

Annex-III to Directors' Report

PARTICULARS REQUIRED UNDER THE COMPANIES (DISCLOSURE OF PARTICULARS IN THE REPORT OF THE BOARD OF DIRECTORS) RULES, 1988:

A. CONSERVATION OF ENERGY:

a) Energy conservation measures taken:

Some of the important energy conservation measures taken during the year 2012-13 in different areas are as under:

ENERGY AUDITS

During 2012-13, 80 energy audits in the areas of auxiliary power consumption, water balance, cooling water system, thermal insulation, compressed air, coal handling plant, milling system, air conditioning, ash handling system, WHRB performance, lighting etc. were carried out at different stations of NTPC. A workshop on "EC Opportunities in Thermal Power Plants with focus on Dry Ash Handling" was conducted at Lucknow.

AUXILIARY POWER CONSUMPTION

Replacement of inefficient BFP cartridges and attending BFP recirculation valves and attending duct leakages / APH seal replacement at various projects, Flue gas duct modification using CFD at Tanda, Offline GT Compressor washing during opportunity shutdowns at Gas Stations, Application of efficiency improvement coating on cooling water / other pump internals and installation of VFD's various LT drives at various projects, Optimization of operation of CW pumps, ARCW, clarified water pumps & Cooling Tower Fans and optimizing DP across Feed Regulating Station at various projects.

LIGHTING

Replacement of conventional GLS lamps and conventional FTLs with CFLs / efficient TL at various projects, Replacement of street lighting HPSV / Halogen / FTL fixtures with LED light fixtures at Kayamkulam, Talcher Kaniha, Dadri & Kawas.

HEAT ENERGY

Attending / upgrading thermal insulation at Rihand, Auraiya, Gandhar & Kayamkulam, attending passing in HP heaters at Rihand, Replacement of turbine seals at Ramagundam, attending high energy drains at Rihand & Simhadri.

b) Additional investments and proposals for reduction in consumption of energy:

Provision of ₹ 17.37 crore has been kept in BE 2013-14 for different energy conservation schemes like:

- Installation of VFD in HT drives
- Grid interactive roof-top SPV plant
- Vapor absorption system for Air Conditioning
- Energy efficient lighting

c) Impact of measures taken for energy conservation:

Savings achieved during 2012-13 on account of specific efforts for energy conservation:-

S.No.	Area/Activities	Energy Unit	Savings Qty. of units	₹ (Crore)
1	Electrical	MU	119.9	26.39
2.a	Heat Energy (equivalent MT of coal)	MT	9366	1.68
2.b	Heat Energy (equivalent MCM of Gas)	MCM	1.967	3.33
2.c	Heat Energy (equivalent KL of Naptha)	KL	253	1.08
Grand Total				32.48

Savings achieved during 2011-12: ₹ 30.79 Crore

Technology Absorption:

Efforts made towards technology absorption are contained in enclosed Form -B.

C. FOREIGN EXCHANGE EARNINGS AND OUTGO

Activities relating to export initiative taken to increase export, development of new export markets for products and services and export plan:

Total Foreign Exchange Used/ Earned (2012-13)		₹ (Crore)
1.	Foreign Exchange Outgo	
a)	Value of Imports calculated on CIF basis:	
	- Capital Goods	1,009.05
	- Spare Parts	124.44
b)	Expenditure:	
	- Professional and Consultancy Charges	4.16
	- Interest	625.38
	- Others	5.52
2.	Foreign Exchange Earned	
	- Professional & Consultancy Fee	2.15
	- Others	0.10

FORM FOR DISCLOSURE OF PARTICULARS WITH RESPECT TO ABSORPTION OF TECHNOLOGY
1.0 Specific areas in which NETRA activities have been carried out during 2012 - 13:
a. MOU Projects for 2012-13 Completed:

Deployment and validation of “Energy Intensification & Diagnosis Model (EIDM)” for real time plant performance optimization at one of the 500 MW unit; In-house development of process to upgrade existing induction motor for VFD retrofitting and execution on Cooling Tower Fan in one of our stations; Completion of Supply, Erection, Commissioning of 40 TR Solar thermal HVAC plant at NETRA; Completion of in-house process design for around 50 m² open pond race way algae reactor at one of our stations; Development of an expert system for assessment of paper moisture in transformers using (PDC-RVM) technique and demonstration at one of our Stations; DPR for Integration of solar thermal with feed heating of coal power plant at one of our stations.

b. Developmental Projects undertaken by NETRA: Design of heat pipe based air pre- cility at NETRA & completion of procurement of equipment; Development of advanced pattern recognition technique for early warning detection for a power plant application; Application of TOFD (Time of Flight Diffraction) for testing of welds in headers and pipe lines at one unit of a station; Inspection of LTSH tubes using robotic systems of two 500 MW units of NTPC stations.

c. Scientific Support to Stations:

- **NETRA continued to provide scientific support to stations such as:** Energy Intensification and Diagnostic Model (EIDM) for real time operator advisory system has been successfully installed in Talcher 500 MW unit. The system is under development for three more units. Real time GCV model has been developed and successfully installed in three stations for operator assistance in optimizing the plant operation. Chem analyser, an expert system for power plant chemistry has been developed and installed in 200 MW and 500 MW units. The system is being developed for 660 MW Supercritical units. NETRA has successfully used in-house developed Robotic Inspection System for inspection of coiled tubes in 500 MW boilers. Inspections were carried out in various projects. These inspections helped site to locate problematic areas in LTSH. Inspection was also carried out successfully in Economiser in Sipat Unit-V. Based on CFD model analysis, flue gas ducts in Tanda #2 areas prone to high pressure drop were identified and suitable flow elements were implanted in U#2 during overhaul in July-Aug 2012. It resulted in pressure drop by 60 mmWC and ~100 kW of ID fan power saving. More than 200 numbers of water wall tubes from 34 plants were analysed including state electricity boards and joint ventures. On the basis of qualitative and quantitative analysis of deposits, seven nos. of boilers were recommended for post operational chemical cleaning. Crystallographic characterization has been carried out of turbine blade deposits and water wall deposits to assess steam water cycle impurities for O&M of power plants.

- **Environment:** Environmental Appraisal of 4 stations has been carried out and corrective actions are being taken by the stations based on the appraisal; Ozone measurement as per new ambient air act was performed at three stations to build up data; Performance improvement for STP carried out at Auraiya; the process is finalized for Jhanor-Gandhar effluent recycling scheme.

- **Health Assessment:** 32 in-situ health assessment studies carried out for different boilers, steam & gas turbines. NETRA provided expert services for the application of phased array technique in detecting the cracks on the root of the LP turbine blades without removing them. LP Rotor blades of Talcher (Unit #3), Tanda (Unit#4) were tested using UT phased array. Material mismatch, i.e. use of inferior material, like carbon steel in place of low alloy steel, was detected at 43 locations for various projects .

Health assessment of high temperature headers and pipelines was carried out for Ramagundam (Unit#6), Singrauli (Unit#6). Assessment of material degradation for gas turbine component was carried out at some projects.

High vibration problem of TG#2 at Tanda, C.W. Pump 32A at Dadri Gas and P.A. fan#4B at BTPS were addressed. Looseness problem of Generator overhang windings were also diagnosed at Tanda in U#2, U#3 and U#4 at Unchahar.

Residual life assessments carried out for service-exposed superheater and reheater tubes of boilers of coal-fired units by conducting accelerated stress rupture tests (ASRT) on the tube samples operating in the creep domain.

Sweep Frequency Response Analysis (SFRA) analyses of various transformers to assess the mechanical integrity of Transformers have been carried out at some projects.

Moisture assessment in more than 20 transformers by using (*in-house*) developed PDC-RVM instrument helped sites to take decision like for drying out of transformers.

