetted by the concerned Chief Wildlife Warden for immediate implementation. The plan shall have an in-built monitoring mechanism.	Wildlife Conservation plan prepared by Consultants in consultation with forest dept. The Conservation plan already submitted along with Compliance report of April'13 to September'2013 for valuable suggestions & implementation.
vii	Provision for installation of FGD shall be provided for further use.	Space has been provided for FGD in the Plant layout.
viii	Coal transportation to plant site shall be undertaken by rail and no road transportation shall be permitted.	Noted Compliance assured.
ix	A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash	Noted Compliance assured.

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	(including bottom ash) shall be put in place.	
x	Continuous monitoring for heavy metals in and around the existing ash pond area shall be carried out by reputed institutes like IIT, Roorkee.	There is no existing Ash Pond. However, compliance to the condition will be made for the proposed Ash Pond.
xi	Fly ash shall not be used for mine void filling without prior approval of the DGMS is obtained.	Noted Compliance assured.
xii	The project proponent shall carry out a long term R&D on Boiler efficiency vis-a-vis large variation on ash content of coal and submit its findings to the Ministry at a later stage.	This is a standard practice and on-going at all plant units of Adani Power Group.
xiii	A stack of 275 m Height with flue gas velocity not less than 22 m/s shall be installed and provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and PM <sub>2.5</sub> & PM <sub>10</sub> . Mercury emissions from stack may also be monitored on periodic basis.	Stack Height of 275 m proposed. Online monitoring also proposed.
xiv	High Efficiency Electro Static Precipitator (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> .	Electro Static Precipitator (ESPs) with 99.93% removal efficiency proposed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> .
xv	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.	Water sprinkling proposed in Coal Stock Yard. Dust Extraction System proposed in Crusher House, Transfer Points and Fly Ash Silos.
xvi	Utilisation of 100% Fly Ash generated shall be made from 4 <sup>th</sup> year of operation. Status implementation shall be reported to the Regional Office of the Ministry from time to time.	Noted. Compliance assured.
xvii	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Utilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	Dry Collection & Disposal of Fly Ash proposed. Monitoring will be carried out on regular basis.
xviii	Ash pond shall be lined with HDP / LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached. Ash pond water shall be re circulated and utilized.	Ash Pond is proposed to be lined with LDPE. Safety Measures are being provided at detailed engineering stage itself. Ash Water recirculation is proposed.
xix	Hydrogeology of the area shall be reviewed annually from an institute / organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case any deterioration is observed specific mitigation measures shall be undertaken and reports / data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	Noted Compliance assured.
xx	No ground water shall be extracted for use in operation of the power plant even in lean season.	Noted Compliance assured.
xxi	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.	Noted Compliance assured.

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xxii	Minimum required environment flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel / Rivers (as applicable) even in lean season.	Not Applicable, as the water allocation for the project is from Pench Diversion Project.
xxiii	Land and Water requirement shall be restricted as per latest CEA norms issued.	Noted Land and water requirement are within the CEA norms.
xxiv	COC of 5.0 shall be adopted.	Noted Compliance assured.
xxv	Regular monitoring of ground water level shall be carried out by establishing a network existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Noted Compliance assured.
xxvi	Monitoring surface water quality in the area 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 be undertaken.	Noted Compliance assured.
xxvii	Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB.	Plant is being designed for zero discharge. However, ETP & STP are proposed to meet MPPCB norms.
xxviii	The project proponent shall undertake rain water harvesting measures and shall develop water storage for use in operation of the plant. Rain water harvesting system shall be put in place which shall comprise of rain water collection from the built up and open area in the plant premises. Action plan for implementation shall be submitted to the Regional Office of the Ministry.	Rain Water Harvesting is proposed and will be incorporated during detailed engineering and before commissioning of plant / unit. Rain water harvesting report already submitted along with Compliance Report.
xxix	Additional soil for levelling of the proposed site shall be generated within the site (to the extent possible) so that natural drainage system of the area is protected and improved.	Noted Compliance assured.
xxx	At least three nearest village shall be adopted and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc shall be developed in co-ordination with the district administration.	Noted Compliance assured.
xxxi	A special scheme for upliftment of SC & ST population in the study area shall be formulated and implemented in a time bound manner. The project proponent shall also identify the rights of tribals under existing Laws and ensure its protection and implementation thereof.	Noted Compliance assured.
xxxii	In addition marginalized farmers indirectly affected by the project shall be identified and special scheme for sustainable livelihood for these marginalized	Noted Compliance assured.

