SUSTAINABILITY REPORT

2022-23

Clean Energy for a Sustainable Future

NHPC Limited
(A Government of India Enterprise)

Sustainability Report 2022-2023

Clean Energy for Sustainable Future

Evaluation of Performance of NHPC Limited on Environment, Social and Governance (ESG) Criteria for FY 2022-2023

NHPC Limited

NHPC Office Complex, Sector 33,
Faridabad, Haryana 121003

May 2024

Board of Directors

Shri Rajendra Prasad Goyal
Chairman & Managing Director
Director (Finance)

Shri Uttam Lal
Director (Personnel)

Shri Raj Kumar Chaudhary
Director (Technical)
Addl Charge- Director (Projects)

Shri Mohammad Afzal
Government Nominee
Director

Dr. Uday Sakharam Nirgudkar
Independent Director

Prof. (Dr.) Amit Kansal
Independent Director

Prof. (Dr.) Rashmi Sharma Rawal
Independent Director

Shri Jiji Joseph
Independent Director

Shri Premkumar Goverthanan
Independent Director

Source: NHPC website as on March 31, 2024.

About the report

NHPC Limited is delighted to present its second Sustainability Report for the fiscal year ending March 31, 2023, aligning with the triple bottom line standards (People, Planet and Profit). Sustainability reporting is a cornerstone of NHPC's drive for transparency, responsibility and ethical business practices. The report has been prepared on a standalone basis covering 22 power generating stations (including twenty hydropower, one solar plant in Tamil Nadu and one wind Power Station in Rajasthan), two under-construction Hydropower Projects (Subansiri Lower and Parbati-II), five Regional Offices and Corporate Office at Faridabad. Dibang MPP is in early stage of development, it is not included in current scope of report. The report's scope excludes the activities of external entities such as vendors, suppliers, contractors and subcontractors. The report is prepared with reference to the Global Reporting Initiative (GRI) Standards 2021, which serve as a comprehensive framework for sustainability reporting worldwide.

NHPC is committed to offer a comprehensive view of our sustainability initiatives, addressing stakeholder concerns and reflecting our dedication in creating long-term value. Our stakeholders form an integral part of our sustainability strategy and initiatives; and we are honoured to share our results with them.

NHPC, in alignment with the theme of this Sustainability Report, "*Clean Energy for a Sustainable Future*," is actively contributing to India's goal of generating 50% of its cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030 as envisaged in updated Nationally Determined Contribution under Paris Agreement (COP21). Through harnessing India's abundant water resources and other renewable sources, NHPC is dedicated for generating clean and affordable power, thus driving India's growth story forward.

The report discloses NHPC's key non-financial attributes, effectively communicating its performance to stakeholders while offering insights into governance, strategy and prospects. Additionally, it aligns NHPC's operations, structure and social efforts with the UN Sustainable Development Goals and the BRSR Reporting Framework, highlighting the company's commitment to sustainability and global development objectives.

Environment & Diversity Management Division of NHPC has prepared the Sustainability Report 2022-2023. For any feedback or queries about this report, please write to:

Environment & Diversity Management Division,
NHPC Office Complex, Sector-33, Faridabad - 121003 (Haryana).
Email: envdivmgn-co@nhpc.nic.in.

From Chairman's desk

Rajendra Prasad Goyal
Chairman and Managing Director

Dear Stakeholders,

I am pleased to present the progress and initiatives as a part of NHPC's second Sustainability Report showcasing our dedication to environmental stewardship, social responsibility and economic growth during FY 2022–23.

At NHPC, we recognise that sustainable growth is not only a choice but also a necessity for the future. It is the foundation upon which we build resilience, generate value for our stakeholders and significantly contribute to our communities. This report, aligned with GRI Standards, summarises our collaborative efforts, progress, accomplishments and goals in Environmental, Social and Governance (ESG) domain.

Our activities align with the Mission LiFE, Hon'ble Prime Minister's vision for promoting a sustainable lifestyle to combat Climate Change.

The theme of this year's report "Clean energy for a Sustainable Future" highlights our efforts to balance economic prosperity with environmental concerns. In fiscal year 2022-23, NHPC reached a milestone by producing 24,907 MUs, breaking the previous year's record and achieving overall PAF of 88.75% up from 88.19 % of previous year. Our initiatives include reducing carbon footprints, improving operational efficiency, increasing community participation and promoting inclusive growth. Additionally, NHPC is also venturing into pumped storage projects, floating solar projects and green hydrogen.

NHPC embraces sustainability both as a choice and as an obligation, in response to global environmental challenges. We prioritize well-being and safety of our employees, maintain efficient plant operations and actively contribute to the welfare of local communities around our Projects/Power Stations. Our commitment also extends through our R&R initiatives for eligible PAFs.

We have spent INR 127.31 Crores on CSR initiatives in FY 2022-23 including support of INR 30.00 Crores to PM CARES Fund.

Our activities align with the Mission LiFE, Hon'ble Prime Minister's vision for promoting a sustainable lifestyle to combat Climate Change.

NHPC has been honoured with several awards in 2022-23, including 'Best Globally Competitive Power Company of India-Hydropower and Renewable Energy Sector' at the15th Enertia Awards 2022 New Delhi, Second Best Enterprise for Mini-Ratna Category by SCOPE at WIPS (Women in Public Sector) 33rd National Meet at Kolkata and a Gold Medal for Best Presented Annual Report (2020-21) at Kathmandu. This is also reflected in our ESG score of 48, rated by S&P Global based on its CSA survey.

I extend my heartfelt thanks to our Environment and Diversity Management Division for their dedication to prepare this report and to our Power Stations, Projects and the Corporate Office for their support.

I look forward to sharing the Sustainability Report 2022-23 with our stakeholders, showcasing our commitment to generating clean energy for a sustainable future.

Rajendra Prasad Goyal
Chairman and Managing Director
NHPC Limited

Message from

Director (Personnel)

The Sustainability Report of NHPC for the fiscal year 2022-23 highlights the substantial progress that we have made through the strengthening of our power generating capacities, the prioritisation of the well-being of our employees and communities and demonstration of our dedication to the responsible management of the environment. When it comes to conserving the environment and implementing Environmental, Social and Governance (ESG) ideals into every aspect of our business operations, we remain firm in our commitment.

NHPC is an equal opportunity employer. Our recruitment process is carefully crafted to attract top talent to remain competitive, innovative and adaptable in energy sector. We are incredibly proud of our outstanding team of dedicated and skilled professionals. Our top priority is the growth and development of our employees, while ensuring the workplace safety and overall wellbeing.

Each one of our esteemed NHPC members is wholeheartedly dedicated for propelling progress within our efforts and bestowing a beneficial influence upon our businesses, communities, environment and stakeholders.

We are deeply convinced that NHPC's approach to ESG initiatives will become increasingly significant, not only to ensure enduring value for all our stakeholders but to uphold our promise to provide clean energy for a sustainable future. I hope this Sustainability Report will once again serve as an inspiration for many others to pursue the path we have chosen to follow.

Uttam Lal
Director (Personnel)
NHPC Limited

Message from

Director (Technical/Projects)

It is a great pleasure to share NHPC Limited's second Sustainability Report, which covers operations from 2022 to 2023. I am pleased to announce that NHPC has made significant advances in the ESG realm, which are presented in this Sustainability Report.

The Sustainability Report 2022-23 showcases NHPC's commitment for "*Clean Energy for a Sustainable Future*" as we have grown as self-reliant on hydro-sector development from planning to commissioning besides venturing in Solar Power, Wind Power, Green Hydrogen and Pump Storage Schemes.

NHPC's unwavering commitment to sustainability goes well beyond just achieving environmental conservation goals. It incorporates a tireless commitment in improving our society, including social well-being and economic development. As a staunch advocate for sustainability, NHPC has integrated compliance standards into its business operations. Environment safeguard measures are essential and strictly followed throughout construction and operation phases of a project.

Sustainability will always be NHPC's top focus in all its business operations, policies, programmes and activities. We are deeply committed to develop sustainable and clean power-generating infrastructure that will meet the needs of our present generation without compromising the planet's valuable resources.

Raj Kumar Chaudhary
Director (Technical/Projects)
NHPC Limited

Message from

ED (SBD&C/EDM/Planning)

NHPC's second Sustainability Report is a critical milestone demonstrating our commitment to sustainability, transparency and ethical corporate practices. It represents our united yearning for a better, more conscious future. The report presents a methodically structured overview of our commitment to the environment, community and financial advancement throughout the previous year.

As we move forward, let this accomplishment continue to remind us of our continued obligation to monitor, improve and disclose our ESG performance. NHPC has received its ESG score as 48 from S&P Global for 2023, highest among its peer power generating CPSEs in India. We are incredibly thankful to the whole team at NHPC Limited for the steadfast commitment and involvement in the activities aligned to sustainability landscape, which is well reflected in our ESG score.

We thank our Environment & Diversity Management Division for their immense effort in preparation of this report. We would also like to recognise our Power Stations, Projects, Regional Offices and Corporate Office for their contribution in shaping this report.

This report will be a significant milestone highlighting NHPC's efforts to promote clean energy for a sustainable future.

Rajat Gupta
Executive Director (SBD&C/EDM/Planning)
NHPC Limited

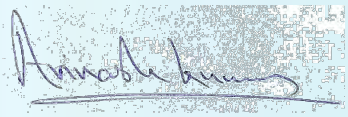
Message from

GM (Environment)

I am pleased to announce the publishing of NHPC Limited's second Sustainability Report, which highlights our successes and demonstrates our commitment to develop an eco-friendly power generation infrastructure that coincides with India's Updated First Nationally Determined Contribution Under Paris Agreement (2021-2030). Our commitment to sustainability is demonstrated by the extensive range of policies, strategies, initiatives and programmes we have methodically devised and executed to balance economic growth, environmental conservation and social well-being. NHPC is committed to develop clean energy infrastructure and improving its environmental performance.

Furthermore, I want to take this opportunity to thank all the Power Stations/Projects/RO/CO for their sincere effort in data submission to Corporate Environment and Diversity Management (EDM) Division for compiling in the present form of report. I would also thank to our dedicated ESG team in EDM Division. NHPC acknowledges the consultancy support of Deloitte TTILLP in developing this report.

I believe that the Sustainability Report 2022-23 provides an overview of NHPC's activities via a sustainability lens and serves as a benchmark for increasing performance in the coming years while harnessing *Clean Energy for a Sustainable Future*.



Dr Avinash Kumar
General Manager (Environment)
NHPC Limited

Sustainability Initiatives 2022-23

Economic Performance

Total Capacity(MW)	5551.2
Operational Power station	22
Energy Sector	Hydropower (20), Wind (1), Solar (1)
Total Income	INR 10150.9 Crores
Investment base	INR 74,715 Crores
Profit After Tax (PAT)	INR 3,833.79 Crores
Annual generation	24,907 MUs
Plant Availability Factor	88.75 %

Environmental Stewardship

% of RE of total energy consumption for operations	29%
Scope 1 Emissions saved for use of EV (CY2022-23)	125.13 MT CO_2e
Scope 2 Emissions saved by using solar energy	2213 $MTCO_2e$
MSMEs Procurement % of total value	50.16%
Environmental norms	Complied

Employee Wellbeing

Permanent Workforce (including Directors)	4776
Number of differently abled employees	117
Workforce from under privileged communities	40.85%
Average hours of training	23.2
Retention rate of employees availed paternal leave	100%
Employee satisfaction survey	98%
Human Rights aspects	Complied

Social Well-Being

CSR beneficiaries	65,06,941
CSR spent	INR 127.31 Crores
Key focus areas	Education and Skill development, Health and Sanitation, Rural Development
CSR projects undertaken in designated aspirational districts	INR 16.46 Crores

Governance

Expenditure incurred on Research and Development	INR 11.30 Crores
Public grievances resolved (CPGRAMS)	98.7%
Operational sites assessed for risks related to corruption	100%

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About NHPC Limited

1. About NHPC Limited

NHPC is as a Mini Ratna Category-I Enterprise of Government of India and is one of the top ten companies in the country in terms of investment base. The Company is primarily dedicated to the development, construction and operation of hydropower projects. NHPC is actively involved in a wide range of diversified projects (including wind, solar, green hydrogen) that are essential for meeting India's energy needs while making a significant impact in reducing the country's carbon emissions and promoting sustainable development. In addition to its core operations, NHPC provides consultancy services to clients in various sectors, offering expertise in construction, operations, maintenance and renovation of hydropower projects.

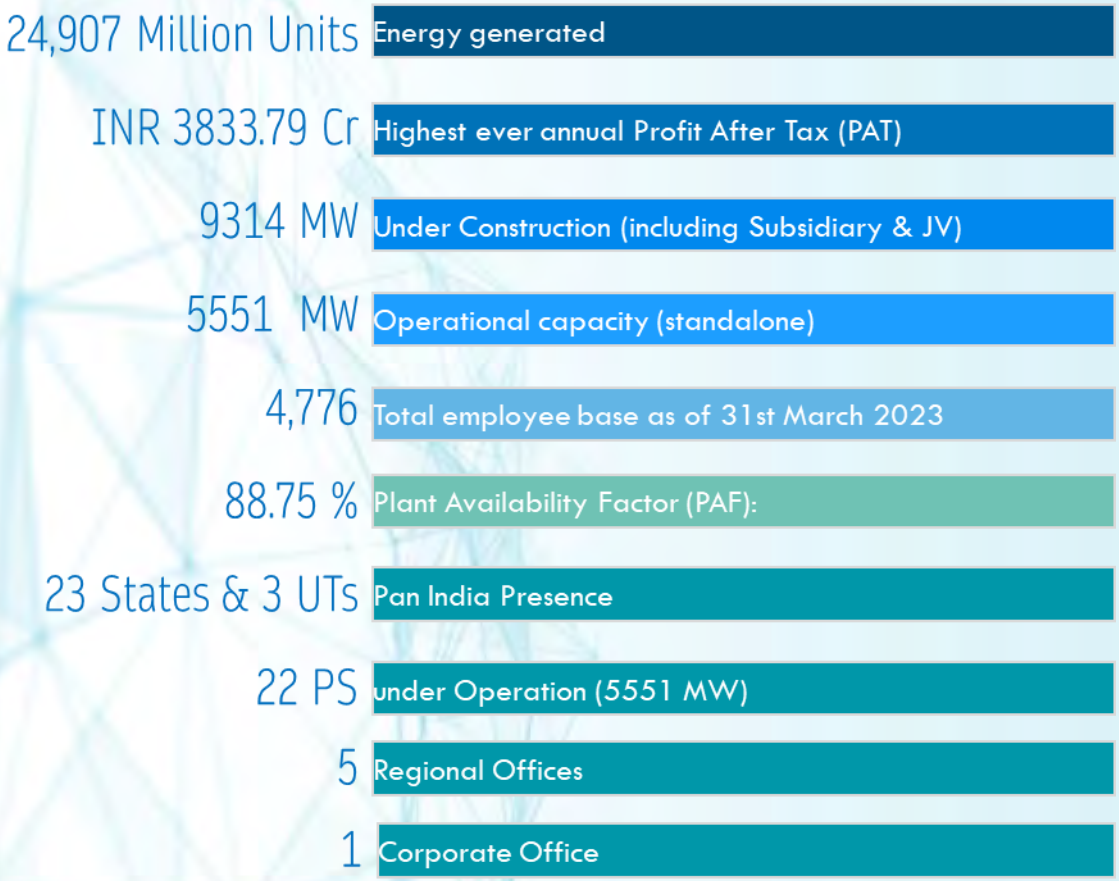


Figure 1.1: NHPC at a glance (2022-23).

The Government of India holds 70.95% shareholding in NHPC as of March 31, 2023, whereas the Life Insurance Corporation of India holds 3.48 % shares of NHPC. The company possesses an authorised share capital of INR 15,000 Crores, a paid-up share capital of INR 10,045.03 Crores and an investment base exceeding INR 74,715 Crores as of March 31, 2023.

In the fiscal year 2022-23, the Power Stations of NHPC accomplished a noteworthy achievement by generating 24,907 million units (MUs) surpassing last year's power generation. This remarkable performance was made possible by maintaining a plant availability of 88.75%. In the fiscal year 2022-23, the standalone profit after tax (PAT) reached an impressive INR 3,833.79 Crores. This accomplishment signifies a significant rise

from the profit after tax of INR 3537.71 Crores in the previous fiscal year.

1.1. Power Stations under operation.

NHPC has successfully developed and commissioned twenty hydropower projects, one solar power project and one wind power project on a standalone basis with an aggregate installed capacity of 5551.2 MW.

Table 1.1: List of commissioned projects of NHPC.

Name of Project	State/UT	Year of Commissioning	Total Capacity (MW)	Generation Target (MU)	Actual Generation (MU)
Baira Siul	Himachal Pradesh	1981	180	736	628
Loktak	Manipur	1983	105	594	478
Salal	UT of J&K	1987	690	3726	3240
Tanakpur	Uttarakhand	1992	94.2	522	535
Chamera - I	Himachal Pradesh	1994	540	2305	1889
Uri - I	UT of J&K	1997	480	3142	2862
Rangit	Sikkim	2000	60	353	332
Chamera - II	Himachal Pradesh	2004	300	1553	1327
Dhauliganga	Uttarakhand	2005-06	280	1278	1293
Dulhasti	UT of J&K	2006-07	390	2242	2083
Teesta - V	Sikkim	2008	510	2812	2858
Sewa - II	UT of J&K	2010	120	549	508
Chamera-III	Himachal Pradesh	2012	231	1151	1002
Chutak	UT of Ladakh	2013	44	221	167
Teesta Low Dam - III	West Bengal	2013	132	618	599
Nimmo-Bazgo	UT of Ladakh	2013	45	248	236
Uri-II	UT of J&K	2014	240	1713	1574
Parbati - III	Himachal Pradesh	2014	520	737	652
Teesta Low Dam - IV	West Bengal	2016	160	758	735
Kishanganga HEP	UT of J&K	2018	330	1713	1454
Parbati II *	Himachal Pradesh			488	288
Hydropower Standalone			**5451.2**	**27461**	**24740**
Wind Power	Rajasthan	2016	50	94	77
Solar Power	Tamil Nadu	2018	50	106	90
NHPC (Standalone)			**5551.2**	**27661**	**24907**

Source: Annual Report 2022-23

* Actual generation shown is infirm power for Parbati II (800 MW)

1.2. Major Highlight (FY 2022-23)

NHPC now has an installation base of 5,551.2 MW from 22 Power Stations (standalone basis). Additionally, NHPC is developing two significant projects, namely the 2000 MW Subansiri Lower HEP and the 800 MW Parbati-II HEP, which will significantly enhance the company's portfolio and contribute to its strategic growth trajectory.

Moving on, NHPC is developing India's largest hydropower project, the 2,880 MW Dibang Multipurpose Project. All the requisite clearances have been obtained for this project and

construction has commenced in February 2023 as per date of CCEA approval. As the Dibang Multipurpose Project is in very initial stage of development, the project is not included in the current scope of this report.

Hydroelectric Projects under development

In 2022-23, NHPC is developing 03 hydropower projects of 5680 MW Capacity and 3 Solar projects of 1000 MW on standalone basis (details as provided in Annual Report 2022-23).

Table 1.2: Under construction Hydropower Projects of NHPC.

S. No.	Under construction Hydropower Projects	Installed capacity (MW)
	A. Standalone basis	
i	Parbati-II, Himachal Pradesh	800
ii	Subansiri Lower, Assam/Arunachal Pradesh	2000
iii	Dibang, Arunachal Pradesh	2880
	Sub-total (A)	5680
	B. Through Subsidiaries/Joint Ventures	
i.	Teesta Stage-VI HE Project under Lanco Teesta Hydro Power Limited (LTHPL), Sikkim	500
ii.	Rangit-IV HE Project under Jalpower Corporation Limited (JPCL), Sikkim	120
iii.	Pakal Dul HE Project under Chenab Valley Power Projects Private Limited (CVPPPL) [A Joint Venture with Jammu & Kashmir State Power Development Corporation Limited (JKSPDC)], UT of J&K	1000
iv.	Kiru HE Project under CVPPPL, UT of J&K	624
v.	Kwar HE Project under CVPPPL, UT of J&K	540
vi.	Ratle HE Project under Ratle Hydroelectric Power Corporation Limited (RHPCL) (A Joint Venture with JKSPDC). UT of J&K	850
	Sub-total (B)	3634
	Total (A+B)	**9314**

Figure 1.2: Subansiri Lower Hydroelectric Project (2000 MW), Assam/Arunachal Pradesh.

Figure 1.3: Parbati Hydroelectric Project (Stage-II) (800MW), Himachal Pradesh.

NHPC has successfully expanded its international presence by signing a Memorandum of Understanding (MoU) for three projects in Nepal: West Seti (750 MW), SR-6 (450 MW) and Phukot Karnali (480 MW) Hydroelectric Projects. On June 1, 2023, NHPC signed an MoU with Vidhyut Utpadan Company Limited (VUCL) of Nepal. This MoU focuses explicitly on the joint development of the Phukot Karnali Hydroelectric Project, boasting a capacity of 480 MW and situated in Kalikot district, Karnali Province, Nepal.