- **Condition Monitoring:** Transformer oil: More than 2500 transformer oil samples were analysed from various stations as well as outside agencies pertaining to different HV transformers such as GT-s, ICT-s, UAT-s, ST-s etc. It helped in early detection of impending faults such as GT-7R, GT-7B in Korba, TT#3 at Farakka etc.

Wear debris: 2245 nos. of oil samples were analysed for wear debris. Problems diagnosed in Mill#5E at BTPS, APH 1B at TTPS, Mill-3B and Mill-4B at SSTPS.

Boiler Tube/ failure analysis: Condition assessment of about 40 boiler tubes from the Water wall, Reheater and super heater regions. Failure analysis of boiler tubes to find the cause of failure was done for over 100 tubes of various boilers of NTPC and external power producers.

d. Scientific Support to Other Utilities:

Scientific services provided to other utilities such as Torrent Power, Jindal Power, Lehra Mohabat, IPGCL, DMRC, MMTC etc.

2.0 Benefits derived as a result of above Research & Technology Development:

NETRA activities as carried out have helped in increasing the availability, reliability and efficiency of the stations. Techniques developed by NETRA are implemented at stations, which are enhancing the life of boiler & turbine components. Environmental appraisals, rejuvenation treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency, availability and life of boilers, various heat exchangers/cooling towers etc.

The preventive/failure investigation of transformers, critical rotating components, boiler/condenser tubes and NDT health assessment of boiler components helped in identifying the cause of failure and thus providing necessary input for taking corrective action in preventing re-occurrence of similar failures thereby increasing the availability of power plant equipments. Real time monitoring softwares/analysers such as Chem. Expert system and real time advisory system techniques enabled stations to monitor parameters on real time basis and generate instant advisory to enhance performance.

Studies on CO₂ fixation/utilization; solar thermal; biofuels will result into development of technologies for reduction in the impact on climate change and technologies for affordable renewable energy sources. Development of technologies for efficiency improvement will help in reducing cost of generation.

3.0 Future Plans

Developmental Projects planned to be taken up:

- Up gradation of existing motors through in-house developed technology for VFD retrofitting in one complete cooling tower fans and commissioning of system at NTPC Dadri station.
- Setting up of 50m² open pond race way algae reactor and commencement of cultivation of algae with selected strains at NTPC Faridabad station for fixation of CO₂ from flue gas.
- Procurement and setup of in-house designed thermo-syphon heat pipe based air pre-heater pilot facility at NETRA and commencement of trials. The technique is expected to reduce APH seal leakage from 15% (approx.) to almost nil value.
- Procurement and erection of flue gas waste heat recovery heat exchanger & associated equipments for 100 TR air conditioning system at NTPC Ramagundam Station.
- Detection & sizing of internal defects on selected welds of critical power plant pipelines using "Time of Flight Diffraction (TOFD)" techniques and establishing its efficacy for faster inspection of weld joints during erection at two NTPC Stations. 25% time saving is expected in NDT.

- Gandhar Gas Station CW Effluent Water Recovery System- finalization of Tech Specs, Costing and NIT. The system will recover about 125 m³/hr of Effluent Water.
- Process optimization studies of conversion of MSW to fuel at bench scale level at NETRA.
- Pilot plant studies for mineralization of fly ash slurry through flue gas to reduce pH of slurry at Ramagundam.
- CFD modelling of power plant process for improving plant efficiency at 2 power stations.
- Packaging of LTSH robotic system trials.
- Final commissioning of RFID system for 5 Km. stretch at Kahalgaon.
- Development of software for in-situ detection of turbine blade defects (with BARC).

4.0 Expenditure on R&D

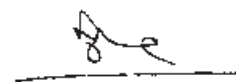
S.N.	Description	Expenditure in (₹/Crores)	
		2012-13	2011- 12
a)	Capital	10.11	3.82
b)	Recurring	91.85	29.89
c)	Total	101.96	33.71
d)	Total R&D expenditure as a percentage of total turnover	0.1585%	0.0551%

5.0 Technology Absorption, Adaptation and Innovation

Particulars of some of the important technology imported during last five (5) years are as follows:

S.No.	Technology	Year	Stations
1	Adoption of supercritical technology in large size units of 800 MW	2012	Being implemented in bulk tender projects of 800 MW at Kudgi, Lara, Darlipalli & Gadarwara
2	Super critical technology with 256 Kg/cm ² Steam Pressure and 565/595 CMS/RH steam temperature is being adopted for improvement in thermal efficiency and reduced emission of green house gasses.	2008-10	Being implemented in Barh-II and also being implemented in 11 units of 660 MW (in Mauda, Sholapur, Meja, Nabinagar and Raghunathpur plant) through bulk tendering mechanism & being implemented for 800 MW units (Kudgi, Darlipalli, Gajmara & Lara through bulk tendering.
3	Development of IGCC technology for high ash Indian coal (s)	2010	A technology demonstration plant of about 100 MW capacity at Dadri project is being planned.
4	Communicable Numerical Relay Technology (on IEC 618500) along with Networking Systems introduced in 33 KV/11 KV /6.6 KV/3.3 KV and LV System	2009	Implemented at Dadri-II, Korba-III & IGSTPP, Simhadri-II. Being implemented in all ongoing projects.
5	Secured & Improved Network design of DDCMIS has been adopted. This secured network design has been incorporated in the specifications along with network security policies & procedures, provision of security audits and specialized training.	2008	Incorporated in technical specifications from Bongaigaon onwards. For existing projects, these security policies & procedures have been circulated to all sites.

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013

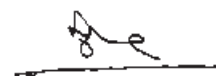
Annex-IV to Directors' Report

STATEMENT PURSUANT TO SECTION 212 OF THE COMPANIES ACT, 1956 RELATING TO SUBSIDIARY COMPANIES

	NAME OF THE SUBSIDIARY	NTPC ELECTRIC SUPPLY COMPANY LIMITED	NTPC VIDYUT VYAPAR NIGAM LIMITED	NTPC HYDRO LIMITED*	KANTI BIJLEE UTPADAN NIGAM LIMITED	BHARTIYA RAIL BIJLEE COMPANY LIMITED
1.	Financial year of the Subsidiary ended on	March 31, 2013	March 31, 2013	March 31, 2013	March 31, 2013	March 31, 2013
2.	Date from which they became Subsidiary	August 21, 2002	November 1, 2002	December 12, 2002	September 6, 2006	November 22, 2007
3.	Share of the subsidiary held by the company as on March 31, 2013					
	a) Number & face value	80,910 equity shares of ₹10/- each	2,00,00,000 equity shares of ₹10/- each	12,13,59,500 equity shares of ₹10/- each	35,71,51,233 equity shares of ₹10/- each	50,94,60,000 equity shares of ₹10/- each
	b) Extent of holding	100%	100%	100%	65%	74%
4.	The net aggregate amount of the subsidiary companies Profit/(loss) so far as it concerns the member of the holding company (in ₹)					
	a) Not dealt with in the holding company's accounts					
	i) For the financial year ended March 31, 2013	(24,58,67,245)	(34,84,39,193)	NIL	(8,38,80,933.50)	(12,15,946.54)
	ii) Upto the previous financial years of the subsidiary company	52,50,17,525	1,77,59,76,299	NIL	(6,04,87,423.75)	(38,94,002.84)
	b) Dealt with in the holding company's accounts					
	(i) For the financial year ended March 31, 2013	Nil	Nil	(31,348)	Nil	Nil
	(ii) For the previous financial year of the subsidiary company since they become the holding company's subsidiaries	Nil	Nil	(8,13,91,473)	Nil	Nil

* The Board of NTPC, in its Meeting held on 10.05.2012, has approved the scheme of amalgamation of NTPC Hydro Limited with NTPC Limited under Section 391-394 of the Companies Act, 1956 subject to the requisite approvals from Ministry of Corporate Affairs, Shareholders and Stock Exchanges. A Meeting of the shareholders of NTPC and of the shareholders of NTPC Hydro Limited was held on 24.05.2013 in accordance with the orders of the Ministry of Corporate Affairs. The legal process of amalgamation is in progress.