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	section of the poor villagers whose sustenance are dependant on the land not owned by them but falling in the proposed power project, shall be formulated and implemented.	
xxxiii	R&R of PPAs shall be completed in a time bound manner and before commissioning of the proposed plant.	Project along with land and infrastructures transferred by MPEB to APPL. <b>No R&amp;R is involved.</b>
xxxiv	The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for providing potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Social development activities being carried out under the CSR activities by Adani Foundation. Need based Assessment Study report already submitted along with Compliance Report of October'12 to March'2013.
xxxv	CSR scheme shall be undertaken based on need based assessment in and around the villages within 5 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR employment of local youth after imparting relevant training as may be necessary shall be undertaken as committed.	We have carried out a Need Base Assessment study of nearby villages. Study report has been already submitted to MoEF, New Delhi. Regular CSR activities being carried out by Adani Foundation
xxxvi	An amount of Rs. 30.0 Crores shall be earmarked as one time capital cost of CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs. 6.0 Crores per annum till the life of the plant shall be earmarked as recurring expenditure of CSR activities. Details of the activities to be undertaken shall be submitted within six months along with road map for implementation.	A separate budget earmarked for CSR activities in Need based Assessment Study Report already submitted along with Compliance Report.
xxxvii	It shall be ensured that an in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website.	Noted Compliance assured.
xxxviii	Green Belt consisting of 3 tiers of plantation of native species around plant and 50 m width shall be raised. The density of trees shall not less than 2500 per Ha with survival rate not less than 80%.	Green Belt provided in the Plant Layout.
xxxix	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.	We have established Environment Management Department with Senior Management at Corporate level. Site Environment Cell will be created once project construction is started.
<b>Sr. No</b>	<b>B. General Conditions</b>	<b>Status</b>
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.	Plant is designed for zero discharge. Storm Water & Effluent Streams will be provided separately.
ii	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation.	STP proposed. Treated sewage will be used for Plantation/Green Belt development and maintenance.

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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.	Noted. Compliance assured, once the project take off.
ix	Storage facilities for the 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.	Noted Compliance assured, once the project take off.
X	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Noted Compliance assured.
Xi	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 earplug / earmuffs etc. shall be provided. Workers engaged in noisy area 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.	All equipments will be designed and procured to have noise level of less than 85 dB (A) at a distance of 1 m.
xii	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 exit the prescribed limits, necessary control measures shall be provided immediately. The locations 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.	Noted Compliance assured, once the project take off.
xiii	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 structure to be removed after the completion of the project.	Noted Compliance assured, once the project take off.
ix	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 environment clearance and copies of clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.inc.in">http://envfor.inc.in</a> .	Complied It was advertised in local daily News Paper 'Dainik Bhaskar and Jabalpur Express' on 28 <sup>th</sup> October 2012. Advertisement copy already submitted along with Compliance Report of October'12 to March'2013.
x	A copy of the clearance letter shall be sent by the proponent to the concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the	Complied, Acknowledged copy already submitted along with Compliance Report of October'12



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	Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	to March'2013.  EC copy also placed on the website - <a href="http://www.adanipower.com">www.adanipower.com</a>
xi	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 (PM2.5 & PM10), SO2, NOx (ambient levels as well as stack emissions) shall be displayed at convenient location near the main gate of the company in the public domain.	Six monthly compliance status report is regularly submitted to MoEF, CPCB & MPPCB. The same is sent by email also.  Compliance status updated on Company's website. Compliance assured, once the project take off.
xii	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.	Noted Compliance assured, once the project take off.
xiii	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board. The project proponent shall upload the status of compliance of the environment 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, Ministry of Environment and Forests.	Six monthly compliance report is being submitting to MoEF, CPCB, & MPPCB regularly. The same is sent by email also. Compliance status updated on Company's website. Last compliance report for the period of October'2014 to March'2015 had been submitted vide our letter no.: APL/APPL/EMD/EC/MoEF/143/05/15, dated- 28/05/2015
xiv	Regional Office of the Ministry of Environment and Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environmental Management Plan along with additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and update the same from time to time at least six monthly basis. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.	Noted. Compliance assured, once the project take off.
xv	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. This cost shall be included as a 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.	Compliance assured. Separate funds earmarked for implementation of environmental protection and details already submitted along with Compliance Report of October'12 to March'2013.

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xvi	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.	Noted <b>Financial Closer yet to be achieved and Thermal Power Plant Construction work yet to start</b>
Xvii	Full co-operation 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.	Noted, Full co-operation shall be extended