Renewable Energy projects under development

NHPC has incorporated a wholly owned subsidiary Company i.e., NHPC Renewable Energy Limited (NHPC REL) in February, 2022 as a separate vertical for developing renewable energy projects. NHPC REL has signed a Memorandum of Understanding (MoU) with the Government of Rajasthan on August 24, 2022, to collaborate on the "Development of a 10,000 MW Ultra Mega Renewable Energy Power Park" in Rajasthan.

NHPC had awarded EPC Contract for development of grid connected Solar PV projects (1000 MW) and its transmission line for power evacuation to ISTS Sub-station along with

Comprehensive O&M for 5 years under Tranche – III of CPSU scheme Phase-II on May 5, 2022 to M/s Adani Infra (India) Limited (600 MW in Gujarat), M/s Tata Power Solar Systems (300 MW in Rajasthan) and M/s SSEL – ASR JV (100MW in Andhra Pradesh) with total awarded value of Rs 6604.42 Crores with completion period of 18 Months.

NHPC has also signed MoUs with the Department of Energy, the Government of Maharashtra and the Government of Odisha through GRIDCO Limited to develop several projects. These include four Pumped Storage Projects-Kalu (1150 MW), Savitri (2250 MW), Jalond (2400 MW) and Kengadi (1550 MW), totalling 7350 MW, along with additional Renewable Energy Source Projects in Maharashtra and Pumped Storage Projects and Renewable Energy initiatives in Odisha.

Table 1.3: Ongoing Solar Power Projects of NHPC.

Sl. No.	Project	State	Capacity (MW)
A.	**In EPC Mode:**		
	I. Standalone basis:		
(i)	600 MW Solar Power Project, Kutch, Gujarat under CPSU Scheme	Gujarat	600
(ii)	300 MW Solar Power Project, Bikaner, Rajasthan under CPSU Scheme	Rajasthan	300
(iii)	100 MW Solar Power Project, N.P. Kunta, Andhra Pradesh under CPSU Scheme	Andhra Pradesh	100
	Sub-total (I)		1000
	II. Through Joint Ventures:		
(i)	65 MW Solar Power Project, Kalpi, U.P. through BSUL	Uttar Pradesh	39*
(ii)	88 MW Floating Solar Power Project, Omkareshwar Reservoir through NHDC	Madhya Pradesh	88
(iii)	8 MW Ground Mounted Solar Sanchi (Nagori / Gulgaon) through NHDC		8
	Sub-total (II)		135
	Sub-total (A) [I+II]		1135
B.	**As an Intermediary Procurer:**		
(i)	380 MW Solar Power project at Jaisalmer, by M/s O2 Power SG Pvt Limited	Rajasthan	380
(ii)	300 MW Solar Power project at Jaisalmer, by M/s Eden Renewable Passy Private Limited		300
(iii)	600 MW at Barmer by M/s Adani Solar Energy Barmer One Private Limited		600
(iv)	400 MW at Barmer by M/s ABC Renewable Energy Private Limited		400
	Sub-total (B)		1680
	Total (A+B)		2815

* 26 MW capacity out of 65 MW was partially commissioned in July 2022.

NHPC is leading the transition to Green Hydrogen Technology, recognising its pivotal role in shaping the future of energy worldwide. NHPC has initiated three Pilot Green Hydrogen

Projects for future developments in green hydrogen at Leh & Kargil Districts of UT of Ladakh and Chamba District of Himachal Pradesh.

Figure 1.4: MoU for development of Pilot Green Hydrogen Technologies with UT of Ladakh.

Power Purchase Agreements (2022-23)

Availability of long-term Power Purchase Agreements (PPA) for Power Stations gives revenue visibility for the organisation and assured rate of return which can be utilised for business expansion during 2022-23.

Table 1.4: PPA for the various Power Stations.

S. No	Beneficiary DISCOMs	Power Station	Date of Signing of PPA	Validity of PPA
1	BRPL, Delhi	Baira Siul	15.06.2022	30.08.2046 for 25 years from R&M of last unit
2	BYPL, Delhi			
3	Rajasthan	Sewa-II	27.07.2022	Valid 40 years from COD
		Uri-II		Valid 35 years from COD
4	Meghalaya	Loktak	11.07.2022	Valid for Intervening period +25 years from R&M of last unit

With sanction of number of new HE projects/Solar Projects under CPSU scheme, NHPC has been pursuing states/ DISCOMs to tie-up the capacity of these new projects. PPA for following projects has been signed.

Table 1.5: PPA for the various new Power Stations/upcoming Projects.

S. No	Beneficiary DISCOMs	Power Station	Date of Signing of PPA	Validity of PPA
1	Chhattisgarh	Subansiri Lower	20.10.2022	Valid 40 years from COD
		Teesta-VI	21.07.2022	
		Dibang MPP	17.02.2023	
2	West Bengal	100 MW Solar Project, Kadri Andhra Pradesh	23.11.2022	Valid 25 years from COD
3	Telangana	600 MW Solar Project, Kutch, Gujarat	28.03.2023	Valid 25 years from COD

1.3. Economic Value Generation

Endowed with significant hydropower potential, India stands among the world's leaders in feasible hydropower capacity. The exploitable hydropower potential in the country is about 133 GW, out of which only 42 GW has been harnessed (as per the Central Electricity Authority Reassessment Study, 2017–23), which can enhance energy security and fosters sustainable economic development through clean and renewable energy sources.

Physical Performance

NHPC, showcasing its constant commitment to operational excellence and sustainable energy production, reached noteworthy achievements in 2022–23. Throughout this period, the company achieved an outstanding achievement by generating 24,619 million units (MUs) of electricity from its installed capacity of 5,551 MW (excluding the infirm power of 288 MUs generated by the Parbati-II HE Project during 2022–23) as compared to 2021-22 (24,855 MUs). NHPC has achieved annual Plant Availability Factor (PAF) of 88.75%, higher than the previous year (88.19%). Of its 20 hydropower stations, 18 have achieved the Normative Plant Availability Factor, showcasing NHPC's dedication towards improving operational efficiency and dependability while contributing substantially to the country's energy requirements.

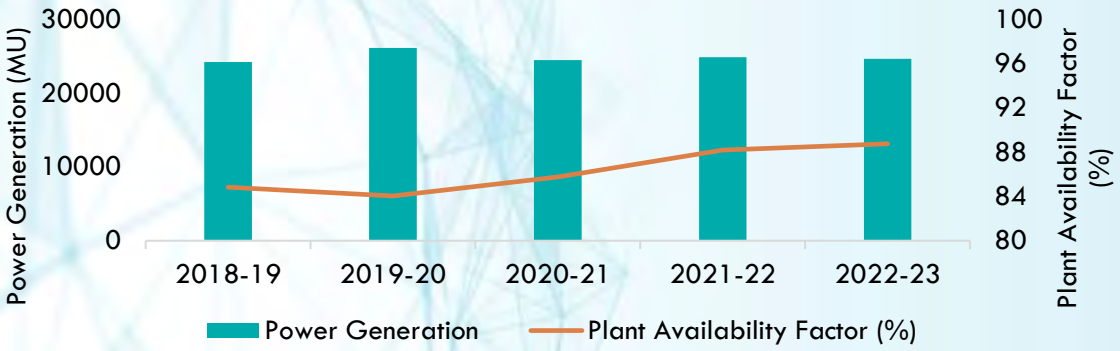


Figure 1.5: Power generation by NHPC (2018-2023).

Economic Performance

NHPC, as of March 31, 2023, has a paid-up share capital of INR 10,045.03 Crores and an investment base of over INR 74,715 Crores. NHPC has been assigned the highest domestic credit rating of 'AAA' with a stable outlook by leading domestic credit rating agencies, including ICRA, CARE and India Ratings & Research for its listed bonds. This rating indicates a low level of credit risk for investors. NHPC also holds an International Credit Rating of BBB(–) with a stable outlook, as assessed by S&P Global Ratings. NHPC's robust financial position allows it to execute extensive hydroelectric projects that demand significant capital investment efficiently.

In 2022–23, NHPC achieved remarkable financial results, marked by the highest-ever Profit After Tax (PAT) of INR 3,833.79 Crores on a standalone basis, representing a noteworthy increase from INR 3,537.71 Crores in the previous fiscal year. Furthermore, the consolidated

net profit surged to INR 4,234.74 Crores in 2022–23 from INR 3,774.33 Crores in the preceding financial year.

NHPC observed a significant 8.22% increase in total income in 2022-23, reaching INR 10,150.90 Crores compared to INR 9,379.98 Crores in 2021-22. This rise can be attributed primarily to increased generation, an increase in Revenue from Project Management and Consultancy works and an increase in 'Other Operating Income' partially offset by a decrease in 'Other Income' in 2022-23. 'Other Income' in 2022-23 decreased by 18.67%, primarily due to reduced income as Late Payment Surcharge (LPS) from beneficiaries (INR 53.41 Crores against INR 229.00 Crores during 2021-22). Lower income on account of LPS is due to a better realisation of Trade Receivables during 2022-2023.

Table 1.6: Economic Snapshot (Total Income) of NHPC (INR in Crore).

	2018-19	2019-20	2020-21	2021-22	2022-23
Sales of Power	7,138.24	7,430.81	7,010.44	7,451.55	8,404.65
Income from Finance Lease	208.28	203.65	371.62	344.95	327.80
Income from Operating Lease	748.61	666.57	712.00	384.07	392.40
Revenue from Contracts, Project Management, Consultancy Works	23.85	27.88	38.52	46.16	60.94
Revenue from Power - Trading	12.96	239.47	216.48	44.85	4.60
Other Operating Income	29.24	167.03	157.52	82.22	125.95
Revenue from operations	8,161.18	8,735.41	8,506.58	8,353.80	9,316.34
Other Income	924.78	1,036.18	1,150.81	1,026.18	834.56
Total Income	9,085.96	9,771.59	9,657.39	9,379.98	10,150.90

The above figures are taken from the Annual Report of respective financial year.

NHPC's primary source of revenue comes from selling power to bulk customers, mainly electricity utilities owned by State Governments or Private Distribution Companies, through long-term Power Purchase Agreements. In 2022-23, NHPC witnessed a notable surge in net sales, reaching INR 9,124.85 Crores surpassing the previous year's figure of INR 8,180.57 Crores.

NHPC's net worth (excluding current maturities) at the end of the 2022-23 fiscal year grew to INR 35,407.96 Crores from INR 33,486.10 Crores in the previous fiscal, reflecting a 5.73% increase. Higher profits after tax and an increase in retained earnings contributed to this growth.

In the fiscal year 2022-23, NHPC's Long Term Borrowings included a variety of financial instruments such as Secured Bonds, Secured Term Loans and Unsecured Bonds & Loans, including Foreign Currency Loans and excluding current maturities. These amounted to INR 13,099.23 Crores INR 5,313.60 Crores and INR 6,841.86 Crores respectively, compared to INR 14,517.90 Crores INR 2,658.00 Crores and INR 5,990.71 Crores in the previous fiscal year. These figures indicate changes in the company's financial structure.

The rise in NHPC's Long Term Borrowings can be attributed to the issuance of unsecured bonds and borrowings from domestic banks, including the securitisation of the return on equity from

one of the Power Stations. The redemption of secured bonds and the repayment of borrowings partially offset these increases. NHPC's diligence in handling its long-term financing demonstrates meticulous financial planning and dedication towards maintaining a stable and sustainable capital structure.

Table 1.7: Economic values created and distributed.

	2021-22	2022-23
Direct Economic Value Generated (Total Income)	9,379.98	10,150.90
Rate Regulated Income	42.85	-144.41
Revenue from operations	8,353.80	9,316.34
Economic Value distributed (expense)	5842.27	6317.11
Purchase of Power - Trading	44.58	-
Generation Expenses	841.24	936.46
Employee Benefits Expense	1,440.78	1301.35
Finance Costs	531.75	476.16
Depreciation and Amortisation Expense	1,126.22	1145.44
Community Investments (incl. CSR Exp.)	105.29	127.31
Other Expenses	1,243.26	1580.58
Income Tax expenses	552.00	605.40
Economic Value Retained (PROFIT AFTER TAX)	3,537.71	3,833.79
Dividend to shareholders	1818.15	1858.33
Net Profit Ratio (%)	42.35	41.15

These results emphasise NHPC's commitment to operational excellence and financial strength, positioning the company for continued success and growth in the future.

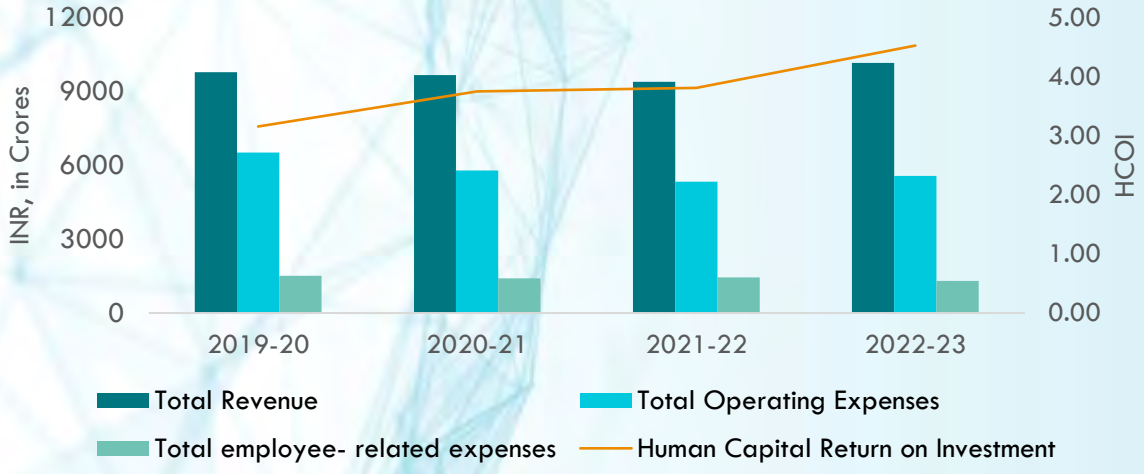


Figure 1.6: Human Capital Return on Investment.

1.4. Association & Corporate Partnership

NHPC is a Central Public Sector Enterprise under the parent ministry "Ministry of Power, Government of India" and is a member of several prominent organisations.

S.No	Name of the organisations
01	CIGRE (International Council on Large Electric Systems)
02	CBIP (Central Board of Irrigation & Power)
03	India Habitat Centre
04	SCOPE (Standing Conference of Public Enterprises)
05	AIMA (All India Management Association)
06	NIPM (National Institute of Personnel Management)
07	Power HR Forum
08	DELNET (Developing Library Network)
09	ISRM (International Society for Rock Mechanics & Rock Engineering)
10	SRMTT (Indian Society for Rock Mechanics & Tunnelling Technology)
11	ISEG (Indian Society of Engineering Geology)
12	TAI (Tunnelling Association of India)
13	ICSI (The institute of Company Secretaries of India)
14	CSI (Computer Society of India)
15	DSCI (Data Security Council of India)
16	INHA (Indian National Hydropower Association)
17	TII (Transparency International India)
18	INCOLD (The Committee for International Commission on Large Dams)
19	REPA (Renewable Energy Promotion Association)

Figure 1.7: Powerhouse of Rangit Power Station (60 MW), Sikkim.

1.5. Corporate Vision and Mission

CORPORATE VISION

To be a global leading organization for sustainable development of clean power through competent, responsible, and innovative values.

CORPORATE MISSION

- To achieve excellence in development of clean power at international standards.
- To execute & operate projects through efficient and competent contract management and innovative R&D in environment friendly and socio-economically responsive manner.
- To develop, nurture and empower the human capital to leverages its full potential.
- To practice the best corporate governance and competent value-based management for a strong corporate identity and showing concern for employees, customer, environment, and society.
- To adopt & innovate state-of-the-art technologies and optimise use of natural resources through effective management.

2

Governance & Commitments

2. Governance and Commitments

NHPC is committed towards a management structure that promotes sustainable corporate governance. It has developed a business strategy prioritising environmental, social and governance-related stewardship actions. NHPC's corporate governance structure assures integrity and openness in business interactions, provides fair and timely disclosures and develops a culture that benefits stakeholders and regulators.

NHPC has implemented key policies such as Code of Business Conduct and Ethics, Whistle-blower Policy, Dividend Distribution Policy and Stakeholder Engagement Policy to support strong governance practices. NHPC employs best corporate governance standards by ensuring compliance with all applicable regulatory requirements in its power. These include the Companies Act of 2013, the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations of 2015, the Guidelines on Corporate Governance for Central Public Sector Enterprises (CPSEs) issued by the Department of Public Enterprises (DPE) of the Government of India and other orders and guidelines.

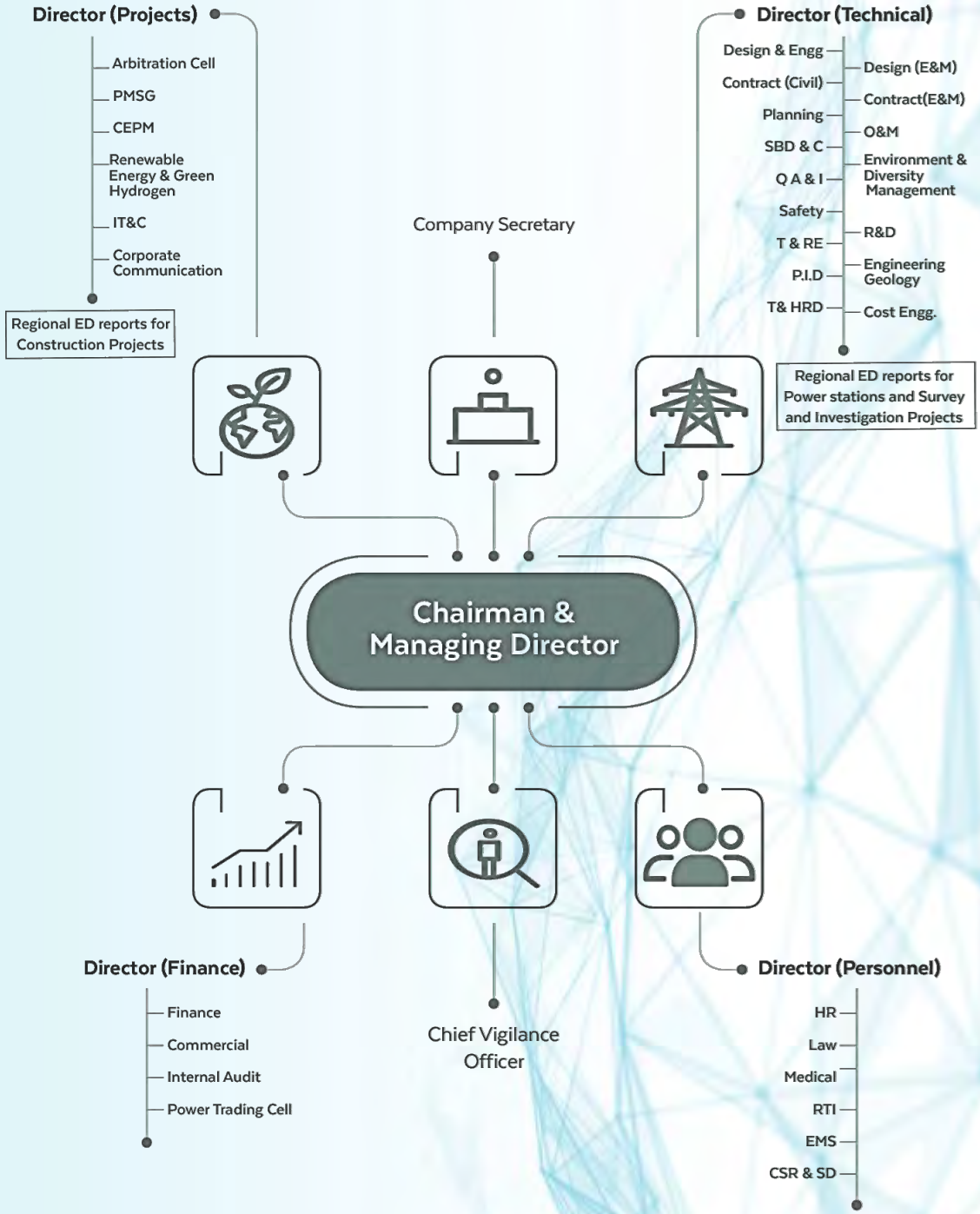
2.1. The Leadership Team

The Board functioned under a single-tier system and consisted of ten Directors as on March 31, 2023, i.e., four were Executive Directors, including the Chairman and Managing Director, one Government Nominee Director and five Independent Directors. The Board of Directors met eleven times during the FY 2022-23, with average attendance rate of 94.82%. Out of eleven meetings, 100% attendance was observed in seven meetings.

Table 2.1: NHPC Board Structure (as on March 31, 2023).