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013

STATISTICAL DATA OF GRIEVANCE CASES

2012-2013

S. No.	Particulars	Public Grievance Cases	Staff Grievances Cases
1.	Grievance cases outstanding at the beginning of the year	1	5
2.	Grievance cases received during the year	-	1
3.	Grievance cases disposed of during the year	-	2
4.	Grievance cases outstanding at the end of the year	1	4

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013

STATISTICAL INFORMATION ON RESERVATION OF SCs/STs FOR THE YEAR 2012.

Representation of SCs/STs as on 01.01.2013:

Group	Employees on Roll	SCs	%age	STs	%age
A	14,238	1,755	12.33	613	4.31
B	5,661	986	17.42	421	7.44
C	4,871	811	16.65	318	6.53
D	868	216	24.88	130	14.98
Total*	25,638	3,768	14.70	1,482	5.78

* The above data is inclusive of manpower posted at JVs and Subsidiaries and manpower of taken over projects.

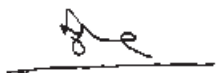
Recruitment of SCs/STs during the year 2012:

Group	Total Recruitment	SCs	%age	STs	%age
A	467	70	14.99	42	8.99
B	-	-	-	-	-
C	23	2	8.70	-	-
D	-	-	-	-	-
Total	490	72	14.69	42	8.57

Promotions of SCs/STs during the year 2012:

Group	Total	SCs	%age	STs	%age
A	2,704	422	15.61	152	5.62
B	1,741	328	18.84	57	3.27
C	1,141	177	15.51	53	4.65
D	41	7	17.07	3	7.32
Total	5,627	934	16.60	265	4.71

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013

Annex- VII to Directors' Report

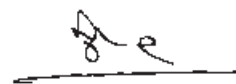
INFORMATION ON PHYSICALLY CHALLENGED PERSONS

With a view to focus on its role as a socially responsible and socially conscious organization, your Company has endeavored to take responsibility for adequate representation of Physically Challenged Persons (PCP) in its workforce. With this in view, the Company launched a massive recruitment drive to make up the shortfall of PCP. Presently, 472 PCP (97 VH, 104 HH and 271 OH) are on rolls of NTPC. Reservation has been provided for PH as per rules/policy. Some of the other initiatives taken for the welfare of PCP by NTPC over the years are as under:

For individual needs of the Visually Hampered employees, screen reading software and Braille shorthand machines, made available by the Projects of NTPC. A website has been made PCP friendly, particularly for Low Vision Employees.

- "Sign language" training for the employees in general.
- Changes in the existing building have been/ are being made to provide barrier free access to physically challenged.
- Ramps have also been provided for unhampered movement of wheel chairs.
- At most of the NTPC Projects, wherever houses are located in multi-storied structures, allotments to PCP has been made on the ground floor.
- Special parking enclosure near the ramp at the office entrance as well as Physically Handicapped friendly toilet and lift at CC and Projects.
- Wheel chairs have been provided to employees with orthopaedics disabilities. If required, the assistance of an attendant has also been sanctioned.
- Wherever required, gates/ door of the quarter have been widened.
- At CC procurement of stationery items like files, envelopes are mainly being done from NGOs/ Agencies like ADDI, MUSKAN, Blind Relief Association who are working for physically challenged thereby creating indirect employment.
- Paintings made by disabled persons have also been procured and placed at different locations in the Company Offices.
- Medical camps have been organized in various projects of the Company for treatment and distribution of aids like artificial limbs, tricycles, wheelchairs, calipers etc.
- Shops have been allotted in Township to PCP so that they may earn their livelihood. Similarly, PCOs within/ outside plant premises are also allotted to PCP.
- Regular interactive meetings are being organized with physically challenged employees.
- Training needs are being fulfilled as per the individual requirement.
- 9 number of Scholarships @ ₹1,500/- per month/ per student are given to PH students pursuing MBA/ PGDBM/Degree in Engineering Courses.
- Petty contracts like book binding, scribbling pad preparation from waste paper, file binding, furniture repair, screen printing, spiral binding, painting contract are also being given to disabled persons.
- Physically challenged (Orthopedically Handicapped) employees have been allowed to purchase a three wheeler vehicle with a hand fitted engine against their normal entitlement (advance for scooter/ motorcycle/ moped) under NTPC Conveyance Advance Rules.
- At all Projects/ Offices, Nodal Officers (Physically Challenged) have been nominated.
- Reimbursement towards low vision aids, dark glasses etc. subject to maximum of ₹1,000/- every year has been introduced. Similarly hearing aid; behind the ear model for each ear restricted to ₹10,000/- or actual cost whichever is lower has been introduced. It may be replaced every four years subject to certificate of condemnation by ENT Specialist.
- Relaxation in qualifying marks for open recruitment: pass marks only and also 10% relaxation in written test and interview from the year-2002 onwards.
- The minimum performance level marks for promotions within the cluster is relaxed by 3 marks in case of employees belonging to SC/ ST/ Physically Challenged category.

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013

UNGC – Communication on Progress

NTPC expresses its continued support for the Global Compact and its commitment to take action in this regard, as was communicated by the Chairman & Managing Director, NTPC in his letter dated May 29, 2001 addressed to Secretary General, United Nations.

NTPC has posted the brief of Global Compact (GC) and its commitment to the principles of GC on its website at www.ntpc.co.in. The principles of GC were communicated to all employees through in-house magazines, internal training programmes and posters. NTPC, a core member of Global Compact Network (GCN), India, (formerly known as Global Compact Society) actively participated in the monthly meetings, Governing Council Meetings and Annual Convention of the Global Compact Network at New Delhi.

NTPC has released its Sustainability Report "Powering with care ..." for the year 2011-12 with NTPC's Sustainable Energy Development Vision of "Going Higher on Generation, lowering GHG intensity", the report is a step towards sustaining greener environment, conserving natural resources such as energy, water etc. and company's commitment towards Corporate Governance and Social Responsibility. Self declared B+ report and in accordance with the Global Reporting Initiative (GRI) G3.0 guidelines. The report has been externally assured by the assurance provider, M/s DNV AS, as per the assurance standard AA1000.

Human Rights: Principle 1-2

NTPC, a socially responsible Corporate Citizen since its inception, started its Community Development initiatives in the form of R&R program which aim to improve the overall economic status of persons displaced or otherwise affected by our projects. Each R&R programme is based on specific local requirements and is guided by extensive socio-economic surveys.

NTPC recognized to continue community and peripheral development works through Community Development (CD) Policy where the same were closed under R&R policy. NTPC revised its CD policy in August 2010, keeping in view the changed Business environment, Global practices and guidelines issued from DPE, Ministry of Heavy Industry & Public Enterprises. In line with the CD Policy, NTPC takes up activities at Station level and Regional/ National level within the identified Basket of Activity.

In the area of education, following activities were undertaken:

- Financial support for construction of Engineering College in Korba.
- Improvement in adopted ITIs at various projects
- Purchase of equipments at schools
- Construction of girls toilets at primary schools
- Distribution of solar lamps to about 900 meritorious village students
- Various other education related activities in more than 350 village schools like distribution of scholarships, uniforms and development of assets and infrastructure support to students
- Information and Communication Technology (ICT) centers established by NTPC Foundation at Delhi University and at Gauhati University, Guwahati for providing IT education to physically & visually challenged students, benefited approx 174 students during 2012-13. A new ICT Centre has been started at Devi Ahilya Vishwavidyalaya, Indore.
- Activities to benefit physically challenged persons like distribution of dress, bags study material, reimbursement of school fees etc., distribution of tricycles and providing medical appliances were taken up by Stations.
- 23 schools run by NTPC predominately for community benefited more than 20,000 students of neighbourhood community.