Shri Rajeev Kumar Vishnoi Chairman & Managing Director	
Shri Yamuna Kumar Chaubey Director (Technical)	Shri Rajendra Prasad Goyal Director (Finance) & CFO [holding additional charge of Director (Personnel)]
Shri Biswajit Basu Director (Projects)	Shri Mohammad Afzal Government Nominee Director
Dr. Uday Sakharam Nirgudkar Independent Director	Prof. (Dr.) Amit Kansal Independent Director
Prof. (Dr.) Rashmi Sharma Rawal Independent Director	Shri Jiji Joseph Independent Director
Shri Premkumar Goverthanan Independent Director	

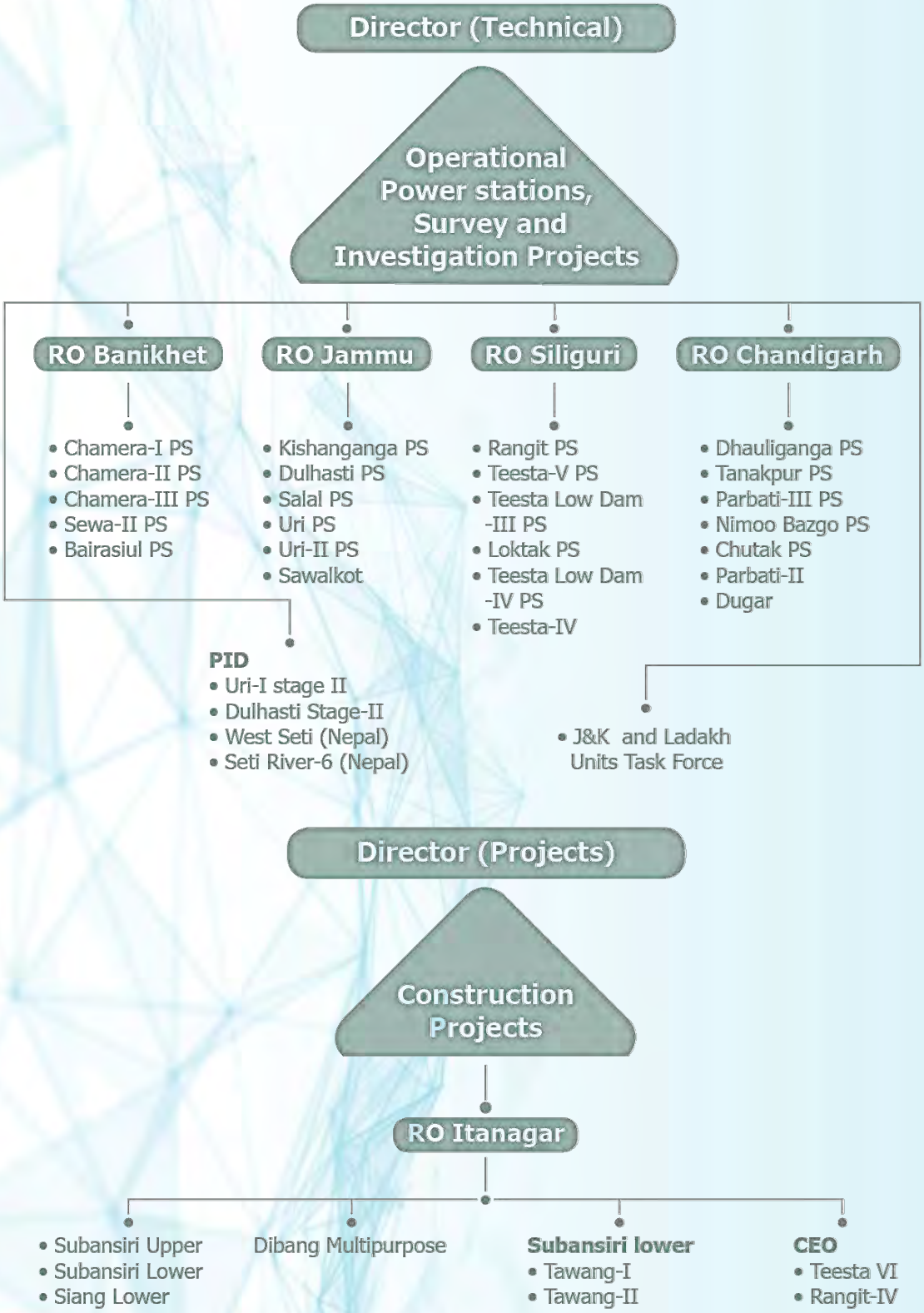
2.2. NHPC Organisation Structure



(Source: NHPC Website, the organisation chart is as on 1st April 2023)

Organisation Structure

(Survey and Investigation Project, Under-Construction Projects and Power Stations)



(Source: NHPC Website, the organisation chart is as on 1st April 2023)

Board Composition

The Board of Directors (BODs) is responsible for overseeing the overall operations of the Company, as mandated by the shareholders. The Board of Directors offers the management team with strategic guidance, leadership and direction, all the while following the Code of Conduct for Board Members and Senior Management Personnel, which is prominently showcased on the Company's website. As a result, this has strengthened the management's ability to implement effective governance practices and empowered the Board to exercise diligence, as needed.

Board composition in governance pertains to the structure and composition of an organisation's Board of Directors. It focuses on the selection, diversity, qualifications and responsibilities of Board Members. The Directors on the Board of NHPC (Government Owned Company) are appointed/nominated by the President of India in accordance with the Articles of Association of the Company.

Consequent upon order(s) received from Ministry of Power (MoP), NHPC has appointed five independent Directors, including one-woman independent Director, on its Board. The composition of Independent Directors on the Board of NHPC as on 31.03.2023 is in conformity with statutory provisions. As per the requirements of Regulation 17 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, it is mandatory for companies with an executive Chairperson to have at least half of their Board of Directors as Independent Directors.

Board Independence

NHPC's Independent Directors are appointed/ nominated by the President of India acting through administrative ministry, i.e., MoP, Government of India. As a result, the appointing authority considers the integrity, expertise and experience of the individual to be appointed as Independent Director on the Board of the Company. All Independent Directors on the Board of the Company met the criteria of Independence as required by law and were registered in the databank of Independent Directors maintained by Indian Institute of Corporate Affairs (IICA) during FY 2022-23. No Independent Director has resigned from their post before the expiration of their tenure.

Board Compensation

NHPC is a central public sector enterprise (CPSE) and the Government of India decides the appointment, tenure and remuneration of the Chairman & Managing Director and whole-time Directors. The Independent Directors are paid sitting fees for attending the Board and Committee meetings. The Company does not provide the Government Nominee Director any remuneration/sitting fee. In accordance with the Companies Act, 2013 read with DPE Guidelines and OMs issued from time to time, the Board of Directors of the Company is empowered to determine the sitting fee payable to Independent Directors within the ceiling prescribed under the Companies Act, 2013.

At present, sitting fee of INR 40,000/- for attending each meeting of the Board and INR

30,000/- for attending each meeting of the Committees is being paid to Independent Directors. The sitting fee for attending the meeting of the Board was increased from INR 30,000/- to INR 40,000/- during the financial year.

The Policy on remuneration, pay structure, allowances and other benefits of employees of the Company are governed by relevant Department of Public Enterprises (DPE) Guidelines. Stakeholder opinions are not considered when determining Director's remuneration.

Table 2.2: Remuneration of Functional Directors paid during 2022-23.

Name of Director	Designation	Salary (INR)	Total (INR)*
Shri Rajeev Kumar Vishnoi[1]	Chairman & Managing Director	NIL	NIL
Shri Abhay Kumar Singh[2]	Chairman & Managing Director	20,54,004	1,18,91,654
Shri Yamuna Kumar Chaubey	Director (Technical)	58,31,905	1,11,43,370
Shri Rajendra Prasad Goyal	Director (Finance)& CFO	52,44,679	90,51,346
Shri Biswajit Basu	Director (Projects)	47,60,682	96,84,599

*Benefits include perquisites, medical reimbursement, EPF, Social Security Scheme & Pension Fund (Matching Contribution), leave encashment, gratuity, etc. which were not included in salary.

[1] Appointed as Chairman and Managing Director of NHPC w.e.f. December 13, 2022 as an Additional Charge hence, no remuneration has been paid by NHPC Limited.

[2] Superannuated Chairman and Managing Director w.e.f. August 31, 2022.

Table 2.3: CEO-to-Employee Pay Ratio (FY 2022- 23).

	Employee Compensation (INR)	
	Median	Mean
Total annual compensation of CMD	1,18,91,654	1,18,91,654
Annual compensation of all employees, except CMD	26,08,761	28,27,209
The ratio between the total annual compensation of the CMD and the employee compensation:	4.56	4.21

Board Evaluation

The Ministry of Corporate Affairs (MCA) exempted Government Companies from providing information in the Directors' Report about the way the annual performance evaluation of the Board, its committees and the individual Director is carried out if the performance of the Director is being evaluated by the Administrative Ministry, in its notification dated June 5, 2015. The Administrative Ministry, i.e., MoP, in compliance with the DPE-specified methodology for appraisal of the performance of top management incumbents of CPSEs, evaluates the performance of each functional Director of the Company. The nominating authority evaluates the performance of the Nominee Director of the Company.

NHPC has framed a policy on performance evaluation of the Board, Board-Level Committees and Directors in line with the provisions of Companies Act, 2013 and SEBI LODR. The performance evaluation of all the Board Members, Board as whole and mandatory Committees of the Board for FY 2022-23 has been carried out during FY 2023-24.

Capacity Building of Board Members

NHPC has adopted a policy on board member training that includes the CMD and all other Directors on the Company's Board. The Company's Directors are nominated from time to time to attend different conferences/programs on Corporate Governance, Roles and Responsibilities of Director and other industry-related subjects, organised in-house and by the Department of Public Enterprises, SCOPE, Indian Institute of Corporate Affairs (IICA) or other reputable institutions. This allows individuals to improve their knowledge and abilities to perform the roles more effectively and efficiently.

In 2022-2023, Independent Directors had attended the master class on building better Boards organised by Indian Institute of Corporate Affairs (IICA). The master class covered various topics i.e., Roles and Responsibilities of Directors, Effective Board Governance, Prospects & Possibilities, Effectiveness of Board Committees, Sustainability and Climate Risk etc. including ESG related topics and principles under the National Guidelines on Responsible Business Conduct (NGRBC) on the importance of ESG and how it affects a company's reputation, financial performance and overall success. Various other training & orientation Programme are attended by the Independent Directors during the year 2022-23; details of which is available at: https://www.nhpcindia.com/assests/pzi_public/gallery/1712660675.pdf.

Board Committees

At NHPC, the Board Committees play crucial role in implementing the corporate governance practices. The Board Committees are formed with the formal consent of the Board to fulfil clearly defined tasks and each committee is given specific responsibilities to address an identified scope promptly. The Board is responsible for overseeing and ensuring the committee fulfils its obligations. Senior company officials provide necessary information or clarification on matters placed before the committees whenever the committees require it. The Board fully supports and generally approves all committee recommendations for the essential procedures.

To meet the necessary obligations outlined in the Companies Act, 2013, SEBI LODR and DPE Guidelines on Corporate Governance, the Board of Directors has established the required Committees with required composition requirements as per statutory provisions.

1. Audit Committee.
2. Stakeholders' Relationship Committee.
3. Nomination and Remuneration Committee.
4. Committee of Directors on Corporate Social Responsibility (CSR) and Sustainability.
5. Risk Management Committee.

Table 2.4: Board Committees and its members*.

	Committees	Details of members	
1	Audit Committee (7 Meetings, 100% attendance)	Dr Uday Sakharam Nirgudkar	Chairperson
		Dr Amit Kansal	Member
		Dr Rashmi Sharma Rawal	Member
		Shri Jiji Joseph	Member
		Shri Yamuna Kumar Chaubey	Ex-Officio Member
2	Stakeholders' Relationship Committee (4 Meetings, 100% attendance)	Dr Uday Sakharam Nirgudkar	Chairperson
		Dr Amit Kansal	Member
		Dr Rashmi Sharma Rawal	Member
		Shri Jiji Joseph	Member
		Shri Yamuna Kumar Chaubey	Ex-Officio Member
		Shri Rajendra Prasad Goyal	Ex-Officio Member
3	Nomination and Remuneration Committee (5 Meetings, 100% attendance)	Dr Rashmi Sharma Rawal	Chairperson
		Dr Uday Sakharam Nirgudkar	Member
		Dr Amit Kansal	Member
		Shri Jiji Joseph	Member
4	Committee of Directors on Corporate Social Responsibility (CSR) and Sustainability (6 Meetings, 100% attendance)	Dr Rashmi Sharma Rawal	Chairperson
		Dr Uday Sakharam Nirgudkar	Member
		Dr Amit Kansal	Member
		Shri Jiji Joseph	Member
		Shri Rajendra Prasad Goyal	Ex-Officio Member
		Shri Biswajit Basu	Ex-Officio Member
5	Risk Management Committee (3 Meetings, 100% attendance)	Dr Amit Kansal	Chairperson
		Dr Uday Sakharam Nirgudkar	Member
		Dr Rashmi Sharma Rawal	Member
		Shri Jiji Joseph	Member
		Shri Yamuna Kumar Chaubey	Ex-Officio Member
		Shri Rajendra Prasad Goyal	Ex-Officio Member

[*] Attendance mentioned is for the year FY 2022-23 and composition is as on March 31, 2023.

2.3. Corporate Governance Policies

NHPC's sustainability governance structure ensures that sustainability matters are seamlessly incorporated into the organisation's fundamental values, strategy and regular operations. A Board level Committee on Corporate Social Responsibility (CSR) and Sustainability is formed by NHPC, which consists of mix of full-time Directors and Independent Directors, with an independent Director serving as the committee's chairperson, overseeing strategy and keeping an eye on how strategic sustainability initiatives are being carried out. In FY 2022-23, the Board committee met six times to discuss on the Annual Action Plan and to monitor the implementation of CSR and Sustainability projects undertaken by NHPC.

Table 2.5: List of policies on sustainable governances at NHPC.

	Policies of NHPC
1	Biodiversity Policy
2	Code of Business Conduct and Ethics- For Board Members & Senior Management Personnel
3	Conservation of Energy Policy
4	Corporate Environment Policy
5	The CSR & Sustainability Policy of NHPC
6	Fraud Prevention and Detection Policy
7	Grievance Policy and Procedures
8	Guidelines on Banning of Business Dealings
9	Integrity Pact
10	IT & Cyber Security Policy
11	Policy on Materiality of Related Party Transactions and on Dealing with Related Party Transactions
12	Public Policy Advocacy Policy
13	Safety Policy
14	Stakeholder Engagement Policy
15	Suppliers code of conduct
16	Sustainable Procurement/Sourcing Policy
17	Waste Management Policy
18	Water Conservation Policy
19	Whistle Blower Policy

[Human Rights, Social Accountability Policy, Equal Opportunity Policy and Anti-corruption & Anti Bribery Policy are being developed]

2.4. Stakeholder Relationships

The primary stakeholders are identified based on their effect on NHPC's business strategy and sustainability goals. NHPC has mapped and identified both internal and external stakeholders, including those who are impoverished, disadvantaged, or marginalised. Stakeholders include shareholders, investors, distribution companies, employees, local communities, suppliers, contractors, the government and the media. To identify marginalised and vulnerable stakeholders, desk research (documentary studies) of the broader context, community need assessments, peer comparisons and key personnel interviews are also conducted.

NHPC has a stakeholder engagement policy, which is disseminated to all employees at all sites via the Intranet and Notice Boards. The Company Secretariat is the designated nodal department for policy communication and execution, ensuring compliance at the Project/Power Station/Regional Offices by their respective heads and at the corporate level by the appropriate HoDs. The Policy's compliance is monitored by the heads of relevant departments/units/locations and any grievances/complaints regarding policy violations are required to be submitted to the Nodal Department, i.e., the Company Secretariat, for required

steps and disclosure. The interface departments, identified as the owners of the relevant engagement process, are responsible for ensuring end-to-end coverage while identifying and addressing stakeholders' concerns.

Table 2.6: NHPC approach for stakeholder engagement.

Stakeholders and their significance	Purpose of Engagement	Frequency and mode of engagement	Interfacing Department
Government and Regulators: • Owner • Policy maker and Key enabler • Regulator and Monitor	• Act and Policy Compliances • Implementation of Government initiatives, • Environmental Compliances • Regulatory Compliances	Continuous: Calls and meetings with Government officials, MOU, Seminars and interactions with Departments and Industry Chambers.	• Planning • EDM • SBD&C • Commercial • Company Secretary
Public/investors: • Owners/ shareholders • Capital Investors	• Corporate Governance and Ethics • Cost optimisation and improved Profitability • Return on Investment • Risk Management • Innovation and Digitisation • Focus on Sustainability and ESG	Monthly: Stock Exchange Filings. Quarterly: Earnings conference calls and presentations, Investor and Analyst meets. Annual: Annual Report, Annual General Meeting (AGM), Plant/Facility Visits. Investors Grievance Mechanism.	• Investor Relation Cell • Company Secretary
Board of Directors and Key Managerial Personnel: • Business Decision maker	• Implementation of the Company Vision, Mission, Objectives in true, transparent, efficient and ethical manner • Collective direction of the Company's affairs whilst meeting the appropriate interests of its stakeholders and shareholders • Corporate Governance	• Scheduled Board meetings. • Scheduled and special Board. • Committee meeting.	• Company Secretary
Distribution Companies (DISCOM's): • Principle source of business sustenance	Quality and Regular availability of Power	Monthly: Meetings, Emails, Power Purchase Agreement, Industry meets.	• Commercial

Stakeholders and their significance	Purpose of Engagement	Frequency and mode of engagement	Interfacing Department
Employees: • The key resource for competitive advantage and sustainable growth	• Health and Safety • Remuneration Appraisals • Learning and Development • Diversity and Inclusion	Monthly: Emails, Meetings, Company Intranet, Employee and Grievance Mechanism, social media, Trainings, Awareness programmes.	• Human Resource • T&HRD
Communities: • Potentially affected (directly / indirectly) from business operations	Local community development Employment generation	Monthly: CSR programs, Meetings with communities, Grievance redressal mechanism.	• HOPs (PS/ Projects) • CSR • EDM
Suppliers and Contractors • Critical value chain partners • Intrinsic to NHPC's business operations and delivery	• Procurement of Quality Raw Materials and Equipment • Ethical business practices • Payment terms	Monthly: Suppliers meet, Contracts documents and agreements, Workshops, Trainings and Awareness Sessions.	• Contracts
Media • Key Informer for stakeholders about our business development, activities, • General Awareness about the company's operations & activities • Safety & Precautions	• Transparency and relevance of information • New business opportunity • Financial and Operational Performance	Monthly: Media briefings, Press Releases Continuous: Company website, Social Media Platforms like Facebook, Twitter, Instagram, YouTube.	• Corporate Communication
Employee Unions and Associations: • Key source communication / messenger	Help set standard for education, skill-levels, wages, health and employee benefit and working conditions of employees.	Regular meetings and scheduled surveys, Dedicated surveys.	Human Resource

2.5. Ethics and Integrity

NHPC prioritises ethics and integrity in all its operations as they are essential in building trust, maintaining a compelling reputation and cultivating mutually beneficial relationships with our stakeholders for effective governance. NHPC has implemented specific protocols, processes and systems to ensure compliance with regulations and ethical standards. These include the

adoption of the 'Code of Conduct to Regulate, Monitor and Report Trading by Insider', 'Code of Fair Disclosure Practices for Prevention of Insider Trading' and the 'Code of Business Conduct and Ethics-For Board Members & Senior Management Personnel'. All personnel, regardless of their position or employment status, are expected to adhere to the policies outlined in NHPC's code of conduct.

NHPC's Code of Business Conduct and Ethics emphasises that Board Members and Senior Management Personnel are expected to operate within the boundaries set by the company and the law. They must prioritise the company's best interests, act fairly and transparently and avoid involvement in decision-making processes where there is or could be a conflict of interest that may compromise their ability to make impartial judgments in the company's best interest.

NHPC has implemented a system that ensures compliance with its Whistle-blower Policy, which is applicable to all individuals associated with the company, including employees, Directors, contractors and vendors working with NHPC. The company has also put in place a Fraud Prevention and Detection Policy that is designed to proactively prevent and address any instances of fraud or suspected fraudulent activities involving its employees, vendors, suppliers, contractors, consultants, service providers, or external agencies. All operations have been thoroughly evaluated for any potential corruption risks. During FY 2022-23, any incidence of any fraudulent, illegal, or unethical transactions were not reported.

NHPC has an effective grievance mechanism to address the concerns raised by different stakeholders. The goal is to address complaints at the lowest level of the company to ensure they are resolved quickly. However, if the concern remains unresolved, the authority responsible for addressing grievances (also known as the Public Grievances Redressal Machinery) will address such important matters.

NHPC consistently seeks feedback from its beneficiaries to enhance service quality and effectiveness. NHPC interacts with beneficiary States through Regional Power Committees (RPCs), which are a statutory body established under the Electricity Act 2003. This forum serves as a platform for regular interaction among beneficiary DISCOMs, facilitating the resolution of any outstanding issues. NHPC also organises regular customer meetings with its DISCOMs to foster communication and address any concerns. It is worth mentioning that the company has not faced any legal action in the past five years for unfair trade practices, irresponsible advertising, or anti-competitive behaviour.

In accordance with SEBI (Prohibition of Insider Trading) Regulations, 2015 as amended, NHPC has developed and implemented 'Code of Conduct to Regulate, Monitor and Report Trading by Insider' and 'Code of Fair Disclosure Practices for Prevention of Insider Trading'.

Vigilance Mechanism

The objective of the vigilance function is to ensure the maintenance of the highest level of integrity throughout the Company. NHPC has a Vigilance Department headed by the Chief Vigilance Officer, an independent authority from outside NHPC, to ensure transparency, objectivity and quality of decision-making. All the procedures are documented to monitor and handle vigilance complaints and disciplinary cases. The Vigilance Department coordinates with the Ministry of Power, Central Bureau of Investigation (CBI), Central Vigilance Commission

(CVC) and other concerned departments of the Government.

Figure 2.1: Awareness campaign during the Vigilance Awareness Week 2022.

Figure 2.2: Street play for awareness creation during Vigilance Awareness Week 2022.

With regard to Vigilance cases towards misconduct, one vigilance case related to misconduct has been disposed during 2022-23. Further, only one vigilance case related to disproportionate assets is under disciplinary proceedings as on March 31, 2023. As a part of preventive vigilance, circulars and guidelines are being issued regularly based on various inspections/ intensive examinations carried out from time to time along with trainings to employees on Vigilance Matters. Vigilance Awareness Week and other vigilance awareness programmes are also being organised by the Company to promote transparency and ethics in working system.

Grievance Redressal Procedure

NHPC has a well-defined Grievance Redressal Procedure for settling grievances of employees and public. For redressal of public grievances, NHPC adheres to a 'Centralised Public Grievance Redressal & Monitoring System (CPGRAMS)' linked with the Ministry of Power. During FY 2022-23, NHPC has resolved 98.7 % of the public grievances received as per the CPGRAMS portal (a total of 305 out of 309 grievances were disposed of during the FY 2022-23).

For redressal of the grievances of employee, NHPC has defined Grievance policy & Procedure and has constituted the Grievance Redressal Authority. The Grievance Redressal Authority also functions as Public Grievances Redressal Machinery. In addition, the shareholders can send their grievances to the company/RTA directly through email/letter, they can also lodge them through the SEBI SCORES portal.

The HoPs of the power stations are accessible to the local community to discuss their concerns to foster a stronger relationship and smooth functioning of the power station.

Table 2.7: Complaints/Grievances on any of the principles under the National Guidelines on Responsible Business Conduct.

	2021-22		2022-23	
Stakeholder group	Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Number of complaints filed	`Number of complaints pending resolution at close of the year
Investors	112	0	43	0
Shareholders	1,085	2	864	2
Value Chain Partners	2	0	2	0
Employees and workers	21	5	9	1

2.6. Strategic Risk Management

NHPC recognises its exposure to several uncertainties inherent to the power sector. The power sector's volatility affects the business's financial and non-financial results. To increase confidence in achieving the company's objectives, NHPC has developed a Risk Management Policy to remain a competitive and sustainable organisation and enhance its operational effectiveness.

The risk management framework at NHPC identifies, assesses and reduces potential risks to Projects, operations and financial stability. NHPC intends to make informed decisions, allocate resources efficiently and establish contingency plans to prevent adverse outcomes using a structured risk identification and assessment approach. This includes the Enterprise Risk Management Policy, the Risk Management Committee and an Enterprise Risk Management Framework. NHPC conducts proactive risk identification, mitigation, monitoring and reporting.

Risk Identification and Reporting

Through a systematic strategy that coincides with internal discussions with stakeholders and deliberations with the Senior Management team, NHPC has identified significant business risks. NHPC has implemented a Risk Management Policy to enhance confidence in achieving the company's and shareholders' objectives while maintaining competitiveness and sustainability by improving operational efficiency. The Enterprise Risk Management system identifies and addresses the risks within a company's operations. It provides guidelines for understanding, quantifying, communicating, managing and reducing these risks.

NHPC has categorised risks into four groups: operational, financial, strategic and compliance. Risk identification aims to assess NHPC's vulnerability to various uncertainties. This involves thoroughly evaluating the company's business and operations, its market and external factors such as the economic, legal, regulatory, social, political, technological and cultural environment. Additionally, it considers NHPC's strategic and operational objectives and the factors crucial to its success. The analysis also finds the potential threats and opportunities that may impact achieving these objectives.

NHPC follows a systematic approach for identifying and defining risks associated with all significant activities. This ensures that NHPC has a comprehensive understanding of the potential risks involved. It gathers experiential and documented knowledge through brainstorming, surveys, interviews and collaboration with working groups. Consequently, NHPC utilises risk lists, lessons learned and historical risk event information to identify and assess potential risks thoroughly and has a well-defined risk reporting structure with three levels of reporting.

First line of reporting

Department/Regional Office/Project/Power Station Heads send quarterly reports on risk status to Risk Coordinators. These coordinators then send the reports to the Chief Risk Officer (CRO) for reporting in the Risk Assessment Committee.

Second line of reporting

The CRO and other members of the Risk Assessment Committee review risks and their mitigation measures and decides on the key risks that are to be reported to the Risk Management Committee quarterly basis. After approval, the Risk Cell records the risks and their mitigation plans in the risk register, which is then handed over to the CRO for implementation. The Risk Assessment Committee presents the mitigation plan to the Risk Management Committee quarterly basis.

Third line of reporting

The Chief Risk Officer and other members of the Risk Assessment Committee review risks and their mitigation measures and decide on key risks that are reported to the Risk Management Committee on quarterly basis. After approval, the Risk Cell records the risks and their mitigation plans in the risk register, which is then handed over to the CRO for implementation. The Risk Assessment Committee presents the mitigation plan to the Risk Management Committee on quarterly basis.

Risk Governance Framework

NHPC has a well-defined risk governance framework and has constituted a Risk Management Committee, a Risk Assessment Committee and a Risk Cell has been constituted.

Risk Management Committee

The Risk Management Committee is formed per the provision of SEBI (LODR), 2021 and any subsequent amendment. It assists the Board in fulfilling its corporate governance responsibilities regarding identifying, evaluating and mitigating operational, strategic, financial, compliance and external risks. It monitors, approves and reviews the company's risk policies/ plans and associated practices and presents them to the Board. The Risk Management Committee reviews the Risk Assessment Committee's reports and takes remedial action.

Risk Assessment Committee

The Risk Assessment Committee at NHPC consists of the Chief Risk Officer (CRO), the Department Head (R&D) and Regional Heads/HoDs (Finance, O&M, Planning, Strategy Business Development and Consultancy, PMSG, Others). The Risk Assessment Committee identifies the key risks, suggests mitigation measures and monitors and supervises the implementation of Risk Management while ensuring Policy compliance and maintaining the enterprise-wide view of the critical risks NHPC faces.

The committee ensures that effective risk mitigation plans are in place and the results are evaluated and acted upon. It reports on the key risks/ new/emerging risks the company faces and its mitigation plans to the Risk Management Committee. The Risk Assessment Committee prioritises the reported risks according to their risk ratings and assists the risk management committee in decision-making for risk management responses for identified vital risks.

Chief Risk Officer

The Department Head (R&D) is given the charge of Chief Risk Officer (CRO), who works with the Risk Coordinators to ensure the effective implementation of the enterprise-wide risk management process and Risk Management Policy according to NHPC's Risk Management vision. CRO designs and reviews processes for Risk Management, communicates with the Risk Management Committee regarding the status of risk management, reports the key risks faced by the company and coordinates with all the Risk Coordinators to compile the level of risks and mitigation measures taken. It also convenes the Risk Assessment Committee meetings and facilitates discussions.

Risk Cell

The Risk Cell is located at NHPC Corporate Office and is comprised of one General Manager/Deputy General Manager, one Senior Manager/Manager and one Deputy/Assistant Manager/Engineer who shall report directly to the CRO. The cell assists the CRO in risk assessment and mitigation measures taken as reported by Risk Coordinators.

Risk Coordinators

The Risk Coordinators are the heads of respective departments of Contracts, Design and

Engineering, Security, PMSG, Geology, Finance, O&M, HR, IT&C, Commercial, Planning, Strategy Business Development and consultancy, Company Secretary as mentioned in the responsibility column of the Risk Register. They review and assess the risks identified by the associated Department/Regional/Project/Power Station Heads and develop and monitor the mitigation measures for the identified risks.

Table 2.8: Risk Management Process at NHPC.

1	**Risk Identification** NHPC shall identify and record in the Risk Register, enabling the top management to take a comprehensive view of the same. Risks are identified in several ways, viz: Brainstorming sessions, Surveys/ Interviews/ Working groups, Experiential or Documented Knowledge, Risk Lists - Lessons Learned, Historical risk event information.
2	**Risk Assessment** Qualitative screening of risks and opportunities(R&O), followed by a quantitative treatment of the most significant R&O, as not all risks are quantifiable, using descriptive scales for each risk and opportunity. The combination of likelihood of occurrence and the magnitude of impact provides the inherent risk level to NHPC.
3	**Risk Treatment** Risk treatment entails finding and evaluating risk treatment options, as well as developing and implementing risk treatment plans. Risk strategies followed by NHPC: **(1)** Risk avoidance/termination; **(2)** Risk Reduction or Mitigation. **(3)** Risk acceptance and Tolerance; **(4)** Risk Transfer

Impact Likelihood Framework

NHPC has identified risks and opportunities with mitigation strategies and a detailed Risk Identification and Risk Assessment approach has been prepared and documented for both the corporate and site levels. Periodic workshops are part of the risk assessment and mitigation planning process. During the workshops, brainstorming sessions are conducted to identify, evaluate and review risks based on their impact and likelihood and mitigation plans are developed for each identified risk.

The Design & Engineering Department of NHPC conducts modelling studies on the estimation of potential risk associated with Glacier Lake Outburst Flood (GLOF) to predict the outflow hydrograph due to the breach of potentially hazardous lakes and routing the GLOF hydrograph through the downstream valley to get the maximum water level and discharge along with the travel time at various locations of the river downstream of the lake. The estimation of GLOF provides the flood hydrograph of discharge from the dam breach and maximum water level at various locations of the river downstream of the dam due to propagation of flood waves along with their time of occurrence. This helps in development of mitigation and management strategies downstream, in case of such eventualities. In addition, NHPC has Early Warning Systems integrated with a comprehensive software application named e-Aabhas. Automatic water level sensors along with telemetric data transmission are

installed at sufficient upstream location of dam sites of NHPC Power Stations and Projects.

The IT Business Process of NHPC is centralized and all its business operations are integrated with Software Driven WAN technology. NHPC has implemented IT and Cyber Security Policy to safeguard IT and OT Information Infrastructure and adopt standardised process. Cyber Crisis Management Plan (CCMP) has been implemented for dealing with cyber incidents. These are internal policy documents and not available in public domain. As per direction of Government of India, Cyber Jagrukta Diwas is observed on 1st Wednesday of every month. NHPC is certified with Information Security Management System (ISO 27001:2013) for Corporate Office which assures confidentiality, integrity and availability of information assets.

Figure 2.3: National Cyber Security Awareness Month celebration at CO, Faridabad.

2.7. Research and Development

NHPC has a dedicated Research and Development Division which in association with Design and Engineering, Geology, Environment and Diversity Management and other Divisions; addresses the requirements of the Projects of NHPC. NHPC possesses a competitive advantage over other hydropower businesses due to the substantial expertise of its in-house design team in hydropower. The Environment and Diversity Management Division of NHPC ensures that sustainable development principles are upheld within the realm of hydropower generation from planning to operational phases. NHPC also has an integrated team of experienced Engineering Geologists, Geophysicists and Research officers in the Engineering Geology & Geotechnical Division for carrying out geological, geophysical and construction material survey works and providing engineering geological and geotechnical solutions at different stages from inception to commissioning. As per MoP directives, 2% of Profit Before Taxes (PBT) is earmarked for the R&D related activities. NHPC communicates various outcomes of the research activities in peer reviewed national and international journals, blogs and scientific forums.

Figure 2.4: NHPC stall at "Make in Odisha Conclave 22" Bhubaneswar, 30 Nov-04 Dec 22.

Figure 2.5: NHPC pavilion at 8th National Conference-cum-exhibition, Jammu (Dec. 2022).

During DPR stage of the project development, a detailed geophysical investigation is conducted to finalise the sites and design the diversion, Power Station and other appurtenant structures of the Projects for environmental and other routine obligatory clearances. Therefore, in this stage, the preferable alternative selected during the Project feasibility study needs to be thoroughly investigated to generate a bankable DPR. Besides optimising the drilling program, the purpose of a geophysical survey at this stage would be a detailed study of the subsurface condition to minimise the grey areas and enhance confidence in Project development.

NHPC is committed to the seismic safety of its projects and in line with the Dam Safety Act, Dec.2021, which has mandated seismic monitoring of all hydropower projects, NHPC has set up a network of fifty-seven extremely sensitive SMA (Strong Motion Accelerographs) covering all its dams & barrages. All these SMA's are connected online and real-time centralised

monitoring is done with the help of five servers at Real Time Seismic Data Centre, NHPC, CO. Once any earthquake occurrence is observed in the vicinity of a project, specialised software like Apollo Server Antares, Stream, Scream, EQ wave, RT-Display/RT view are used for data management along with downloading, processing and analysis of the earthquake data. This is a one of its kind facility developed in any hydro sector of the country.

Figure 2.6: Resistivity Imaging and Seismic Tomography at Dibang MPP, Arunachal Pradesh.

Detailed report of the event is prepared and sent to the respective projects. More than nine hundred Himalayan earthquake events have been recorded by this centre. These earthquake reports are further shared with local district authorities and local panchayat bodies, during public hearings, with officials from other various departments during their visit to the projects to spread awareness regarding NHPC's initiative to dedicated seismic monitoring as well as to assure them of safety of the structures.

R&D projects activities during 2022-2023

NHPC is India's sole hydroelectric power generation utility with specialised knowledge in several techniques, such as tunnel seismic prediction, tomography and resistivity imaging. These techniques are employed to obtain sub-surface information cost-effectively and efficiently. It has used state-of-the-art geophysical exploration methods on the premises to analyse data and provide internal reports. The engineering capabilities encompass a broad spectrum, from the initial conceptualisation phase to the final commissioning stage of Projects.

NHPC has entered into a Memorandum of Agreement (MoA) with the IIT Roorkee, IIT Kanpur, IIT-ISM Dhanbad, CSIR-CSIO, Chandigarh, CWPRS, Pune, NIT Durgapur, IIT Jammu, IIT Delhi and IIT Indore to engage in collaborative research and development (R&D) endeavours in the domains of science, engineering and technology. NHPC has signed MoA with IIT Delhi & IIT Jammu on November 21, 2022 and September 26, 2022, respectively under which both IITs shall provide training, research and development and advisory session services to NHPC in the broad area of its various expertise, hydro, hydrology, water resources, geology, earthquake, renewable energy and environmental management.

Table 2.9: R&D spending for the last four fiscal years:

	2019- 20	2020- 21	2021- 22	2022- 23
Total R&D spending	INR. 10.65 Cr.	INR. 9.24 Cr.	INR. 10.07 Cr.	INR. 11.30 Cr.
R&D Spending as % of sales (PAT)	0.35%	90.28%	0.28%	0.29%

Total R&D Expenditure as % of PAT is to be reported as per NHPC R&D Policy. However, as per MoP directives, 2% of PBT has been earmarked for the R&D works, since 2021-22 onwards. The Expenditure includes the establishment expenses.

Figure 2.7: MoA with IIT Delhi for developing capability in Science & Technology

NHPC is undertaking a high-end Research & Development Project in collaboration with Department of Earthquake Engineering, Indian Institute of Technology- Roorkee (IITR) towards the development of a Himalayan specific attenuation relationship utilising SMA data from NHPC network. Once developed it will help in optimising the design parameters of the structures.

R&D Studies completed in 2022-23:

(A). Measurement of GHG emissions from Reservoir of Chamera-I Power Station on Ravi River in Himachal Pradesh in association with IIT Roorkee.

(B). Post Project Environmental Evaluation of Rangit HE Project Sikkim using Remote sensing and GIS Technology.

(C). Study of Landslides in the vicinity of nine commissioned/under construction hydroelectric projects of NHPC utilising Remote Sensing & GIS Technology in association with IIRS, Department of Space, Government of India.

(D). Targeted Solutions through emerging Geophysical Technology in Resistivity Imaging and Ground Penetration Radar for optimisation of Geological uncertainties in Hydro Power Projects.

(E). Introduction of Hydraulic Motor operated Rope Drum Hoisting System for one surge shaft gate of Dhauliganga Power Station under technology upgradation / R&D

intervention.

(F). Numerical and physical model studies for elimination of de-silting basins in hydroelectric projects by sediment management through reservoir operation techniques.

Ongoing R&D Studies

At present, following R&D studies are in progress:

(A). Targeted solution through emerging geophysical technology in Seismic Tomography for optimisation of geological uncertainties in Hydropower Projects. An in-house R&D Project being carried out by NHPC.

(B). Analysis of Strong Motion Accelerograph Data recorded at NHPC Power Station for development of site-specific Peak Ground Acceleration Attenuation Relationship for Himalayan Region In consultation with Department of Earthquake Engineering, IIT Roorkee.

(C). Monitoring Hydro abrasive erosion and suspended sediment for optimal operation of hydro power plant is being conducted jointly through IIT Roorkee in Baira Siul Power Station.

(D). Development of inflow forecasting system for Chamera-III Power Station. Project taken up in collaboration with IIT Roorkee.

(E). Development of Design Guidelines/Charts for quick estimation of Caverns behaviour & support layout including openings based on 3D FEM Analysis. Project taken up in collaboration with IIT Kanpur.

(F). Development of Partial Discharge Monitoring Solutions for High Voltage Electrical Apparatus can help NHPC to move towards a "Predictive Maintenance Practice" from its current Preventive Maintenance Practice. Project taken up in collaboration with NIT Durgapur.

Collaborative research for the power sector's growth

As per Ministry of Power recommendations for support and growth of power sector, studies/research related to Policy initiative, reforms, restructuring will provide crucial inputs for Policy formulation. For this, a corpus for funding the studies has been setup jointly with MoP and CPSUs like NHPC, NTPC, PGCIL, PFC & REC. NHPC has been undertaking collaborative research for the overall growth of the power sector.

3

ESG Strategy & Management

3. ESG Strategy & Management

In its first Sustainability Report (2021-2022), NHPC had made significant efforts to ensure the meticulous representation of data related to material topics. The Sustainability Report (2022-2023) encompasses a comprehensive range of ESG indicators while engaging with various stakeholders across different platforms and hierarchies. NHPC comprehensively comprehends and effectively responds to stakeholders' expectations while fostering collaborative relationships with them.

3.1. Stakeholder Engagement & Materiality Assessment

NHPC has a Stakeholder Engagement Policy for fostering partnerships with stakeholders and ensuring their ongoing and progressive involvement in the company's activities and operations. This policy highlight NHPC's broader sustainability vision as it provides a roadmap to get insight of the stakeholders' expectations on the activities and initiatives of NHPC. The identification and prioritisation of key internal and external stakeholders have been carried out based on their impact on NHPC's business strategy and sustainability vision and the degree to which they are affected by the business decisions. NHPC has conducted a comprehensive analysis to map and identify internal and external stakeholders, encompassing a range of individuals and groups, including in vicinity of Power Stations/ Project sites. Additionally, NHPC conducted community need assessments, peer comparisons and key personnel interviews to understand stakeholders' opinions. NHPC identifies its internal (employees and workers) and external (DISCOMs, Community, shareholders, regulators and policymakers namely CERC, MoP and MoEF&CC, Government of India) stakeholders based on the influence and impact on the sustainability performance. NHPC ensures engagement with its stakeholders on business sustainability issues as part of its everyday operations. The opinion and the opportunities provided by stakeholder group's engagement have paved the way to success in delivering positive outcomes.

Approach towards Materiality Assessment

Materiality is typically used to identify an organisation's most important ESG issues, which become foundational material topics to drive ESG strategy, performance and reporting on managing these topics. For FY 2021-22, NHPC undertook a materiality assessment with reference to the GRI Standards to include a sustainability-focused approach into the corporate strategy. The materiality analysis process begins with identifying sector-specific material topics using the SASB framework. This included industry patterns, legal prerequisites, significant issues highlighted by stakeholders and potential risks and opportunities. Subsequently, these topics are compared to peer companies and ranked according to NHPC's enduring strategic objectives. These critical material topics are discussed during stakeholder engagement to understand their main concerns and anticipations and outcomes are aligned with the GRI framework. Over 600 internal and external stakeholders participated in the impact materiality exercise, including stakeholders such as employees, local communities (Parbati II and Parbati III) and government during June 2023.