In order to make the youths self-reliant, the following activities were undertaken:

- Vocational training programs to make youth self-reliant such as Computer training, Motor Driving, General Electrical Repairing, mobile repairing, fitter, refrigeration & air conditioning repair, masonry, shuttering etc. for youth and various Coaching Classes etc. for village children.
- Implementation of the project "Improvement in Quality of Life of rural poor to create self-reliance by increasing participation in Community Development Work" around Kahalgaon Station through Disha.
- Various vocational training programmes for women in the neighbourhood villages of its stations including Dress Designing, Beautician, Embroidery, Hair & Skin care etc. for women empowerment.
- Skill upgradation programs in sewing for women population in the neighborhood villages to promote self-employment conducted by Stations including providing sewing machines covered more than 600 women.

In the area of infrastructure, the following activities were undertaken:

- Installation of 10 High Mast Lights in Berhampore district of West Bengal
- Solar Power System in three municipal corporations of Raebareli, Bacharvan and Lalganj of Raebareli District
- Installation of 36 solar street lights at different location in the Barabanki district of Uttar Pradesh is in progress
- Installation of 27 no. of hand pumps completed in District Dhanbad of Jharkhand

- Construction of 24 patches of cement concrete roads totaling to about 2.5 km in various villages in District Chhindwara, Madhya Pradesh
- Construction of road, sanitation, drinking water and electrical lightning work in 6 villages, 3 each in Bhagalpur and Godda Districts by Kahalgaon Project.

In the area of health, the following activities were undertaken:

- Disability Rehabilitation Centers (DRCs) at Tanda, Rihand, Korba, Dadri and Bongaigaon established in collaboration with NTPC Foundation and National Institute for the Orthopaedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India benefited about 4200 physically challenged people during 2012-13.
- Operational Mobile Health Clinic facility by Stations to provide quality health care at the doorstep of neighbourhood villages.
- Conducting more than 70 medical camps of various types for local villages including those for detection and treatment of respiratory diseases like TB and lung cancer, eye check up camps and general health checkups. During the camps more than 2,100 surgeries of various natures were performed.
- Activities like fogging, spraying anti larva spray and to support for Health Infrastructure were taken up in about 200 villages during the year.
- NTPC extended support by providing essential drugs to State Government, Odisha to meet medical emergencies during ensuing monsoon.
- Directly Observed Treatment cum Designated Microscopy Centre (DOT cum DMC) with Mobile ambulance facilities being run by 12 NTPC hospitals through NTPC Foundation under Revised National Tuberculosis Control Programme (RNCTP) that cater to villages up to 25-30 km benefited about 5,550 people during 2012-13.

NTPC employees participated in various activities through Employee Voluntary Organization for Initiative in Community Empowerment (EVOICE).

NTPC had signed a MOU with Archeological Survey of India (ASI) and National Culture Fund (NCF) for financial support for preservation and conservation of group of 3 monuments (Group of Monuments, Mandu (MP), Excavated site at Vikramshila (Bihar), and Archaeological site, Lalitgiri / Dhauri (Odisha). The preservation & conservation works are in progress at Group of Monuments, Mandu. For other two sites, plans have been prepared & work will start soon.

Labour Standard: Principle 3-6

For addressing the issue of labour standard in comprehensive manner, NTPC has decided to adopt international standards like SA-8000 and OHSAS-18001.

13 NTPC Stations has been accredited for SA 8000 in previous years. During the year 2012-13, Jhanor Gandhar and NCPP Dadri stations of NTPC got revalidated for SA 8000. Revalidation for the same is under process at Auraiya, Singrauli and Unchahar. Surveillance audit for SA 8000 Accreditation has been carried out by Anta, Auraiya, Badarpur, Farakka, Kayamkulam, NCPP Dadri, Ramagundam, Rihand & Simhadri.

Environment: Principle 7-9

NTPC since inception has been proactive in addressing environmental concerns. NTPC has identified Environment Management as a thrust area to achieve excellence and aims to strengthen its position as a leader in environment protection area. To meet the environmental challenges of 21st century and beyond, we have adopted sound envt. management practices and advanced environment protection system to minimize impact of power generation on environment. All NTPC units have been ISO 14001 certified by reputed National/ International certifying agencies.

The details of the initiatives undertaken by the Company are given under the Heading 'Environment Management - initiatives for preserving environment' in the Directors' Report.

Anti-corruption: Principle 10

The Company has a Vigilance Department headed by Chief Vigilance Officer who is a nominee of the Central Vigilance Commission. The Vigilance Department consisting of Four Units, namely Corporate Vigilance Cell, Departmental Proceeding Cell (DPC), MIS Cell and Technical Cell (TC). These units deal with various facets of Vigilance Mechanism. Exclusive and independent functioning of these Units ensure transparency, objectivity and quality in vigilance functioning. The Vigilance Department submits its reports to Competent Authority including the Board of Directors. The CVO also reports to the Central Vigilance Commission as per their norms.

The details are given under the Heading 'Vigilance' in the Directors Report.

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013

The quantity of ash produced, ash utilized and percentage of such utilization during 2012-13 from NTPC Stations is as under:

Sl. No.	Stations	Ash Produced	Ash Utilization	% Utilization
		Lakh MTs	Lakh MTs	%
1	Badarpur	12.02	10.41	86.61
2	Dadri	27.44	23.80	86.73
3	Singrauli	37.77	22.66	59.99
4	Rihand	34.89	19.71	56.49
5	Unchahar	24.54	15.33	62.47
6	Tanda	11.56	7.33	63.41
7	Korba	64.39	24.18	37.55
8	Vindhyachal	69.35	46.13	66.52
9	Sipat	41.76	8.62	20.64
10	Ramagundam	45.21	30.52	67.51
11	Simhadri	32.25	19.60	60.78
12	Farakka	36.47	33.34	91.42
13	Kahalgaon	45.63	10.22	22.40
14	Talcher-Thermal	12.35	12.35	100.00
15	Talcher-Kaniha	67.26	25.50	37.91
	Total	562.89	309.70	55.02

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013

NTPC BUSINESS RESPONSIBILITY REPORT-2012-13

Section A : General Information about the company

1. **CIN (Corporate identity number)** L40101DL1975GOI007966
2. **Name of the company** NTPC Limited
3. **Registered address** NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003
4. **Website** www.ntpc.co.in
5. **Email id** akrastogi@ntpc.co.in
6. **FY reported** 2012-13
7. **Sector that company is engaged in : Power**
8. **Product/services that the company manufacturers /provides (as in balance sheet):**
 - i. Generation of Electricity
 - ii. Consultancy
9. **Total number of location where business activity is undertaken by the company:**
 - i. International locations - 03 nos
 - a. Trincomalee Power Project, Srilanka
 - b. Power Project at Khulna, Bangladesh
 - c. Siddhirganj, Bangladesh
 - ii. National locations - 55 nos.
10. **Markets served by the company : National & International**

Section B : Financial details of the company

1.	Paid up capital (₹ Crore)	₹ 8,245.46 Cr.
2.	Total Revenue (₹ Crore)	₹ 68,775.51 Cr.
3.	Total profit after taxes (₹ Crore)	₹ 12,619.39 Cr.
4.	Total spending on CSR and Sustainable Development (SD) as % of PAT (%) (CSR : ₹ 69.24 Cr.+SD : ₹ 10.29 Cr.)	₹ 79.53 Cr. (0.63 %)
5.	List of activities in which expenditure in 4 above has been incurred	<p>Areas of CSR Activities :</p> <ul style="list-style-type: none"> - Education and awareness creation - Vocational Training and Skill up-gradation - Health and Sanitation - Conducting Medical camps - Activities for physically challenged - Women Empowerment - Roads and Infrastructure development - Drinking Water - Animal Health - Sports and Culture <p>Areas of SD Activities :</p> <ul style="list-style-type: none"> - Tree Plantation - Stack SPM reduction - Installation of Bio-methanation plants - Environmental Studies

Section C: Other Details

Subsidiaries : The company has the following five Subsidiary Companies as on 31-03-2013 :

- i. NTPC Electric Supply Company Limited
- ii. NTPC Vidyut Vyapar Nigam Limited
- iii. Bhartiya Rail Bijlee Company Limited
- iv. Kanti Bijlee Utpadan Nigam Limited
- v. NTPC Hydro Limited*

*NTPC Hydro Limited is being merged with NTPC Limited

The Business Responsibility Initiatives of the parent company are applicable to the subsidiary companies also. However, none of the entities that the Company does business with, participate in the BR initiatives of the Company.