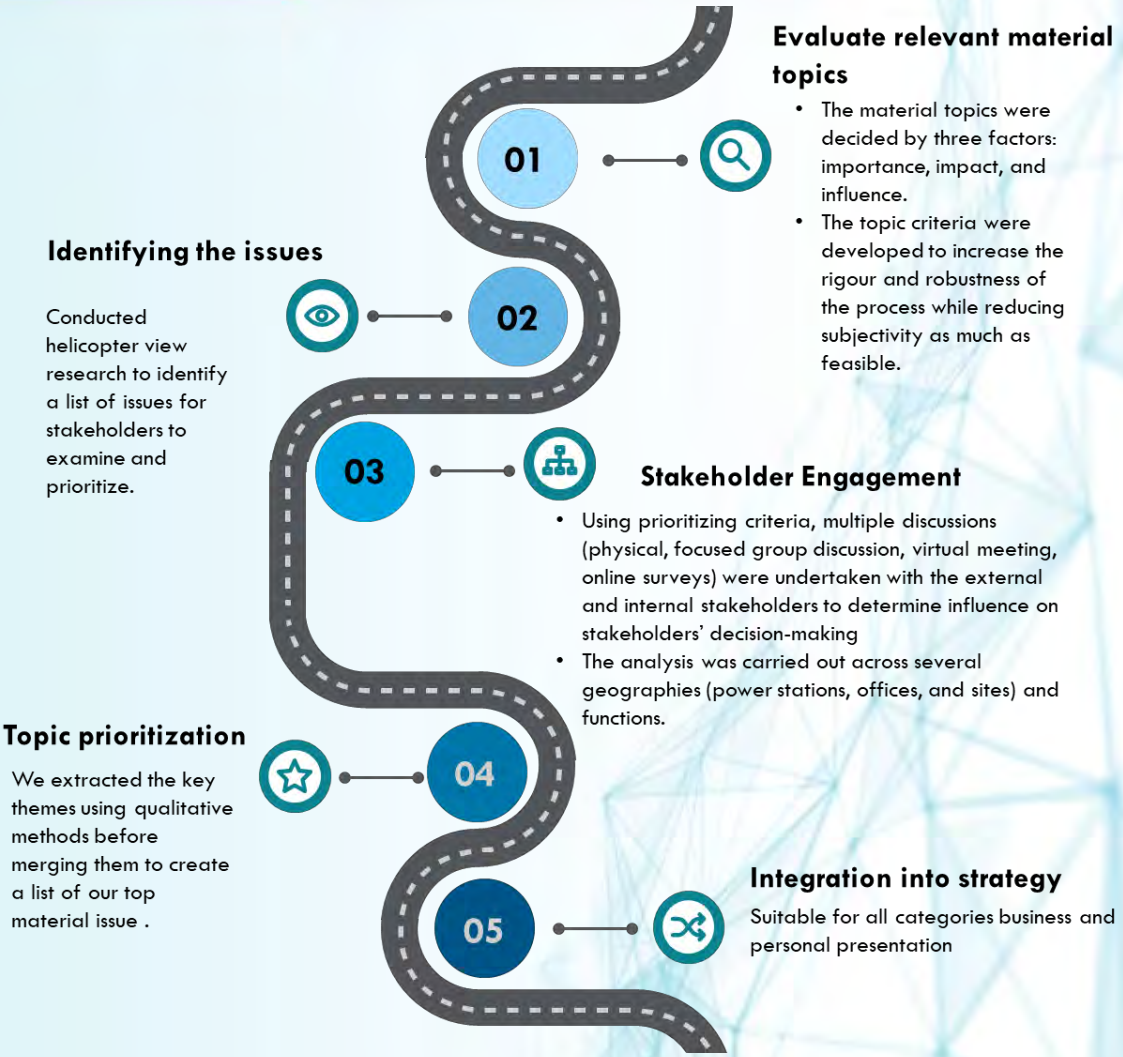


Figure 3.1: Process for Stakeholder Engagement and Materiality Assessment.

The sensitivity of an issue to stakeholders and NHPC, in terms of importance, forms the basis of the materiality analysis, guiding the processes for identifying, managing and devising specific action plans for addressing these material aspects. This assessment resulted in identifying goals and targets (in line with UNSDG) that are most important to its stakeholders and for NHPC to create value in the short, medium and long term. These material topics also provide further insights into risks and opportunities described in subsequent sections.

The material issues prioritised by stakeholders are plotted on the Materiality Matrix against the priorities of strategic business importance. The topics are categorised relative to each other and the position of each topic represent its relative importance. Topics have been rated on a high to very high scale for their impact on business and significance as perceived by stakeholders. This assessment has helped NHPC to validate its priorities related to emerging business risks and to leverage opportunities for future growth. NHPC has carried out the double materiality (union of impact materiality and financial materiality) assessment, to understand that how the operations and the business of NHPC are impacted by sustainability issues and how the activities of NHPC impact society and the environment. NHPC intends to review its materiality matrix at regular intervals to update and include the voice of stakeholders and in context of the evolving ESG landscape.

3.2. Impact materiality Assessment for NHPC

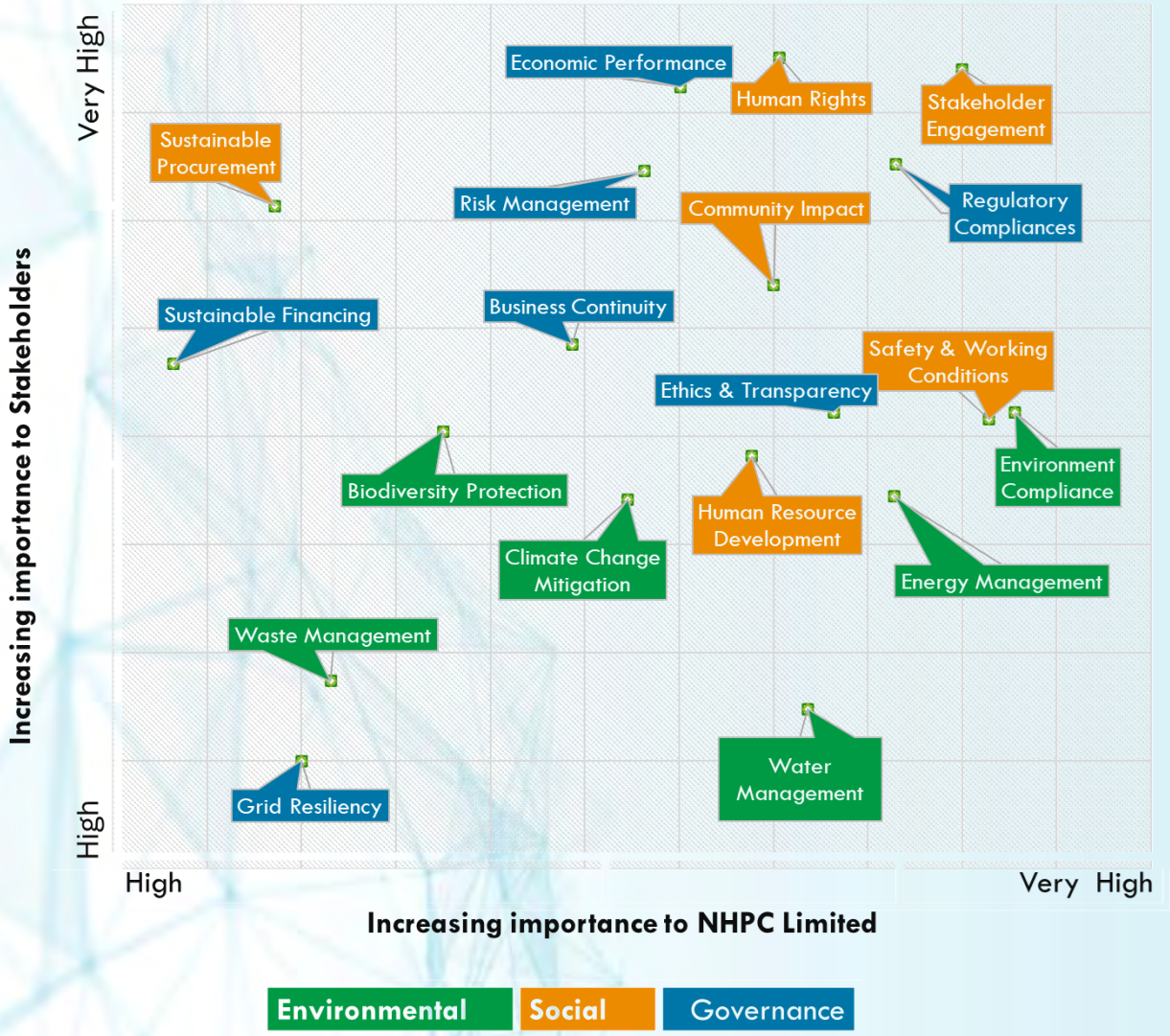


Figure 3.2: Materiality Matrix.

3.3. Double Materiality Assessment

For 2022-23, NHPC carried out a Double Materiality Assessment to gain insights into its impact on the external environment and its ESG risks and opportunities. It was carried out to determine the scale and scope and impact of NHPC business operations on environment and the community but also to assess the efficient allocation of the resources and relation for shaping NHPC's future strategy.

The objective of stakeholder engagement with the key managerial personnel was to understand how people may be impacted by NHPC and to get input and feedback on material sustainability matters.

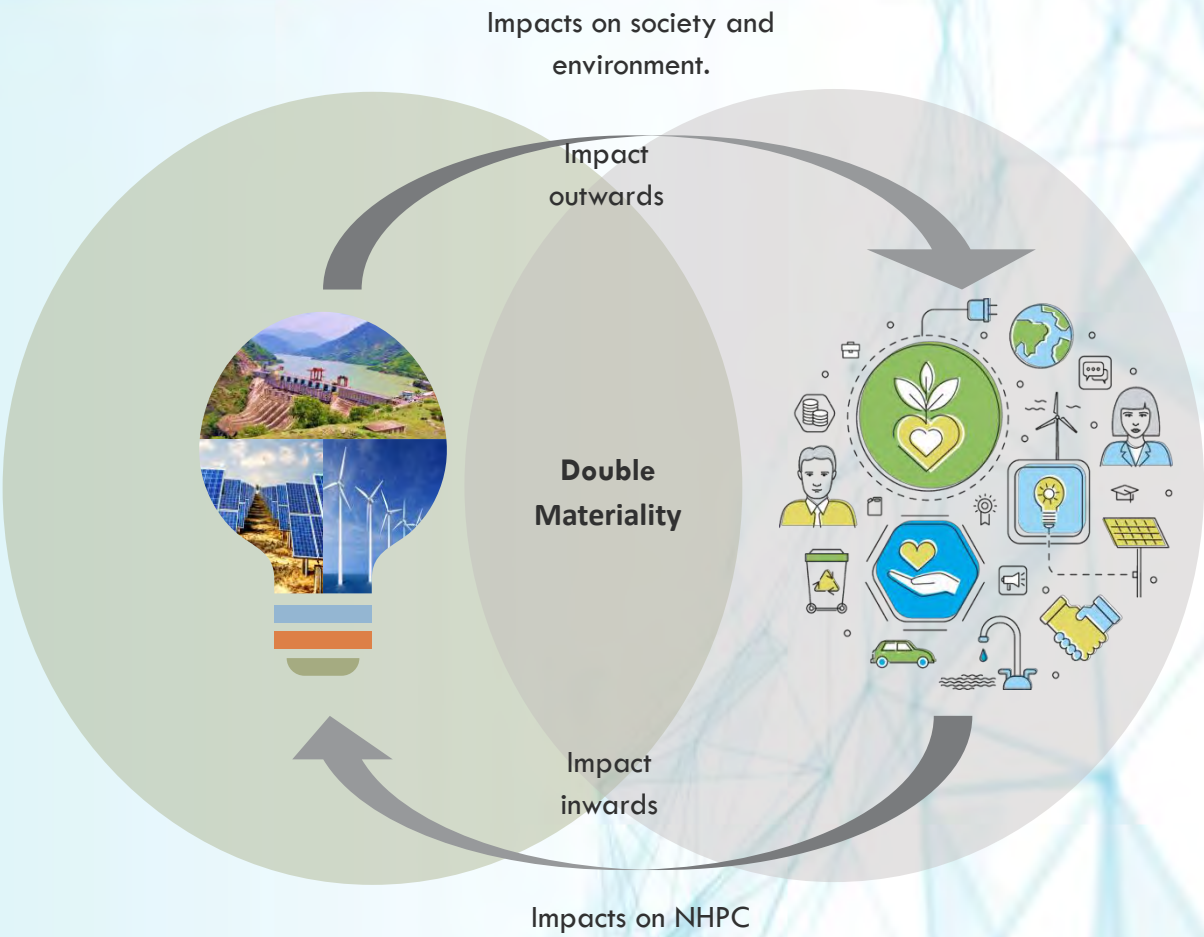


Figure 3.3: Double Materiality Approach of NHPC.

The following activities were performed:

Step *1*: Selection of relevant stakeholder groups and 9 material topics for consideration.

Step 2: Interviews with key stakeholders. The 9 material topics were grouped into environmental; social and governance bundles and each stakeholder was asked their views on impacts, risks and opportunities for NHPC regarding the topics in their assigned bundle. The outputs of the interviews were aggregated across all interviewees and summarised in factsheets, one for each topic.

Step 3: The responses consequent to the survey with selected members of NHPC senior management were prioritised for these 9 material topics with regards to:

- the impact of NHPC on society from an economic, environmental and people perspective (i.e., impact materiality) and
- the impact of society on NHPC business value (i.e., financial materiality).

A total of 60 response as interviews from the senior leadership (internal) across different departments were captured to identify and assess the material issues. External stakeholder's responses were incorporated in the matrix which included DISCOMs, bankers and lenders, supplier and contractors and regulating bodies (CERC, MoP, MoEF&CC).

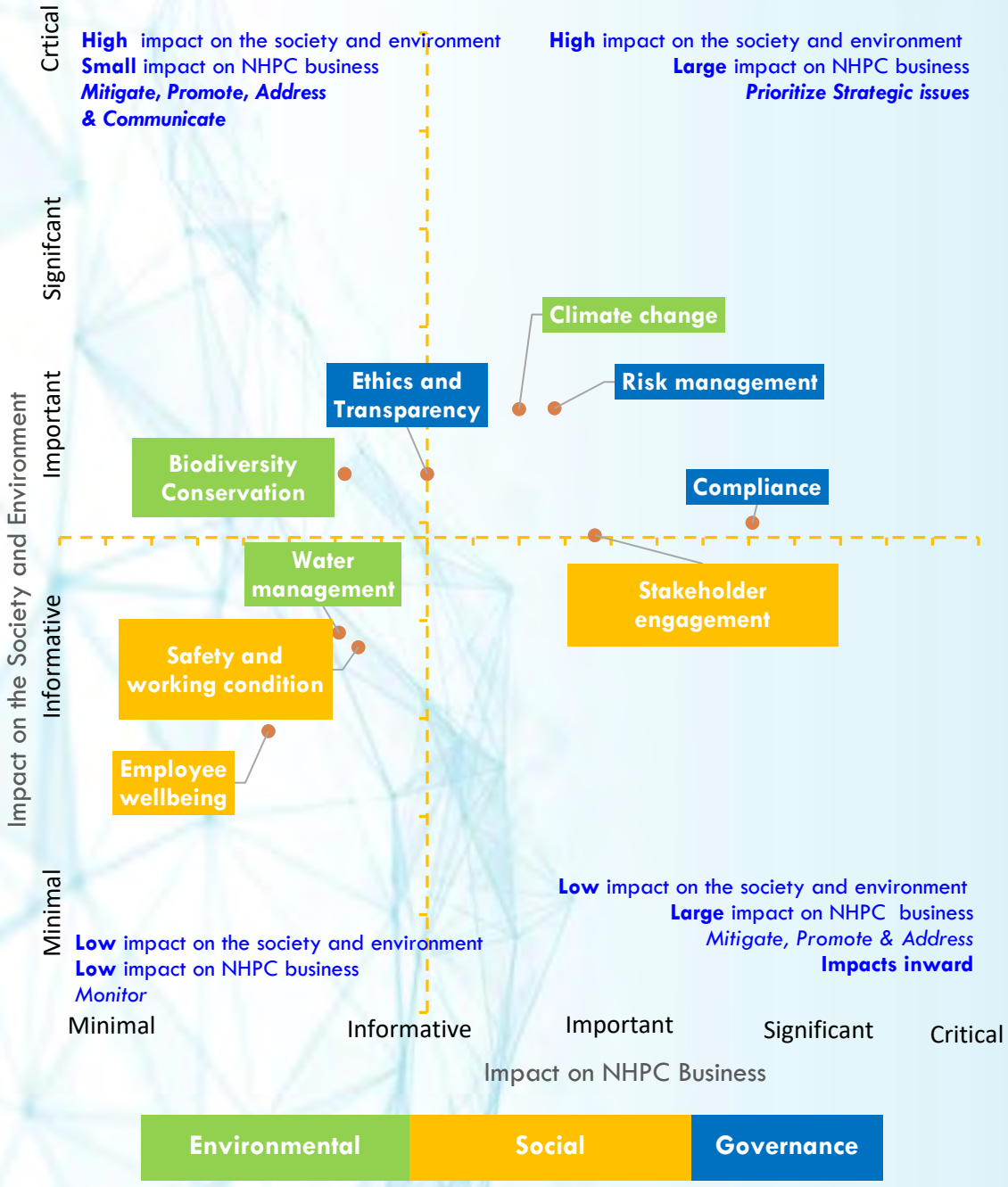


Figure 3.4: Double Materiality Matrix for NHPC.

With increased focus on access to clean energy, NHPC can have a significant positive impact on this domain and therefore aligning to the material issues as risk management in context of climate change, while adhering to all the compliance. This will provide an opportunity of growth in the energy markets and towards government commitment to provide access to clean and affordable energy and strengthen energy security. NHPC has established approaches to address the key material issues and have develop a roadmap as applicable for the work.

3.4. Management Approach for Material topics

The material topics were mapped for GRI and BRSR alignment. The approach of NHPC in addressing these material topics is provided below:

Table 3.1: Approach of NHPC on material topics.

Material Topic	GRI & BRSR Alignment	NHPC Management Approach
		ENVIRONMENTAL
Climate Change	GRI 305: Emissions GRI 302: Energy BRSR Principle 6	• NHPC has carried out measurements of GHG emissions from some of its reservoirs under R&D scheme and post-construction EIA studies. • To reduce GHG emissions from its activities and facilities (such as DG sets, vehicles etc.), NHPC has taken several steps such as implementing energy efficient lightings and building management solutions, solar installations and reducing the fossil fuel consumption by shifting to electrical mobility solutions and retrofitting DG sets. • NHPC monitors, evaluates and conserves energy at all operating locations by adopting energy efficient solutions and shifting towards renewable energy sources to reduce environmental footprint and Scope 2 emissions. • Installation of Early Warning System, e-Aabhas-Automatic water level sensors along with telemetric data transmission, GLOF, Modelling studies.
Water Management	GRI 303: Water and Effluents BRSR Principle 6	• Low water footprint due to non-consumptive usage for power generation. • Optimises water consumption by implementing a series of water-saving measures at offices/Power Stations. • Implementation of wastewater treatment at several of its power stations by ensuring water reuse and recycling.
Biodiversity Conservation	GRI 101: Biodiversity 2024 BRSR Principle 6	• NHPC complies with the baseline study of the flora and fauna in the project area as part of EIA study through independent accredited consultant, prior to implementation of the Project. Accordingly, biodiversity conservation plan is prepared as a part of EMP and implemented in consultation with State Forest Department. • NHPC undertake voluntary initiative such as voluntary plantation, herbal parks butterfly parks etc. for the long-term conservation of the fauna and flora of the regions in which NHPC operates.

Material Topic	GRI & BRSR Alignment	NHPC Management Approach
		SOCIAL
Stakeholder Engagement and Community	GRI 3: Material Topics 2021 GRI 2-29: Approach to stakeholder engagement GRI 413: Local Communities BRSR Principle 3 BRSR Principle 4 BRSR Principle 8	• NHPC maintains strategic relationships with both internal and external stakeholders, responding to their expectations and concerns in a timely and appropriate manner, displaying a commitment to continue a progressive engagement in the company's activities and operations. • NHPC fosters the well-being and growth of the communities in which it operates in. NHPC works with communities to reduce the likelihood of current and future disputes, maintain smooth operations and increase livelihood prospects. Furthermore, through frequent assessments, NHPC ensures the identification of areas for continual improvement. • NHPC conducts CSR activities in and around its business operation in line with Section 135 of the Companies Act, 2013 and Companies (Corporate Social Responsibility Policy) Rules, 2014, read with its amendments and general circulars issued by the Ministry of Corporate Affairs. NHPC also adheres to guidelines on CSR issued by Department of Public Enterprises (DPE)
Safety and Working Conditions	GRI 403: Occupational Health and Safety BRSR Principle 3	• NHPC prioritises worker health and safety, as well as good working conditions and a conducive working environment that encourages staff productivity along with a good health. • NHPC has put in place steps to assure continuous improvement, such as updating safety guidelines, giving safety training and conducting regular mock drills on probable emergency scenarios to increase the awareness among employees and other stakeholders.
Employee wellbeing	GRI 2-7 Employees GRI 401: Employment GRI 402 Labour/ Management Relations GRI 404: Training and Education GRI 405: Diversity / Equal	• NHPC strives for holistic employee and extended workforce development, from recruitment to retention to career development to training to retirement. • It includes strategies and mechanisms to address employee well-being, remuneration grievances, diversity and inclusion concerns to ensure and boost productivity among the company's employees. • NHPC adheres to regulations of Government of India and the acts governing various aspects of labour and employment. • NHPC is dedicated towards preventing discrimination,

Material Topic	GRI & BRSR Alignment	NHPC Management Approach
	Opportunity GRI 406: Non-Discrimination GRI 407: Freedom of Association and Collective Bargaining GRI 408: Child Labour GRI 409: Forced or compulsory Labour GRI 412: Human Rights Assessment BRSR Section A: General Disclosures BRSR Principle 3	harassment, abuse and bias in its operations and value chain and to treat all with dignity and integrity. It adheres to ethical business practices and respects employee and community rights. • All the operational activities are imbued with the determination to safeguard and strengthen individual rights, as well as to promote inclusivity, diversity and equality. • Established Internal Complaints Committee under Sexual Harassment of Women at Workplace (prevention, prohibition & Redressal) Act, 2013. • NHPC has been encouraging women leadership in all activities. • For employees, NHPC has established creche at its Corporate Office. • NHPC conducts regular training for its employees, Currently the security personnel are trained on human rights issues by the contractor.
		GOVERNANCE
Compliance	GRI 307: Environmental compliance GRI 2-27 Compliance with laws and regulations BRSR Principle 1	• NHPC complies with environmental laws and regulations established by governmental agencies or other regulatory bodies to protect natural resources, ecosystems and human health. Multiple monitoring mechanisms (6 monthly report to MoEF&CC, Monitoring by SPCB, EMC meetings) are in place to ensure compliance. • NHPC ensures compliance with statutory and regulatory laws, regulations and requirements.
Risk Management	GRI 201-2 Financial implications and other risks and opportunities due to climate change BRSR Section A: General Disclosure	• NHPC has developed and implemented an effective risk identification, mitigation and management strategy that is aligned with international standards and includes risks such as financial and regulatory risks, including the impact of climate change on business continuity. Cyber security and data protection procedures are implemented as part of risk management to provide a zero-default environment for data leakage and breaches.
Ethics & Transparency	GRI 201: Economic Performance GRI 205: Anti-	• NHPC has fostered a business culture on integrity and open communication. Maintaining ethical integrity and openness in the governance process integrates ethical leadership, generates confidence and creates long-term benefit for all

Material Topic	GRI & BRSR Alignment	NHPC Management Approach
	corruption GRI 206: Anti-competitive Behaviour BRSR Section A: General Disclosures BRSR Principle 3 BRSR Principle 8	stakeholders. • NHPC has established a set of procedures for coping mechanism, maintaining productivity and quick recovery in the unfortunate event of a catastrophic setback to the business. • NHPC strives to leverage economic interests while improving sustainability performance. NHPC's strong commitment to generating long-term that value for the business that contributes to the company's strong economic performance and market leadership.

3.5. Clean Energy for Sustainable Future

India announced a net-zero emission objective at the COP26 climate summit in Glasgow, with a strong climate ambition to reach net-zero by FY 2070. The Hon'ble Prime Minister of India adopted an updated Nationally Determined Contribution (NDC) under the Paris Agreement to increase India's response to the challenge of climate change. The updated NDCs include aggressive targets on five essential elements (Panchamrit) that would speed the transition to a low-carbon economy. In 2019, Ministry of Power, Government of India, has declared Large Hydropower Projects as renewable energy source. NHPC's commitment to hydropower aligns with the broader mission of achieving net-zero emissions, as it supports India's efforts to transition towards cleaner and more sustainable energy sources.

An approach to environmental stewardship includes strategies and actions centred on emission reduction, effective non consumptive use of water and energy conservation, waste reduction and increased use of renewable energy by implementing established environmental safeguard measures. NHPC has integrated environmental and ecological conservation, social well-being and responsible corporate governance in all its activities. The onset of Hydropower Stations by NHPC has contributed to the socioeconomic progress of the region through the creation of employment opportunities, the development of infrastructure and community development initiatives as part of its CSR initiatives. It has provided several indirect employment/ entrepreneurial opportunities in the field of transportation, construction, tourism and other small-scale businesses, thus promoting the continuous sustainable progress through an Environmental, Social and Governance (ESG) vision.

ESG Vision

NHPC aims to lead India's energy sector by safeguarding the environment, fostering societal welfare and upholding governance principles. NHPC seeks to create a vibrant, eco-friendly future while positively impacting communities through innovative hydroelectric projects and renewable energy initiatives. NHPC is committed to continuous enhancements in ESG performance, active stakeholder collaboration and significant contributions towards a resilient, equitable and sustainable world.

ESG Goals, Targets and Initiatives

NHPC is committed to the vision of being a "Global leading organisation for sustainable development of clean power through competent, responsible and innovative values." Being an environmentally conscious and socially responsible company, NHPC strives to align its ESG goals with the requirements of national and international sustainability frameworks, such as the United Nations Sustainable Development Goals (UNSDGs) and the Business Responsibility and Sustainability Reporting (BRSR).

Table 3.2: ESG goals and targets.

Focus area 1: Drive sustainability best practices throughout NHPC's operations to minimise environmental footprint.

Goal 1: Optimise resource efficiency and business operation management.

Target	NHPC initiatives
Target 1.1: Continuation of investment in renewable energy, improve energy efficiency and minimise GHG emissions through dedicated initiatives and fostering sustainable energy landscape	• Ventured into other renewable forms of energy i.e., solar and wind energy. • Signed the E-mobility agreement with Convergence Energy Services Limited (CESL). • Formulated Corporate Environment Policy and Energy Conservation policy. • Constituted Energy Conservation Task Force. • Conducted Energy Audit through BEE certified agencies. • GRIHA certified Corporate Office building. • Grid Solar Power Station Energy of capacity of 80 kWp and 150 kWp at Corporate Office.
Target 1.2 Ensure environmental flow from its hydropower stations.	• NHPC electricity generation involves non-consumptive usage of (water) resources. • Environmental flow is maintained at dam sites to maintain ecological health and achieve socioeconomic and cultural sustainability in the downstream area.
Target 1.3 Conserve the ecosystem through Integrated Sustainable Waste Management (ISWM) and contributing to a responsible future	• Defined Waste management policy and an E-Waste Policy in place. • Waste (Hazardous & Non-hazardous) generated are properly managed and disposed with approved agencies. • The municipal solid waste (MSW) is collected and disposed by the local municipalities, wherever applicable. • Disposal of Wastewater is as per the standard procedures of SPCB through STP. Few of the Power Stations commissioned early years have septic tanks and soak pits for wastewater disposal.

Target	NHPC initiatives
Target 1.4 Implement effective water-saving measures to achieve water conservation.	• Formulated a Water Conservation Policy which aims to: • Optimise the use of water through installing efficient water systems. • Installed rainwater harvesting measures at some of its sites including the Corporate Office.
Target 1.5 Demonstrate unwavering dedication in preserving and enhancing the natural environment.	• NHPC has maintained a 'No Net Loss' of forest land across all operational sites through compensatory afforestation for the loss of forest land. • NHPC has a Biodiversity Conservation Policy in place. • To check soil erosion, extensive Catchment Area Treatment measures have been adopted by NHPC at its projects. • EMP suggests project-specific conservation measures for biodiversity conservation based on the findings of EIA study. The activities include both ex-situ conservation measures such as the development of Botanical Gardens, Biodiversity Conservatories such as Arboretum and Orchidarium, Butterfly Parks and so on, as well as in-situ conservation measures such as habitat improvement, the conservation of biologically rich area, anti-poaching activities and so on. • Compensatory Afforestation through State Forest Department and Voluntary afforestation. • Restoration of Muck Dumping sites & Quarry sites. • Landscaping and Development of Herbal Parks. • Fisheries Management Plan.
Target 1.6 Encourage a shared objective of sustainability with the upstream value chain by collectively nurturing responsible supply chain management practices.	• NHPC has a Sustainable Procurement Policy to encourage suppliers to abide by ESG directives. • NHPC follows International Competitive Bidding (ICB) system for selection of qualified, competent and performing agencies for executing the construction of Hydropower Projects. The techno-commercial bids are examined in line with ICB practices, CVC guidelines, prescribed norms/ initiatives of Govt. of India. • Directions of Govt. of India under Public Procurement (Preference to Make in India), Order 2017 with latest amendments is being complied with to promote indigenous products. • Various contracts have been signed with residents in the project area for vehicle hiring, material handling, housekeeping, waste disposal and gardening, among other things. In addition, provisions have been provided for Micro and Small Enterprises and Start-Ups in the bidding and awarding of procurement of services and goods, for all the procurement works.

Focus area 2: Improve social impact of NHPC throughout company's value chain and communities in which it operates.

Goal 2: Promote an inclusive and healthy work environment.

Targets	NHPC Initiatives
Target 1 Foster diversity and nurture equality to drive a more inclusive and dynamic organisational culture. Encourage women in leadership role at NHPC.	• NHPC promotes equal opportunity in all aspects. • NHPC has been encouraging women leadership in all activities. • Established Internal Complaints Committee under Sexual Harassment of Women at Workplace (prevention, prohibition & Redressal) Act, 2013. • For employees, NHPC has established creche at its Corporate Office.
Target 2 Maintain a "zero accident" and "zero fatality" work environment on a year-on-year basis.	• Corporate Safety Policy in place along with separate safety policies for Power Stations and Construction Projects towards target of Zero hazard potential. • Most of the Power Stations are OHSAS-18001:2007 /ISO 45001: 2018 certified. • Regular Safety monitoring by safety officer. • NHPC has been conferred with 'AEOHD Occupational Health Excellence Award – Public Sector' for exemplary contribution in the field of environment, health and safety. • Minimum of 10 hours of training for all contract workers. • Safety promotional activities are celebrated at Power Stations & Projects like safety week/day, fire service week, safety competitions, poster making etc. to increase the awareness among employees.
Target 3 Encourage employees, workers and local communities to work together by promoting awareness to strengthen efforts in addressing SDG agenda.	• NHPC has a Stakeholder Engagement Policy in place to guide stakeholder interaction at different management levels through multiple engagement platforms. • NHPC has conducted stakeholder engagement and materiality assessment exercise to analyse the perspective and interests of their important stakeholders to further map and prioritise the material issues.
Target 4 Maintain its pro-active thrust as socially conscious company on elevating the quality of life and building essential	• NHPC has implemented CSR initiatives in the areas of Education, Health, Sanitation, Rural Development, Skill Development, Environmental sustainability, Women Empowerment, Promotion of sports etc. • Established a Committee of Directors on CSR & Sustainability and has formulated a policy on CSR & Sustainability.

Targets	NHPC Initiatives
facilities/ opportunities for its communities.	• NHPC has been conducting impact assessment of its CSR projects through independent agencies. • Contributed INR 30 Crores in PM CARES. • Rehabilitation and Resettlement schemes for Project Affected Families (PAFs) to provide economic sustenance. • NHPC has formulated a policy for reservation of certain type of works through competitive bidding for PAFs and locals residing near its Projects/Power Stations. • Benefits to the home state by providing 12% of free power from hydropower generation. • As per Hydropower Policy, Government of India, NHPC provides an additional 1% free power from the project (over and above 12% free power earmarked for the host State) as a Local Area Development Fund, aimed at providing a regular stream of revenue for income generation and welfare schemes, creation of additional infrastructure and common facilities etc. on a sustained and continued basis over the life of the project. • In Himachal Pradesh, provisions of Local Area Development Fund (LADF) @1.5% of total estimated cost of the project during construction phase.

Focus Area 3: Uphold business integrity and establish clear governance mechanism.

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Goal 3: Upholding business ethics, integrity and transparency

Target	NHPC initiatives
Target 3.1 Ensure a zero tolerance for corruption and unethical practices.	• Committed to ethical conduct and is vigilant against any form of corruption. • Adopted Conduct, Discipline and Appeal Rules to maintain order, ensure fair treatment of individuals and uphold ethical standards. • Whistle Blower Policy wherein Directors, employees, contractors and vendors of the Company are free to report any unethical practice, violation of applicable laws, rules, regulations, or Company's code of conduct. • A policy on Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace, in line with the provisions of the Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013 is in place.
Target 3.2 Ensure that NHPC is 100% compliant with	• Compliance with all the regulation as mandated by Government of India and home State. • Compliance with safety systems & procedures and environmental

Target	NHPC initiatives
local and national regulations.	laws is regularly monitored. • NHPC has internal control systems and processes in place for smooth and efficient conduct of business and ensure compliance to relevant laws and regulations. • Six monthly compliance reports on environmental aspects of Projects/ Power Stations are submitted to MoEF&CC and are available on company website.

Stakeholder engagement on all initiatives

Idea boxes are an effective approach used by NHPC to gather, centralise and track employees' ideas, resulting in continual company development through collective intelligence. An idea box is a low-cost solution for a company's sustainability that also develops its employees' collective intelligence. Sourcing employee ideas and innovating through collective intelligence can lead to new business models, product development, HR processes, organisational processes, diversity and inclusion policies, environmental commitment and research and development and innovation.

Cooperation and communication with stakeholders are the first step towards identifying issues that may be rectified and building a work environment at NHPC that is increasingly sustainable and responsive to the needs and expectations of its employees. NHPC efficiently communicates the Stakeholder Engagement policy to all its employees, familiarising them with its essential components and invites input and conversation from interested parties.

The stakeholder communication policy has reiterated NHPC's commitment to establish effective communication and engaging stakeholders in a two-way conversation process. For this purpose, suggestion boxes have been put up at each of its Project Sites, Power Stations and Offices, allowing anybody to submit reports or suggestions including NHPC's ESG key performance indicators (KPIs).

Figure 3.5: Suggestion box at Corporate Office.

NHPC has dedicated intranet portal, where it communicates with its employees, updating the current developments and seeking ideas and opinion on all aspects. Often these initiatives and idea seeking are accompanied with recognition and monetary awards, encouraging the employees to participate.

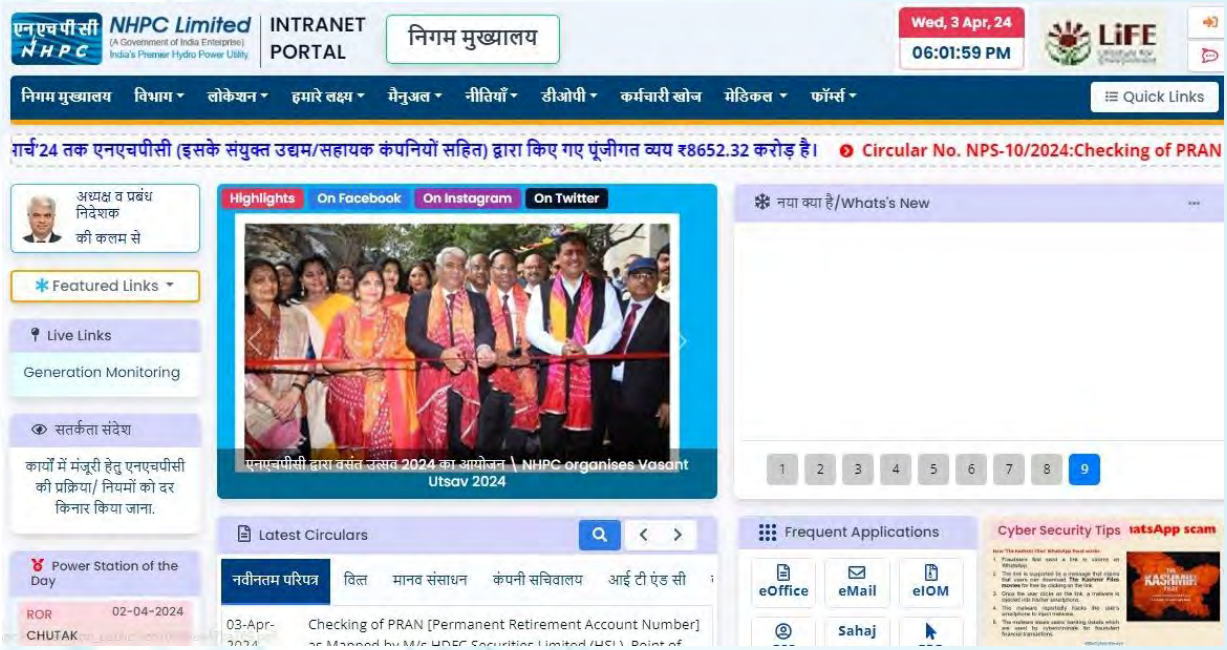


Figure 3.6: Screenshot of NHPC intranet portal.

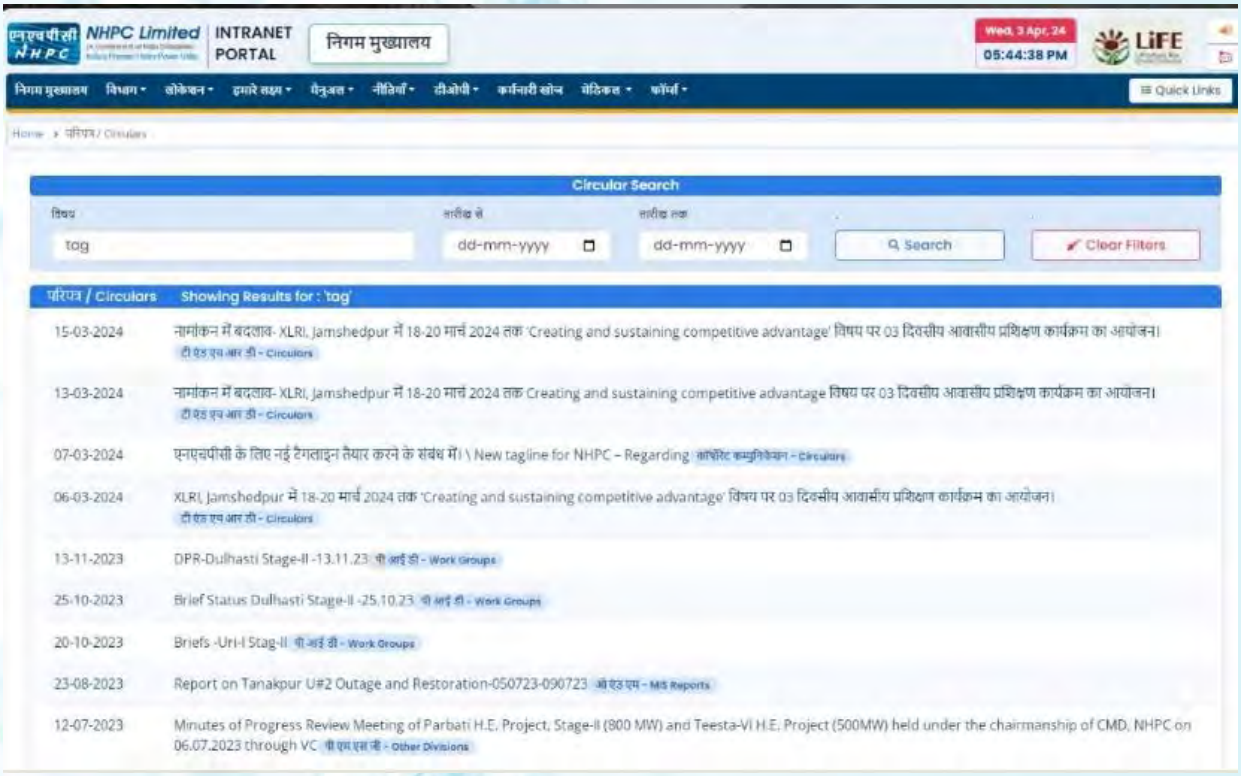
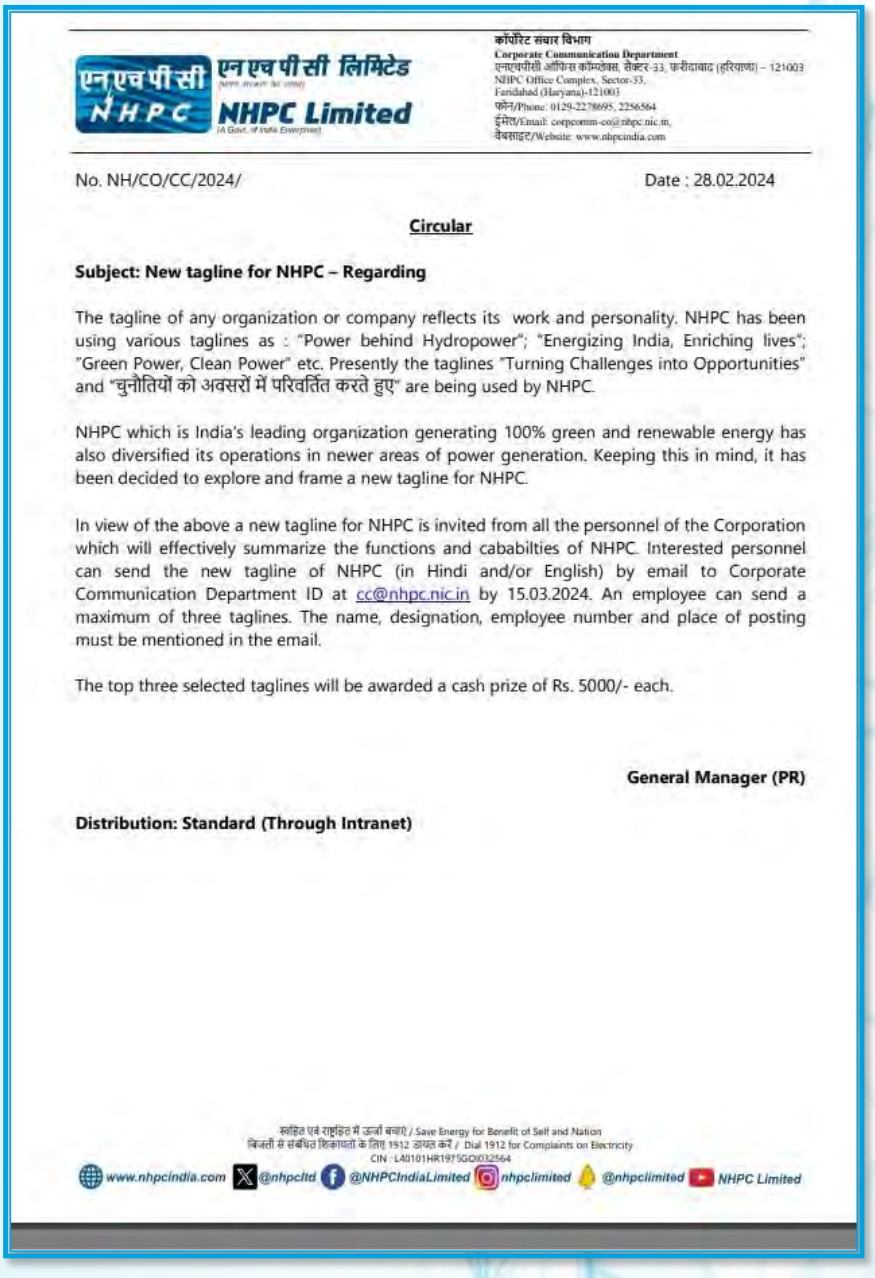


Figure 3.7: Seeking ideas from employees of NHPC on new tagline.