Section D: BR information

1. Individual Directors responsible for implementation of the BR policy/policies:

Principle No	Description	Policy / Policies	Director(s) Responsible
Principle 1 (P1)	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability.	1. Code of Conduct* 2. Core Values 3. Fraud Prevention Policy	All Directors & Chief Vigilance Officer
Principle 2 (P2)	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle.	1. Safety Policy 2. Sustainable Development (SD) Policy	Director (Operations) Director (Technical)
Principle 3 (P3)	Businesses should promote the well-being of all employees.	Human Resource (HR) Policies	Director (HR)
Principle 4 (P4)	Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.	1. R&R Policy 2. Community Development (CD) Policy 3. HR Policies	Director (HR)
Principle 5 (P5)	Businesses should respect and promote human rights.	HR Policies	Director (HR)
Principle 6 (P6)	Businesses should respect, protect, and make efforts to restore the environment.	1. Environment Policy 2. SD Policy	Director (Operations) Director (Technical)
Principle 7 (P7)	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner.	1. Code of Conduct* 2. Core Values	All Directors
Principle 8 (P8)	Businesses should support inclusive growth and equitable development.	1. R&R Policy 2. Community Development (CD) Policy	Director (HR)
Principle 9 (P9)	Businesses should engage with and provide value to their customers and consumers in a responsible manner.	Commercial systems & Procedures	Director (Commercial)

* Code of Conduct for Board Members & Senior Management Personnel

2. Details of Director/ Directors responsible for BR as a whole

a. Details of the Director/ Directors responsible for implementation of the BR Policy/ policies:

- i. **DIN Number** : 00659908
- ii. **Name** : Dr. Arup Roy Choudhury
- iii. **Designation** : Chairman & Managing Director
- iv. **Telephone Number** : 011-24360044
- v. **Email-id:** : cmd@ntpc.co.in

b. Details of the BR Head : Same as above

3. Principle wise reply to each question on BR Policy / Policies :

	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9
1.	Do you have a policy/ policies for the Principle	Y	Y	Y	Y	Y	Y	Y	Y	N
2.	Has the policy being formulated in consultation with the relevant stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
3.	Does the policy conform to any national /international standards?	Y	Y	Y	Y	Y	Y	Y	Y	-
4.1	Has the policy being approved by the Board?	Y	Y	Y	Y	Y	Y	Y	Y	-
4.2	If yes, has it been signed by MD/owner/CEO/appropriate Board Director?	N	N	N	N	N	N	N	N	-
5.	Does the company have a specified committee of the Board/ Director/ Official to oversee the implementation of the policy?	Y	Y	Y	Y	Y	Y	Y	Y	-
6.	Indicate the link for the policy to be viewed online?	(i)	(i)	(ii)	(i)	(ii)	(i)	(i)	(i)	-
7.	Has the policy been formally communicated to all relevant internal and external stakeholders?	Y	Y	Y ^s	Y	Y ^s	Y	Y	Y	-
8.	Does the company have in-house structure to implement the policy/ policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
9.	Does the Company have a grievance redressal mechanism related to the policy / policies to address stakeholders' grievances related to the policy / policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
10.	Has the company carried out independent audit / evaluation of the working of this policy by an internal or external agency?	Y	Y	Y	Y	Y	Y	Y	Y	-

^s Communicated to Internal Stakeholders only.

(i) Web links for the Policies :

- Code of Conduct & Core Values :
www.ntpc.co.in/images/content/investors/Code_of_Conduct_for_Board2012.pdf
- R&R Policy :
www.ntpc.co.in/images/content/corporate_citizenship/NTPC_R&R_Policy_2010.pdf
- CSR-CD Policy :
www.ntpc.co.in/images/content/corporate_citizenship/CSR-CD-Policy-2010.pdf
- Sustainable Development (SD) Policy :
www.ntpc.co.in/images/content/corporate_citizenship/SustainableDevelopmentPolicy/NTPC-SDPolicy.pdf
- Fraud Prevention Policy : www.ntpctender.com/about/FraudPolicy.asp

(ii) Policies not hosted on web :

- Environment Policy : Policy is in hard copy only and not hosted on web. However, Principles of Environment Policy have been given on the website www.ntpc.co.in under Environment Head.
- Safety Policy & HR Policies : Available for internal stakeholders only and not hosted on web.

4. If answer against any principle is 'No', please explain why:

Principle 9 : All the sub-principles identified under principle -9 are duly followed by NTPC through its commercial systems and procedures. However, NTPC feels that a separate Policy on Principle -9 is not required because :

- NTPC supplies power to the bulk customers viz. State Electricity Distribution Companies, majority of which are owned by respective State Governments.
- Allocation of power is made by Ministry of Power based on certain policies and guidelines.
- Power Tariff is determined by Central Electricity Regulatory Commission (CERC) engaging all stakeholders.
- Issues, if any, are discussed and resolved in common forums like Regional Power Committees, where customer organisations and generators are members.

5. Governance related to BR

i.	Indicate the frequency with which the Board of Directors, Committee of the Board or CEO to assess the BR performance of the Company.	Within 3-6 months
ii.	Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?	The Company has published its Sustainability Report for the Financial Year 2011-12 and intends to publish it annually. The hyperlink to the report is : http://www.ntpc.co.in/images/content/corporate_citizenship/SustainableDevelopmentPolicy/sustainabilityreport11-12.pdf

Section E: Principle –wise performance

Principle 1: Businesses should conduct and govern themselves with Ethics, Transparency and Accountability

- Does the policy relating to ethics, bribery and corruption cover only the company? Does it extend to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs / Others?
 - Code of Conduct for Board Members & Senior Management Personnel cover all the Directors and Senior Management Personnel of the Company.
 - Fraud Prevention Policy applies to any fraud, or suspected fraud involving employees of NTPC as well as representatives of vendors, suppliers, contractors, consultants, service providers or any outside agency (ies) doing any type of business with NTPC.
 - Conduct, Discipline and Appeal Rules (CDA Rules) are applicable to all employees of NTPC and employees of NTPC posted in JVs/ Subsidiaries.
 - Insider Trading Code is applicable to designated employees of the Company.
 - However in line with NTPC, RGPL and NTECL, JVs of NTPC have also adopted Fraud Prevention Policy and CDA rules.
- How many stakeholder complaints have been received in the past financial year and what percentage was satisfactorily resolved by the management? If so, provide details thereof, in about 50 words or so.

A total of 51 complaints were taken up for investigation during the period 1st April'12 to 31st March'13. All cases, referred under the Fraud Prevention Policy, have been investigated and taken to its logical conclusion. Action as per law has been initiated against those, who are found involved, and misappropriated amount involved in most of the fraud cases has been recovered.

Principle 2: Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle

- List up to 3 of your products or services whose design has incorporated social or environmental concerns, risks and/ or opportunities
 - Generation of Electricity
- For each such product, provide the following details in respect of resource use (energy, water, raw material etc.) per unit of product(optional):
 - Reduction during sourcing/production/distribution achieved since the previous year throughout the value chain?
 - Reduction during usage by consumers (energy, water) has been achieved since the previous year?

RAW MATERIAL (ENERGY) CONSUMPTION PER YEAR

Energy Source	2011-12		2012-13	
	Quantity	Per Unit Consumption	Quantity	Per Unit Consumption
Coal*	140.6 MMT	0.71 Kg/kwh	154.5 MMT	0.73 Kg/kwh
Gas ^s	13.08 MMSCMD	0.21 scm/kwh	10.70 MMSCMD	0.22 scm/kwh

* Increase in per unit coal consumption is due to poor quality of coal and lower plant load factor in FY 2012-13.

\$ Increase in per unit gas consumption is due to lower plant load factor in FY 2012-13

WATER CONSUMPTION PER YEAR

	2011-12		2012-13	
	Quantity	Per Unit Consumption	Quantity	Per Unit Consumption
Total Water Withdrawal	4701 million KL	21.3 Litre/kwh	4591 million KL	19.9 Litre/kwh

Reduction in Water withdrawal during FY 2012-13 = 6.5 %

ENERGY SAVING PER YEAR

Energy saved by the initiatives taken in NTPC power plants for energy conservation / efficiency improvement	2011-12	2012-13
	111.2 MU	119.9 MU

3. Does the company have procedures in place for sustainable sourcing (including transportation)? If yes, what percentage of your inputs was sourced sustainably? Also, provide details thereof, in about 50 words or so.

Yes, the Company has procedures in place for Sustainable Sourcing of Coal. For projects commissioned before 31.03.09, NTPC has signed Fuel Supply Agreements (FSAs) for 124.9 million tonnes which corresponds to 23895 MW at 85% PLF.

After 31.03.09 and till end of FY 2012-13, 7960 MW capacity has been commissioned in the Company. Letter of Assurance (LOA) for coal supply has been issued by coal companies. New FSAs for the projects have been finalised and are being signed with Coal India Limited (CIL). The total LOA quantity for these projects is 33.31 million tonnes, which correspond to PLF of around 76.5% to 85% as per CEA norms. As an interim measure, yearly MOUs are being signed with coal companies based on coal allocation done by Central Electricity Authority (CEA).

For any shortfall in coal requirement, NTPC is sourcing coal through E-auction, bilateral agreement and import.

NTPC has its own dedicated Merry-Go-Round (MGR) railway system for all its Pit Head stations for transportation of coal from respective linked mines. Around 60% of its coal requirement is transported through this system ensuring sustainability of coal transportation.

4. Has the company taken any steps to procure goods and services from local & small producers, including communities surrounding their place of work? If yes, what steps have been taken to improve their capacity and capability of local and small vendors?

The Company adopts fair, equitable and transparent tendering procedures. To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents to the extant policy of Government of India. However, there are certain economic opportunities for the local and small producers, arising out of need for goods and services by the project and its township, which are extended to project affected persons/ families as additional facilities over and above the entitlements. These economic opportunities include preference to Project Affected Persons (PAPs) / land oustees in the project and its township in following areas:

- Employment with contracting agencies and through other sources
- Allotment of Shops/ Kiosks in township
- Award of petty contracts
- Vehicle hiring in project
- Vendor permit
- Any other opportunities deemed fit by the project.

5. Does the company have a mechanism to recycle products and waste? If yes, what is the percentage of recycling of products and waste (separately as <5%, 5-10%, >10%). Also, provide details thereof, in about 50 words or so.

Our Product viz. Electricity gets completely consumed and hence there is no scope of its recycling. The hazardous wastes generated at our power stations such as used transformer oil, used lubricants, lead acid batteries etc. are sold to government approved recyclers or given back to the sellers for recycling under buy back arrangements, which takes care of 100% recycling of such wastes.

Around 55% of the total ash generated from electricity generation has been used for various productive purposes during 2012-13. Important areas of ash utilization are - cement and asbestos industry, ready mix concrete plant (RMC) road embankment, mine filling, ash dyke raising and land development.

Principle 3 : Businesses should promote the wellbeing of all employees

1. Number of Employees* :

- a. Executives : 12,588
b. Non- executives : 11,277

* excluding JVs and subsidiaries

2. Number of Employees hired on Temporary / Contractual / Casual basis :

NTPC does not hire employees on temporary / casual basis. The no. of workers with Contractors are vary from time to time. As per the available information, the total no. of Contractor's Workers as on 31-03-2012 were 11,333.

3. Number of permanent Women Employees : 1,467

4. Number of permanent Employees with Disabilities : 472
5. Do you have an employee association that is recognized by management:
NTPC Limited is a multi unit organization. Association(s) comprising of executives of NTPC need not be recognized in the absence of any statutory mandate. Workmen of various NTPC Units have formed unions. The same are accorded recognition by NTPC Limited as per applicable law / practice.
6. What percentage of your permanent employees is members of this recognized employee association?
About 50-55% of the permanent employees in workmen category are members of the recognized union of workmen.
7. Please indicate the number of complaints relating to child labour, forced labour, involuntary labour, sexual harassment in the last financial year and pending, as on the end of the financial year.

No.	Category	No. of complaints filed during the FY 12-13	No. of complaints pending as on 31-03-2013
1	Child labour / forced labour / involuntary labour	NIL	NIL
2	Sexual harassment	NIL	NIL
3	Discriminatory employment	NIL	NIL

8. What percentage of your under mentioned employees were given safety & skill up-gradation training in the last year?

Category of employee	Training for safety (% covered)	Training for skill up -gradation (% covered)*
Permanent Employees	18.63	26.84
Permanent Women Employees	3.80	27.65
Casual / Temporary / Contractual Employees	84.04	14.24
Employees with Disabilities	7.28	23.62

* Programmes, which involve direct hands on training, have been considered under skill up-gradation programmes.

Principle 4: Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.

1. Has the company mapped its internal and external stakeholders? : Yes
2. Out of the above, has the company identified the disadvantaged, vulnerable & marginalized stakeholders
NTPC identifies vulnerable & marginalised stakeholders through Socio Economic Surveys and extend benefits as per provisions of extant Rehabilitation & Resettlement policies of GOI / concern State Govt / NTPC.
3. Are there any special initiatives taken by the company to engage with the disadvantaged, vulnerable and marginalized stakeholders. If so, provide details thereof, in about 50 words or so.

In addition to the entitlements and packages as envisaged in the policy, NTPC makes special efforts for the welfare of this section of the society. These may include provision of suitable amount as economic assistance / seed capital for self employment, special vocational training programmes, priority in engagement for suitable jobs, pension under Widow Pension Scheme, old age pension scheme etc.

Principle 5 : Businesses should respect and promote human rights

1. Does the policy of the company on human rights cover only the company or extend to the Group / Joint Ventures / Suppliers / Contractors / NGOs / Others?
All HR Policies of NTPC are applicable to all its employees and employees posted in JVs and Subsidiaries. Human Rights provisions are also built in our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors.
2. How many stakeholder complaints have been received in the past financial year and what percent was satisfactorily resolved by the management?

No complaint on human rights, such as child labour, forced labour, involuntary labour, sexual harassment, discrimination, rights of the disabled etc was received during the year.

Principle 6 : Business should respect, protect, and make efforts to restore the environment

1. Does the policy related to Principle 6 cover only the company or extends to the Group / Joint Ventures / Suppliers / Contractors / NGOs /Others

The environment policy of NTPC and implementation thereof covers the core business activity of producing thermal power through its power stations. However, the Joint Ventures / Suppliers / Contractors / Other stake holders are free to adopt the same voluntarily.

2. Does the company have strategies/ initiatives to address global environmental issues such as climate change, global warming, etc? If yes, please give hyperlink for webpage etc.

Yes, the Company has established a Centre for Energy Efficiency and Environmental Protection (CenPEEP) to work on Green House Gas (GHG) emission reduction through efficiency & reliability improvement. A web-page on the same is available on NTPC web-site (www.ntpc.co.in) under the subhead - Environment.