(Extracted from NHPC intranet portal).



एन एच पी सी लिमिटेड
NHPC Limited
(A Govt. of India Enterprise)

कॉर्पोरेट संचार विभाग
Corporate Communication Department
एनएचपीसी ऑफिस कॉम्प्लेक्स, सेक्टर-33, फरीदाबाद (हरियाणा) – 121003
NHPC Office Complex, Sector-33,
Faridabad (Haryana)-121003
फोन/Phone: 0129-2278695, 2256564
ईमेल/Email: corpcomm-co@nhpc.nic.in,
वेबसाइट/Website: www.nhpcindia.com

No. NH/CO/CC/2024/ Date : 28.02.2024

Circular

Subject: New tagline for NHPC – Regarding

The tagline of any organization or company reflects its work and personality. NHPC has been using various taglines as : "Power behind Hydropower"; "Energizing India, Enriching lives"; "Green Power, Clean Power" etc. Presently the taglines "Turning Challenges into Opportunities" and "चुनौतियों को अवसरों में परिवर्तित करते हुए" are being used by NHPC.

NHPC which is India's leading organization generating 100% green and renewable energy has also diversified its operations in newer areas of power generation. Keeping this in mind, it has been decided to explore and frame a new tagline for NHPC.

In view of the above a new tagline for NHPC is invited from all the personnel of the Corporation which will effectively summarize the functions and cabaibilties of NHPC. Interested personnel can send the new tagline of NHPC (in Hindi and/or English) by email to Corporate Communication Department ID at cc@nhpc.nic.in by 15.03.2024. An employee can send a maximum of three taglines. The name, designation, employee number and place of posting must be mentioned in the email.

The top three selected taglines will be awarded a cash prize of Rs. 5000/- each.

General Manager (PR)

Distribution: Standard (Through Intranet)

स्वहित एवं राष्ट्रहित में ऊर्जा बचाएं / Save Energy for Benefit of Self and Nation
बिजली से संबंधित शिकायतों के लिए 1912 डायल करें / Dial 1912 for Complaints on Electricity
CIN : L40101HR1975GOI032564
www.nhpcindia.com @nhpcltd @NHPCIndiaLimited nhpclimited @nhpclimited NHPC Limited

Figure 3.8: Circular inviting submission of ideas on NHPC tagline.

(Extracted from NHPC intranet portal).

Implementation roadmap

At NHPC, setting goals is not a one-time activity; rather it is an ongoing process that demands continuous monitoring and adaptation. The goals are defined, implementation roadmap is prepared and progress is reviewed annually. The goals and targets are revisited and re-casted in context of the adapting to circumstantial changes and overcoming unexpected challenges. The implementation roadmap at NHPC is flexible, with aim of achieving ESG eminence.

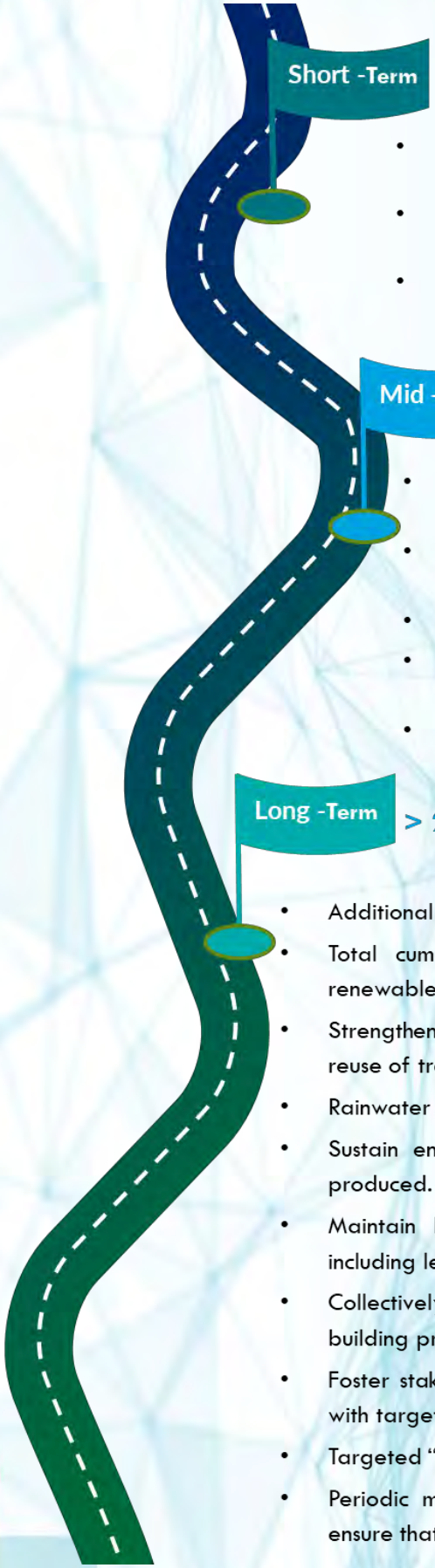


Figure 3.9: Implementation roadmap of initiatives of NHPC.

4

Nurturing Environmental Sustainability

4. Nurturing Environmental Sustainability

A key strategy for combating climate change and attaining sustainability is the transition to renewable energy sources, which provide low-carbon and sustainable energy alternatives. India has established an ambitious objective of attaining Net Zero energy capacity by 2070, which will be complemented by 500 GW of renewable energy capacity by 2030. The primary objective of this ambitious goal is to mitigate climate change and decrease dependence on fossil fuels through the promotion of alternative energy sources such as solar, hydropower, wind and Green Hydrogen.

NHPC's corporate strategy is in accordance with the significance of environmental conservation and is focused on providing clean and sustainable energy alternatives. This exemplifies commitment in addressing climate change and preserving the environment. NHPC Corporate Environment Policy (CEP) thoroughly examines the social and environmental factors that are critical for the continued progress of renewable energy technologies and it involves the formulation and execution of a management strategy with the objective of reducing environmental consequences to the maximum degree possible.

NHPC reasserts its commitment to ethical development practices through its adoption of Integrated Management System (IMS) accreditation. Most of NHPC Power Stations have ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 accreditations. NHPC actively participates in a range of environmental conservation initiatives, such as afforestation, waste management, water conservation and energy conservation, in fulfilment of regulatory requirements and as a voluntary effort. This is in addition to the implementation of approved environment management plans.

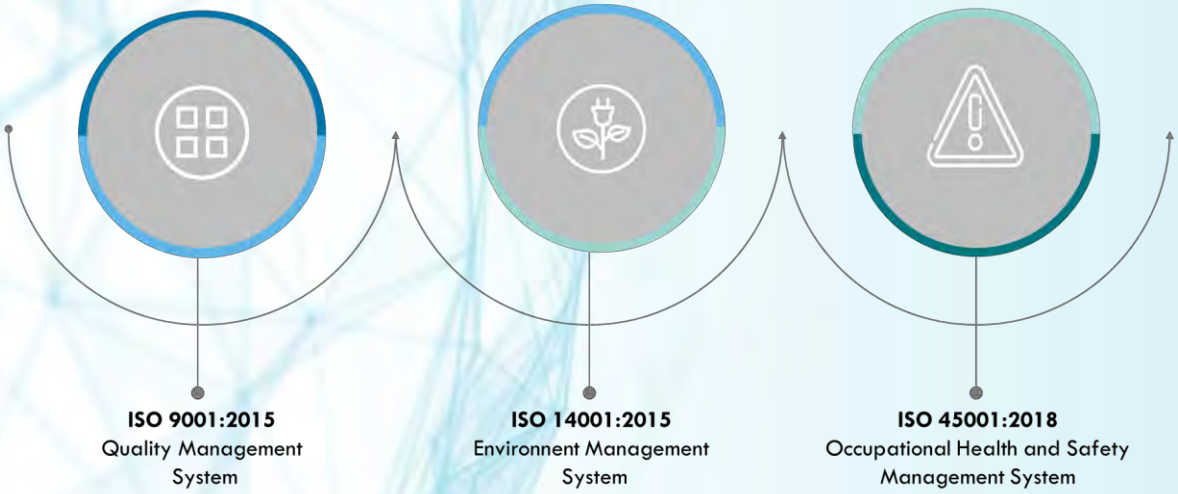


Figure 4.1: The Integrated Management System at NHPC.

NHPC is committed towards a strong environmental consciousness in all aspects of its business operations, ensuring environmental conservation during both the construction and operation stages of its hydropower projects. Environmental Impact Assessments (EIAs) are carried out prior to the commencement of construction by the agencies accredited from the National Accreditation Board for Education and Training (NABET). Site specific Environmental

Management Plans (EMPs) are prepared for suggesting mitigation strategies for both the construction and operation phases. The Expert Appraisal Committee of MoEF&CC conducts a thorough examination of EIA and EMP reports, public consultation proceedings and detailed project report to accord required environmental clearance. NHPC ensures strict adherence to all statutory regulations that are mandated by MoEF&CC and the respective state governments. In addition, compliance reports on environmental aspects are submitted to MoEF&CC on half yearly basis, which are available at NHPC website and the web portal of MoEF&CC. The ongoing monitoring conducted by State Pollution Control Boards and State Forest Departments further underlines NHPC's commitment to environmental accountability.

Green Hydrogen Technology is expected to be the future of energy and NHPC has begun development of three pilot green hydrogen projects in the Leh and Kargil Districts of the UT of Ladakh, as well as the Chamba District of Himachal Pradesh. These pilot projects will provide the groundwork for the future development of Green Hydrogen and the accompanying decrease of carbon emissions in the transportation/heating sector.

The Union Budget 2022-23 has earmarked budgetary allocation of INR 3,365 Crores for solar power, including grid-interactive and off-grid projects, with an extra INR 19,500 Crores for production-linked incentives for high-efficiency solar photovoltaic modules. NHPC is dedicated to support India's ambitious "Panchamrit" commitment which aims for 500 GW installed electricity capacity from non-fossil fuel sources by 2030. Consequently, NHPC is exploring the possibility of producing Giga Watt Scale Vertically Integrated Solar PV Modules and Cells and a Memorandum of Understanding (MoU) with Bharat Electronics Limited has been inked.

NHPC has established an Environment and Diversity Management (EDM) Division at its Corporate Office to oversee and support the implementation of environmental safeguard measures across all Projects, Power Stations and Regional Offices. This dedicated division plays a pivotal role in addressing environmental planning requirements throughout the planning, clearance, construction and operational phases of hydropower projects.

EDM Division has defined roles and responsibilities, related to obtaining the statutory clearances required for the construction of the hydropower projects, finalisation of EIA/EMP studies, Remote Sensing and GIS, CDM, providing inputs of NHPC on draft policy/Acts/guideline of Government related to environment & Forest matters, coordination with the State Government for SIA and R&R plan as per "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR, 2013). EDM Division coordinates with different Power Stations on regulatory compliance and implementation of EMP and post-construction EIA studies for the sustainable development of hydropower projects.

In addition, the EDM Division has embarked on ESG disclosures in the form of Sustainability Report (with effect from FY 2021-22) and is providing inputs to Planning Division for preparation of BRSR as mandated by SEBI, Government of India. The Division acts as nodal point for the Corporate Sustainability Assessment Survey for ESG Rating Framework of S&P Global where it prepares and submit responses for the award of ESG Scores.

Figure 4.2: Environmental Sustainability at NHPC.

4.1. Energy Management

NHPC is committed to minimise its environmental footprint through the expansion of its renewable energy portfolio and the adoption of sustainable technologies. The company has implemented a variety of measures to conserve energy and significantly reduce the impact on the environment. NHPC is dedicated to integrating energy-saving measures into every aspect of its operations and providing consumer services that prioritise energy conservation. This commitment is reflected in its policy on conserving energy. The main objective is to achieve this by implementing a comprehensive and inclusive energy management strategy that involves closely monitoring the energy usage, distinguishing between renewable and non-renewable energy resources and implementing initiatives to improve sustainable energy practices. The organisation has implemented a well-rounded energy consumption strategy that combines grid-sourced electricity with renewable energy sources in a smart and efficient manner.

Energy Generation

NHPC's Power Stations showcased remarkable performance throughout FY 2022–23, culminating in the generation of a total of 24,907 MUs of energy. Additionally, NHPC achieved a significant milestone with overall Plant Availability Factor (PAF) of 88.75% during this period. This remarkable improvement in operational efficiency reflects NHPC's ongoing

commitment to excellence in power generation. Moreover, 18 out of NHPC's 20 Power Stations exceeded their respective Normative PAF (NAPAF) targets, demonstrating the organisation's unwavering focus on meeting and surpassing operational benchmarks. These achievements are in line with NHPC's broader Environmental, Social and Governance (ESG) objectives, highlighting the company's commitment to responsible energy production by continually surpassing generation targets and enhancing operational efficiency.

Table 4.1: Electricity generation based on renewable energy sources.

	Gross generation 2022- 23 (MUs)	Share generation. 2022- 23 (%)	Revenue generated 2022- 23 (INR, in Crore)
Total renewables	24,907	100%	9125
Wind	77	0.3%	22.83
Hydropower	24,740	99.3%	9066
Solar	90	0.4%	36.08

Energy consumption at NHPC

Consumption of energy at NHPC is primarily for the operational activity of NHPC and the key sources include grid-based supply, auxiliary hydropower, fossil fuels and solar plants. NHPC has implemented a comprehensive energy consumption strategy that intelligently blends grid-sourced electricity with renewable energy sources. This approach ensures that all facilities, buildings and offices are powered by a sustainable and environmentally friendly energy mix.

Table 4.2: Total energy consumption (MWh) by NHPC in its operations.

	2018-19	2019-20	2020-21	2021-22	2022-23
Grid Electricity Purchased	61,968	51,082	55,863	58,047	52,189
Non-Renewable Energy sources	17,360	22,898	15,729	16,040	16,273
Renewable Energy sources	16,480	17,157	15,690	26,111	27,438
Total Energy Consumption	95,808	91,137	87,282	1,00,199	95,900

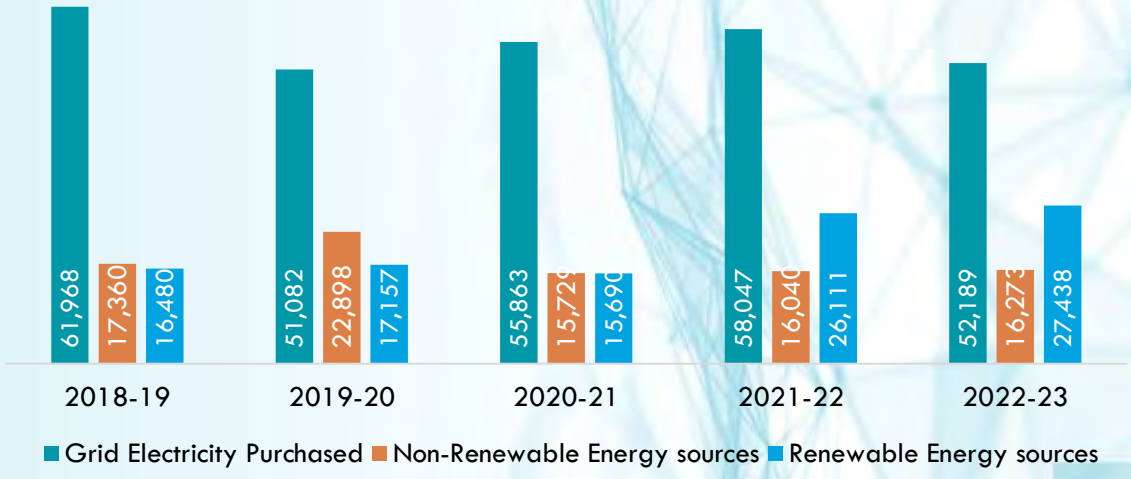


Figure 4.3: Energy consumption at NHPC (MWh).

Table 4.3: The energy intensity at NHPC.

	2018-19	2019-20	2020-21	2021-22	2022-23
Total energy consumption (MWh)	95,808	91,137	87,282	100,199	95,890
Power Generation (MUs)	24,193	26,121	24,471	24855	24,907
Energy Intensity MWh/ Million Units (MUs)	3.96	3.49	3.57	4.03	3.85

NHPC's initiatives to reduce energy consumption

NHPC is dedicated towards sustainable and efficient energy production and has successfully incorporated a diverse range of energy conservation measures into its operations. NHPC has successfully incorporated energy-saving practices across all facets of its operations. Within the Corporate Office, a specialised Energy Conservation Task Force is constituted to champion energy conservation. This task force aims to enhance user awareness, closely monitor the implementation of energy-saving measures and offer valuable feedback to the management team. The team will periodically provide expert guidance on optimising energy consumption and promoting sustainable practices.

- The Energy Audit of NHPC Office Complex, Faridabad is conducted by accredited External Agencies recognised by the Bureau of Energy Efficiency (BEE). Previously, a comprehensive energy assessment was conducted for eighteen Power Stations to assess the efficiency of diverse electrical apparatus, including generators, transformers and related equipment.
- At Corporate Office the Senior Officers' Room, Corridor, general common toilets, restrooms are equipped with state-of-the-art motion detectors/sensors, a testament to the commitment to embrace cutting-edge technology for energy conservation.
- GRIHA certification with Four-star rating has been awarded to NHPC Corporate Office (Neer Shakti Sadan). Jyoti Sadan Building of NHPC Corporate Office is accredited with a Three-star rating by the Bureau of Energy Efficiency (BEE), Ministry of Power for its remarkable sustainable building practices.
- For Energy conservation, control of energy and its monitoring Building Management System (BMS) has been installed in Neer Shakti Sadan.
- NHPC regularly conducts routine maintenance on the HVAC (Heating, ventilation and air conditioning) system to ensure optimal yearly performance and efficiency. During busy seasons, the dirty filters are cleaned or replaced every month to provide optimal energy savings.
- A state-of-the-art Grid Solar Power Station, boasting an impressive capacity of 230 kWp, has been successfully installed on the rooftop of the Neer Shakti Sadan, Jyoti Sadan and Canteen Building of Corporate Office. Solar PV Power Plant of 1000 kWp capacity is installed at residential colony of NHPC, Faridabad.
- This rooftop solar panels plant also partially powers the Colony electricity requirement. NHPC regularly cleans and performs pro-active maintenance activities to ensure optimal productivity and availability of these Solar PV Plants.

Figure 4.4: Energy Certification of (a) Neer Shakti Sadan and (b) Jyoti Sadan, CO, NHPC.

- NHPC effectively raises awareness among the staff about energy-saving practices using thoughtfully designed posters aligned with the Mission LiFE (Lifestyle for Environment) initiative.
- Energy saving slogans are also displayed on NHPC Intranet and during closing of PC allotted to the employees.
- For illumination during night LED streetlight / solar PV standalone streetlights are installed at NHPC Corporate Office Complex / Residential colony.
- NHPC actively participates in the National Awareness Campaign of the Ministry of Power through National Painting Competition to promote energy among students at the School, State and at National level.

Figure 4.5: Painting competition on Awareness for Energy Conservation by RO Banikhet.