3. Does the company identify and assess potential environmental risks?

Environmental management is an integral part of business in NTPC. It starts from selection of environmentally compatible sites and conducting Environmental Impact Assessment studies, wherein all possible impacts and risks associated with the project are indentified. Clearances are taken from State Pollution Control Boards (SPCB) and Ministry of Environment & Forests (MOEF) etc. All necessary pollution control / abatement measures are incorporated in the design of the project and the stipulations made in these clearances are implemented during implementation of the project.

NTPC also has an elaborate and structured methodology for identifying and assessing potential environmental risks through an institutionalized "Enterprise Risk Management (ERM)" framework. ERM comprises of an Executive Director level committee, which meets every quarter to review and mitigate risks. NTPC's risk portfolio includes "compliance of emission, ash utilization and regulatory norms" risk, under which environmental risks are regularly identified, assessed & reviewed and steps for mitigation are evolved.

4. Does the company have any project related to Clean Development Mechanism? If so, provide details thereof, in about 50 words or so. Also, if yes, whether any environmental compliance report is filed?

NTPC has taken several initiatives for taking up CDM Projects in Power Sector. Some of these CDM initiatives are as under :

- i. Two of its Solar Power Projects viz. Solar PV Power Project at NTPC-Dadri (5 MW) and Solar PV Power Project at Port Blair (5 MW) have already been submitted to UNFCCC for CDM registration.
- ii. Another two projects viz. Solar PV Power Project at NTPC-Faridabad (5 MW) and Small Hydro Power Project at NTPC-Singrauli (8 MW) are in advanced stage of Validation and are likely to be submitted to UNFCCC for registration shortly.
- iii. Six more CDM Projects viz. North-Karanpura STPP, Loharinag Pala HEPP, Tapovan Vishnugad HEPP, Energy Efficiency Projects at NTPC-Singrauli, Energy Efficiency Project at NTPC-Dadri and 15MW Solar (Thermal) Power Project at NTPC-Anta have got Host Country Approval (HCA) from National CDM Authority and are being processed further.
- iv. Also, the methodology prepared by NTPC viz. "Consolidated base line and monitoring methodology for new grid connected fossil fuel fired power plants using less GHG intensive technology" for Super Critical technology has been approved by "United Nations Framework Convention on Climate Change (UNFCCC)" under 'Approved Consolidated Methodology 13 (ACM0013)'.

More CDM projects are in the pipeline. However, as none of the CDM projects have yet been registered, no verification report has been submitted by NTPC.

5. Has the company undertaken any other initiatives on – clean technology, energy efficiency, renewable energy, etc. Y/N. If yes, please give hyperlink for web page or write up.

Yes, the company has taken up several Initiatives for clean technology, energy efficiency and renewable energy. Details are as follows:

i. Clean Technology :

- Setting up of Coal Fired Units with Ultra Supercritical Parameters targeting efficiency comparable to the best available technology in the world.
- Establishment of Integrated Gasification Combined Cycle (IGCC) Technology Demonstration Plant (TDP) suited for high ash containing Indian coal : NTPC is planning to set up a 100MW IGCC Technology Demonstration Project (IGCC-TDP) at NTPC Dadri in two stages, with Stage-I comprising of installation of coal gasifier along with associated gas clean-up and other systems. Stage-II comprising of combined plant shall be installed upon stabilization of Stage-I.
- Development of Advance Ultra Super Critical technology : Under National Mission on Clean Coal (Carbon) Technologies, NTPC, BHEL and Indira Gandhi Centre for Advanced Research (IGCAR) have entered into MOU for indigenous development of advance ultra super critical technology which will have enhanced efficiency of around 46% and about 17% less CO₂ emission as compared to conventional 500 MW sub-critical thermal power plants.

ii. Energy Efficiency Improvement:

- The Centre for Energy Efficiency and Environmental Protection (CenPEEP) works on GHG emission reduction through efficiency & reliability improvement. Activities undertaken by CenPEEP in the area of Energy Efficiency improvement are given on the website www.ntpc.co.in
- NTPC is implementing Perform, Achieve and Trade (PAT) Scheme under National Mission on Enhanced Energy Efficiency (NMEEE) of Prime Minister in 22 Power Stations of the company as notified by BEE.

iii. Renewable Energy

NTPC plans to add capacity through renewable sources of energy. It offers environmently clean power. NTPC plans to broad-base generation mix by evaluating conventional and alternate sources of energy to ensure long term competitiveness and mitigate fuel risks. NTPC has taken various initiatives to implement the Renewable Energy Projects. The brief status of these initiatives is as given below:

1) Solar Projects (110 MW) :

- Commissioned- 10 MW (Dadri - 05 MW & Port Blair- 05 MW)
- Under Execution – 85 MW (Ramagundam- 10 MW, Unchahar- 10 MW, Talcher Kaniha- 10 MW, Rajgarh- 50 MW & Faridabad- 05 MW)
- Under Tendering- 15 MW Singrauli

2) Small Hydro Projects (11 MW) :

- Under Execution – 8 MW (Singrauli)
- Under Finalization of DPR - 03 MW (Rihand)

3) Wind power Projects (80 MW) – 40 MW each in Karnataka and Maharashtra - under tendering process

4) Geothermal based power Projects - MoU has been signed with Chattisgarh Govt for development of geothermal power project at Tattapani.

5) Distributed Generation (DG) - MoU with Swiss Agency for Development and Cooperation to plan and implement Renewable Energy and Distributed Generation projects. The main focus is on technologies like biomass gasification including two stage gasifier, small hydro & solar energy and sustainability of the distributed generation projects.

7. Are the Emissions / Waste generated by the company within the permissible limits given by CPCB/SPCB for the financial year being reported?

All the legal parameters including emission norms and effluent (wastes) norms are being adhered to by NTPC stations. Change of Law in certain cases, has necessitated up-gradation of pollution control equipments which are being addressed through R&M Schemes for which actions plans have been submitted to the Regulators.

8. Number of show cause/ legal notices received from CPCB/SPCB which are pending (i.e. not resolved to satisfaction) as on end of Financial Year.

No show cause / legal notice received from the regulatory bodies remain pending as on the end of FY 2012-13. All issues are addressed and action plans submitted to the regulatory bodies.

Principle 7 : Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner

1. Is your company a member of any trade and chamber or association? If yes, Name only those major ones that your business deals with.

The Company has taken Corporate Membership of 48 Chambers & association including FICCI, CII, TERI, ITRHD, WEC etc.

2. Have you advocated / lobbied through above associations for the advancement or improvement of public good? if yes specify the broad areas (drop box: Governance and Administration, Economic Reforms, Inclusive Development Policies, Energy security, Water, Food Security, Sustainable Business Principles, Others).

NTPC is a member of World Energy Council. Chairman & Managing Director of NTPC is also an Ex-officio Member Secretary. WEC India and its international counterpart WEC work towards sustainable use and supply of energy. Their work enables promoting policies which balance Energy Security, Energy Equity and Climate Change.

Principle 8 : Businesses should support inclusive growth and equitable development

1. Does the company have specified programmes / initiatives / projects in pursuit of the policy related to Principle 8? If yes details thereof.

Yes, NTPC has its own Resettlement and Rehabilitation (R&R) policy based on provisions envisaged in GOI R&R policy to extend R&R benefits to project affected people / families. The company also has specified programmes for inclusive growth & equitable development not only at station level but at country level. Some of the areas of our initiatives and programmes undertaken are listed below:

i. Education :

- Under the on-going scheme of strengthening the Industrial Training Institutes (ITIs) across the country, NTPC has taken the initiative of adopting ITIs / setting up of ITIs near its power generating stations / projects. NTPC is presently associated with 26 ITIs (till 31.03.2013). NTPC has adopted 17 existing Govt. ITIs out of which 14 ITIs have been adopted under PPP scheme of GoI and 03 ITIs are being up-graded under Bilateral Agreement with respective State Govt. In addition, NTPC is also setting up 09 new ITIs near its Plants/ Stations.
- Support was extended for construction of Engineering College in Korba and polytechnic training centre in Kayamkulam.
- 23 schools run by NTPC predominately for community, benefited more than 20,000 students of neighbourhood community.
- Various activities undertaken in more than 500 village schools benefited close to 60,000 village children.
- Assistance was provided to National Foundation for Communal Harmony (NFCH), an autonomous organization with Ministry of Home Affairs, GOI to facilitate education and rehabilitation of the child victims of communal, caste, ethnic or terrorist violence.

ii. Health :

- NTPC has a specific scheme for medical facilities to the Project Affected Persons (PAPs) and their families wherein 80% rebate is given for the consultation charges and for indoor treatment in NTPC Hospitals.
- Mobile Health Clinic facility was started by Stations like Kayamkulam, Kawas and Talcher Thermal to provide quality health care at the doorstep of neighbourhood villages.
- Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC) with mobile ambulance facilities was run by 12 NTPC hospitals through NTPC Foundation under Revised National Tuberculosis Control Programme (RNCTP) registering more than 15,100 patients and providing treatment to more than 2,400 patient.
- Activities like medical camps for local villages including those for detection and treatment of respiratory diseases like TB and lung cancer and for general checkups; fogging, spraying anti-larva spray; and support to PHCs and Hospitals in about 300 villages during the year benefited more than 2 Lakh people.
- NTPC extended support for replacement of old hospital equipments at Behala Balananda Brahmachari Hospital & Research Centre, Kolkata.

iii. Vocational Training Programmes :

- NTPC took up various vocational training programmes, such as Computer training, Motor rewinding, Motor

- Driving, Electrician & General Electrical Repairing, etc. for youth and various Coaching Classes etc. for village children, based on the need of the local community in the neighbourhood of its stations.
- Assistance was provided for Vocational training to 45 BPL candidates through Apparel Training and Design Centre (ATDC), Chhindwara.
 - NTPC is implementing a project entitled “Improvement in Quality of Life of rural poor to create self-reliance by increasing participation in Community Development Work” around Kahalgaon Station through Disha.
- iv. Women Empowerment :
- Construction of Girls Hostel in Guntur district of AP.
 - Various vocational training programmes for women in the neighbourhood villages including Dress Designing, Beautician, Embroidery, candle making, food preservation and food processing etc. were taken up.
 - Skill upgradation programs in sewing for women population in the neighborhood villages to promote self-employment were conducted including providing sewing machines covering more than 300 women.
- v. For Physically Challenged :
- Information and Communication Technology (ICT) centers established by NTPC Foundation at Delhi University and in four Govt. Blind Schools at Ajmer, Lucknow, Thiruvananthapuram and Mysore for providing IT education to physically & visually challenged students have benefited more than 2000 students so far. New ICT Centers at Gauhati University, Guwahati was started and MOU signed for ICT Center at Devi Ahilya Vishwavidyalaya, Indore.
 - Disability Rehabilitation Centers (DRCs) at NTPC Tanda, Rihand, Korba, Dadri and Bongaigaon established in collaboration with NTPC Foundation and National Institute for the Orthopaedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India have provided services and aids & appliances to more than 23,900 cases so far.
 - Activities to benefit physically challenged persons like distribution of dress; bags study material, reimbursement of school fees etc. to school children, distribution of tricycles and providing medical appliances were taken up by the Stations.
- vi Infrastructure :
- NTPC Unchahar completed construction of bridge over drain and took up installation of Solar Power Lighting System in three municipal corporations of Raebareli, Bachhrawan and Lalganj of Raebareli District.
 - Talcher Thermal took up supply of drinking water through pipeline to Jagannathpur Village, Odisha through RWS&S, a State Govt. agency.
 - Kahalgaon station has taken up infrastructure development works like construction of road, sanitation, drinking water and electrical lightning work in 6 villages, 3 villages each in Bhagalpur and Godda District.
2. Are the programmes/projects undertaken through in-house team/own foundation/external NGO/government structures/any other organization?
- Based on best practices, programmes are undertaken through well defined in – house team with three tier structure, station level team, regional level team & Corporate level team in association with external NGO’s , government structure, in some activities own foundation & other organizations also.
3. Have you done any impact assessment of your initiative?
- Every two years the impact assessment is done for all the major CSR activities at various stations. Social Impact Evolution (SIE) study/survey have been conducted on completion of R&R plan at Sipat and Simhadri projects. Evaluation is done through the development of a Standard of Living Index (SOLI) and same is evaluated pre and post acquisition of affected Vs unaffected villages.
4. What is your company’s direct contribution to community development projects- Amount in INR and the details of the projects undertaken
- NTPC earmark at least 0.4% of project cost for community development works in and around the project affected

villages to improve their living standard. Recently R&R plan was approved for Lara project, Kudgi project, Korba Stage-III, Vindhyachal IV

5. Have you taken steps to ensure that this community development initiative is successfully adopted by the community? Please explain in 50 words or so.

Community development initiatives are taken in planned way, community participation along with local administration & village panchayats are involved in all activities, this ensures the successful adoption of initiative by the community.

Social Impact Evaluation (SIE) study/ survey are conducted on completion of R&R plan at Sipat and Simhadri projects. Evaluation is done through the development of a Standard of Living Index (SOLI) and same is evaluated pre and post acquisition of affected Vs unaffected villages. The external agency is considered for SIE. Social audit is also being done to evaluate whether all activities identified in the R&R plan have been completed satisfactorily and gives recommendation for necessary modification/ corrective measures, if any, for the future projects.

Principle 9 : Businesses should engage with and provide value to their customers and consumers in a responsible manner

1. Customer complaints / consumer cases are pending as on the end of financial year:

The total of 91 cases are pending as on 31-03-2013, which were filed by NTPC or by different beneficiaries of NTPC against CERC orders / APTEL judgements related to NTPC Ltd. The details are as under :

- Cases with Appellate Tribunal For Electricity (APTEL) : 23 nos.
- Cases in Supreme Court : 68 nos.
- In addition, 16 cases are pending in various Consumer forums of the country on other matters.

2. Does the company display product information on the product label, over and above what is mandated as per local laws?

Not Applicable

3. Is there any case filed by any stakeholder against the company regarding unfair trade practices, irresponsible advertising and / or anti-competitive behaviour during the last five years and pending as on end of financial year. If so, provide details thereof, in about 50 words or so.

The Association of Power Producers had filed a complaint, 125/MP/2011 in Central Electricity Regulatory Commission. The petitioner had alleged that :

- NTPC undertook a massive exercise of signing Power Purchase Agreements with the State distribution companies and State Electricity Boards with a clear intention of bypassing the impending competitive bidding requirements during the period from 1.10.2010 to 5.1.2011 and signed the PPAs for supply of more than 37000 MW of power.
- Conduct of NTPC in rushing to sign Power Purchase Agreements for supply of 37000 MW of electricity abusing its dominant position, thereby causing adverse effect on competition in electricity industry.

After Hearing, CERC issued Final Order on 26.04.2013 in favour of NTPC. The detailed order is available on CERC Website: www.cercind.gov.in

4. Did your company carry out any consumer survey/ consumer satisfaction trends?

Yes, Customer Surveys are being carried out taking feedback on various aspects of NTPC business from the key respondents of the customers' organizations using internal resources. Feedbacks, as received, are being analysed to identify customers expectations, issues of concerns and satisfaction for internal assessment, and identification of suitable strategies to address the issues and improvement in processes.

For and on behalf of the Board of Directors



(Dr. Arup Roy Choudhury)
Chairman & Managing Director

Place: New Delhi
Dated: 2nd August 2013