4.2. Emission Management

India has demonstrated remarkable progress in transitioning to clean energy, achieving the fastest renewable capacity addition among major economies and articulating ambitious goals, as highlighted in the Panchamrit declaration at COP26. NHPC plays a pivotal role in India's proactive stance against climate change, aligning with the nation's ambitious Nationally Determined Contributions (NDCs) to reduce emission intensity by 33–35% by 2030 compared to 2005 levels and achieving net zero emissions by 2070.

NHPC's emphasis on hydropower further strengthens this transition, as highlighted by the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, which underscores hydropower's low median lifecycle GHG emissions compared to other power generation sources. The Government of India has declared large hydropower projects (of more than 25 MW capacity) as renewable energy sources in 2019 and has taken various policy measures to help in development of the hydropower sector.

Scope 1 and Scope 2 GHG Emissions

Even though, the business activities of NHPC do not contribute significantly to GHG emissions, NHPC acknowledges its responsibility in setting industry benchmarks and showcasing exemplary practices. In pursuit of this objective, NHPC closely tracks its emissions and is integrating top-tier management practices and environmentally friendly behaviours to advance its environmental objectives.

NHPC has collected data for the calculation and reporting of all Scope 1 and Scope 2 emissions since FY 2018-2019. This demonstrates NHPC's commitment to transparency and accountability regarding its GHG emissions and environmental impact.

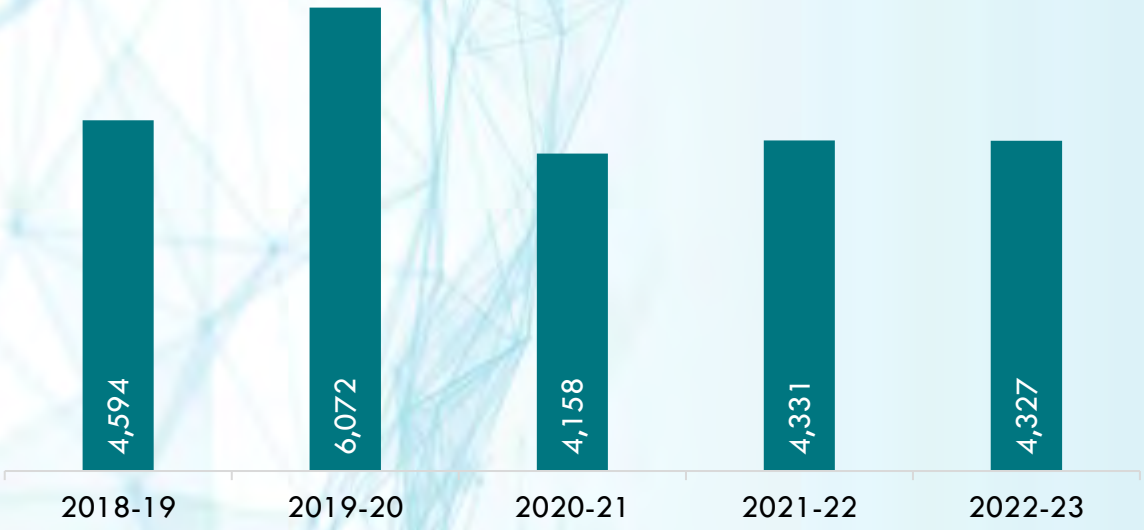


Figure 4.6: Scope 1 GHG emissions (in $MTCO_2e$) of NHPC.

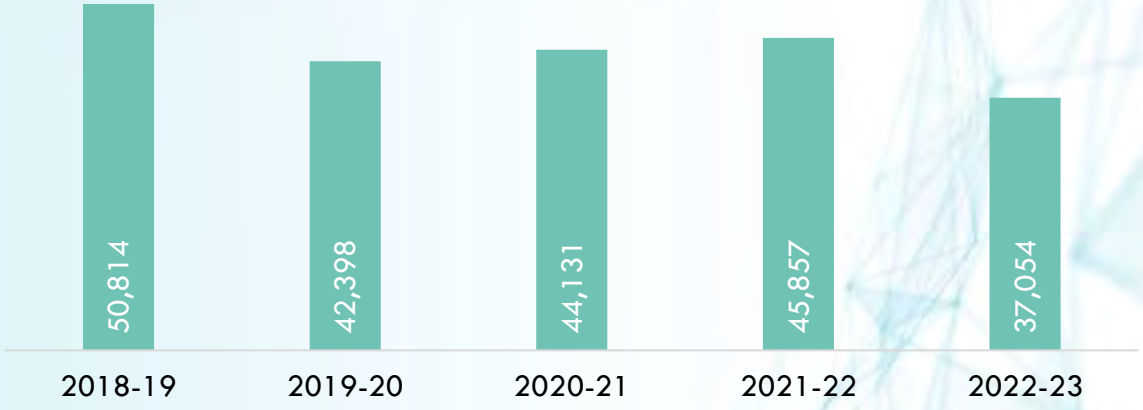
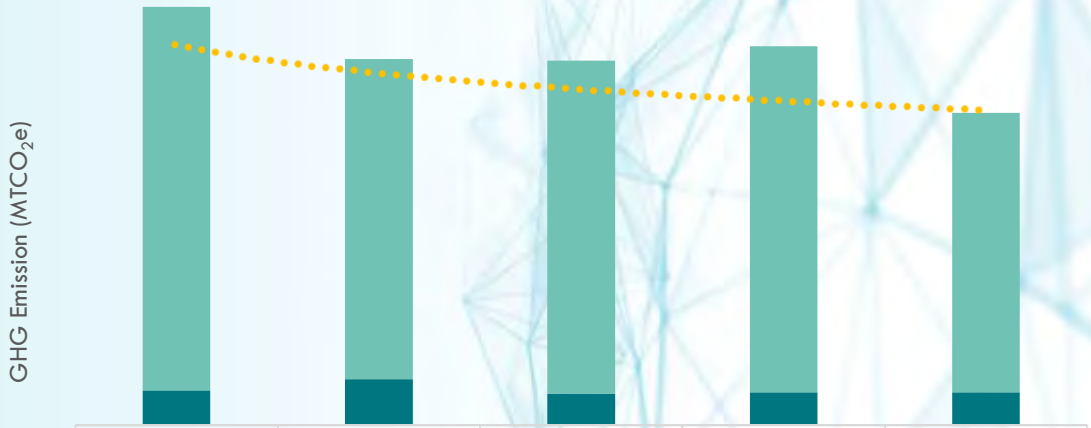


Figure 4.7: Scope 2 GHG emissions (in $MTCO_2e$) of NHPC.

For Scope 1 emissions, NHPC has included the direct emissions that arise from sources that are owned or under the control of NHPC (consumption of fuel and fugitive emissions wherever applicable) whereas Scope 2 (indirect emissions) are from the purchased energy. In current report, conversion factors from IPCC Guidelines for National Greenhouse Gas Inventories (2006, 2019) and CEA CO_2 Baseline Database (2022) are used for calculating the emissions.



	2018-19	2019-20	2020-21	2021-22	2022-23
Scope 2	50,814	42,398	44,131	45,857	37,054
Scope 1	4,594	6,072	4,158	4,331	4,327

Figure 4.8: Cumulative (Scope 1+Scope 2) GHG emissions (in $MTCO_2e$) of NHPC.

GHG Emission Intensity

NHPC's commitment to sustainability drives its relentless efforts to reduce GHG emissions, with notable achievements in this area. The company has achieved a significant reduction in GHG emission intensity in 2022-23 (1.66 $MTCO_2e$ per million units) as compared to 2021-22 (2.02) $MTCO_2e$ per million units). While NHPC primarily focuses on measuring and reducing Scope 1 and 2 emissions, it also aims to incorporate Scope 3 emissions into its reporting framework.

Table 4.4: GHG emission intensity (Cumulative emissions per million unit).

	2018-19	2019-20	2020-21	2021-22	2022-23
Total Scope (1+2) $MTCO_2e$	55,407	48,470	48,289	50,189	41,381
Power Generation (MUs)	24,193	26,121	24,471	24,855	24,907
Emission Intensity	2.29	1.86	1.97	2.02	1.66

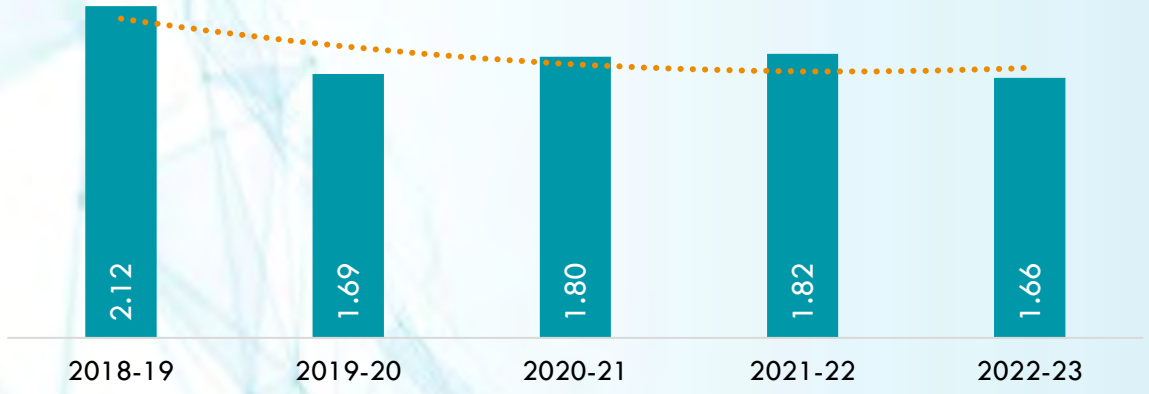


Figure 4.9: GHG emission intensity as Cumulative emissions ($MTCO_2e$) per million unit.

The dotted trendline indicates the efforts of NHPC to reduce it carbon footprints.

NHPC's proactive stance on environmental stewardship and climate change mitigation is evident through its extensive afforestation initiatives within hydropower projects. These initiatives, both compensatory and voluntary, signify a tangible shift towards a greener environment. Moreover, afforestation efforts are globally recognised for their potential as effective carbon sinks, contributing to ongoing discussions on sustainable land management practices.

NHPC's Carbon Credits trading

Clean Development Mechanism (CDM) of United Nations Framework Convention on Climate Change (UNFCCC) allows emission-reduction projects in developing countries to earn Certified Emission Reduction (CER) credits, each equivalent to one Tonne of CO_2. These CERs can be traded and sold, used by industrialised countries to meet a part of the emission reduction targets under the Kyoto Protocol. Carbon Credits have been earned from various Power Stations of NHPC under (A) Clean Development Mechanism (CDM) of United Nations Framework Convention on Climate Change (UNFCCC) and (B) Verified Carbon Standard (VCS) program of Verra. As per Annual Report 2022-23, income from sale of Self-Generated VERs/RECs was INR 52.70 Crore in FY 2021-2022 whereas it is nil in FY 2022-23. A total of 4,36,839 VCUs are available for sale as of March 31, 2023.

Electric Vehicles at NHPC Corporate Office

NHPC is dedicated towards the environment and is committed to contribute towards reducing carbon footprints and has planned to replace its conventional fossil fuel powered vehicles with Electric Vehicles in phase manner. This initiative has been taken in reference to Government of India Scheme "The Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME Scheme, under National Electric Mobility Mission Plan (NEMMP) with an aim to promote eco-

friendly vehicles in the country. A total of 29 Electric Vehicles are being utilised for day-to-day activities of the Corporate Office. This has resulted in reduction of Scope-1 GHG emission by 57.26 $MTCO_2e$ in calendar year 2022 and 67.87 $MTCO_2e$ in calendar year 2023. In a significant step towards environment protection, NHPC has signed E-Mobility Agreements with Convergence Energy Services Limited (CESL) for leasing of twenty-five Electric Vehicles (EVs) and supply of three of Electric Vehicle fast chargers to NHPC including its installation & commissioning.

Air Quality

NHPC actively monitors ambient air quality at its Project Sites and Power Stations during the development and operational phases. The activities during construction phase (such as vehicular traffic, material handling, dust generation from unpaved roads and the operation of construction machinery) may have an impact on air quality in the project area, hence NHPC ensures that all air pollution control measures are implemented at all its construction sites, such as the use of water sprinklers, maintenance of equipment and vehicles, covering of building materials and waste etc. NHPC conducts regular monitoring of ambient air quality at these sites using laboratories approved by the National Accreditation Board for Testing and Calibration Laboratories (NABL). Furthermore, the State Pollution Control Board frequently inspects these operations and emissions to ensure compliance with regulations.

NHPC actively monitors emissions from installed DG sets at its Power Stations, Regional Offices and Corporate Office through independent NABL-certified laboratories, adhering to the criteria established by the Central Pollution Control Board (CPCB), Government of India.

	SOx	NOx	PM	SOx	NOx	PM
	2021-2022			2022-23		
Chamera-1	0.471	0.050	0.004	0.907	0.173	0.009
Chamera- 2	0.097	0.281	0.012	0.072	0.158	0.006
Corporate office	0.018	0.081	0.025	0.056	0.300	0.080

Figure 4.10: Annual emission (in Tonnes per year) of SO_x, NO_x and PM (particulate matter) from DG stacks at Corporate Office and selected Power Stations of NHPC.

These values are calculated from the average emission values from the DG sets and number of operational hours. The DG stack emissions were well within the permissible limits as defined by air quality standards of CPCB. NHPC has low dependency on DG sets in its Power Stations. Additionally, its business operations do not generate significant quantity of criteria air pollutants (such as SO_X, NO_X, Particulate Matter etc.). Maintaining its steadfast commitment to environmental sustainability, NHPC aims to establish periodic air quality monitoring for all DG sets within its operational control, regardless of usage patterns.

4.3. Water Conservation

NHPC recognises the vital role of water conservation in achieving sustainability, dependable electricity generation environmental conservation. NHPC's Corporate Environment Policy highlights its commitment to water conservation via appropriate water resource management. This policy underscores comprehensive plans for successful water management throughout all operations, with the goal of maintaining ecosystems and benefiting communities.

Given NHPC's primary focus on hydropower generation through non-consumptive water use, the water is primarily consumed in its office and residential facilities. NHPC successfully responds to climate change, complies with the law of land and improves economic efficiency. NHPC's conservation activities maintain a reliable energy supply, protect ecosystems and foster strong relationships with regulatory agencies and local people. NHPC also maintains environmental flow, which helps to conserve aquatic ecosystems, meet agricultural requirements and socio-cultural demands in downstream area of dam.

NHPC prioritises and actively encourages water conservation across its activities, developing a strong feeling of stewardship in its employees. The water conservation efforts are augmented by adopting sustainable consumption habits, moving to reclaimed water use and strategically implementing rainwater collection and storage systems at majority of its facilities. Furthermore, the dam reservoirs perform several functions as water-conservation structures, such as providing flood protection, delivering drinkable water, recharging groundwater tables and increasing agricultural production in the surrounding areas. NHPC stands as a benchmark for environmental stewardship in the hydropower business by providing an example of sustainable water management approaches.

Water Withdrawal

NHPC has set a remarkable goal of establishing responsible water utilisation and management processes. The company adheres strictly to regulatory permits, ensuring that water intake quantities are carefully monitored to minimise consumption and prevent adverse impacts on the water bodies from which they are withdrawn. During FY 2022-23 surface water was the primary source for meeting the needs of NHPC's office and residential facilities.

Table 4.5 :Water withdrawal from various sources.

	Water Withdrawal (Kilolitre)				
	2018-19	2019-20	2020-21	2021-22	2022-23
Municipal water supply	11,385	11,042	12,787	14,100	12,515
Tanker water	3,429	3,429	3,429	3,666	3,429
Ground water (bore/open wells)	5,33,641	5,46,422	5,36,790	4,97,677	562,284
Surface water (River/lakes/tunnel seepage)	10,44,045	10,49,307	10,66,873	10,25,367	10,99,746
Total Water Withdrawal	15,92,500	16,10,199	16,19,879	15,40,810	16,77,975

Water Consumption

NHPC is mindful of the growing concern over the paucity of freshwater resources and is constantly making efforts to implement sustainable water management strategies. With a primary reliance on surface water, NHPC has launched initiatives to diligently monitor and reduce freshwater consumption. Within its operations, NHPC purposefully utilises water for routine functions in the facilities, encompassing offices and colonies, of its Power Stations.

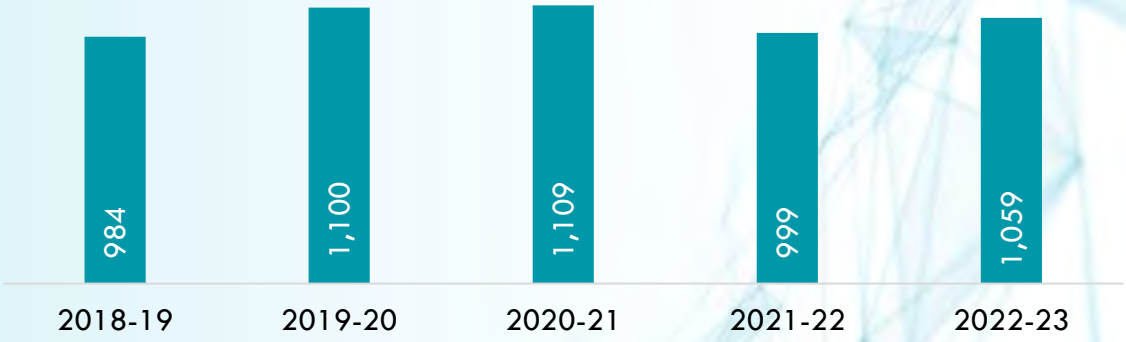


Figure 4.11: Water consumption (in 1000 kilo litres) by the offices and colonies.

Wastewater Management

NHPC is dedicated to sustainable wastewater management, ensuring responsible discharge practices that meet regulatory standards while minimising environmental impact and protecting public health and ecosystems. The discharge procedures strictly adhere to the 'General Discharge Standards' by the Central Pollution Control Board (CPCB) and the Government of India, ensuring the release of only treated wastewater. For example, At NHPC residential Colony (Faridabad), various waste management initiative (such as Sewage Treatment Plant, Composting machine (from Green Waste Processor) & two bin system for waste segregation at source) are implemented with the aim of making it as a 'zero waste colony'. At Chamera Power Station Stage-I and Parbati-II and Parbati -III, Himachal Pradesh, Sewage Treatment Plants are installed for the treatment of wastewater generated from residential colonies and office complex.

The amount of wastewater generation and discharged from the facilities of NHPC is provided in the following table and includes actual values from STP and calculated values from soak pits. For soak pits, the quantity of generated wastewater was assumed to be as 80% of the water withdrawal as per CPCB estimates.

Table 4.6: Wastewater discharged Vs. recycled (in 1000 KL) by the offices and colonies.

	2018-19	2019-20	2020-21	2021-22	2022-23
Wastewater generated	639.02	550.60	579.93	637.25	727.37
Wastewater recycled/reused	30.13	40.37	69.02	95.75	108.07
Wastewater discharged	608.89	510.23	510.91	541.50	619.30

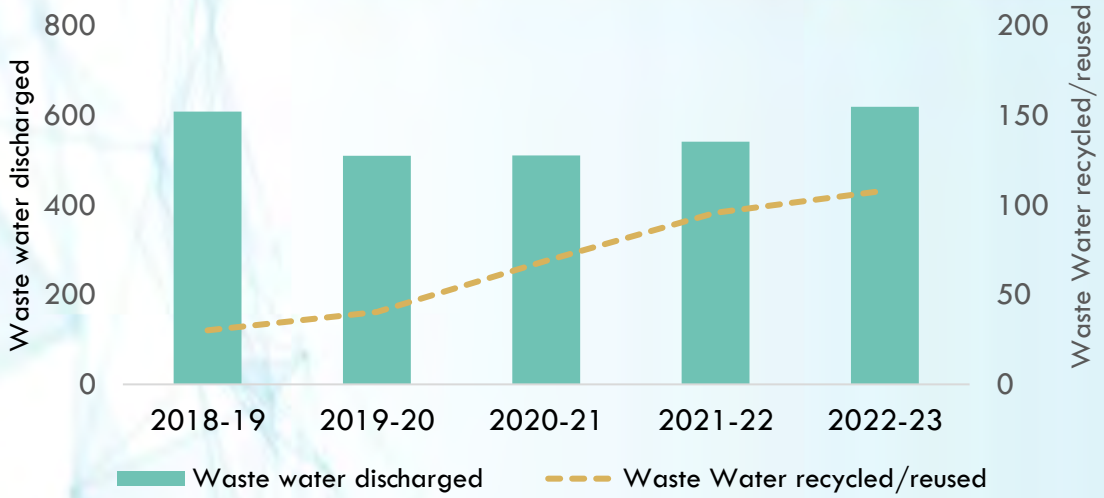


Figure 4.12: Wastewater discharged (in 1000 kilo litres) by the offices and colonies.

In the old establishments/colonies, the wastewater is discharged in the septic tanks and soak pits. Furthermore, NHPC aims to further strengthen the wastewater treatment across its different Projects and Power Stations.

Figure 4.13: Sewage Treatment Plant at NHPC Residential colony, Faridabad.

4.4. Waste Management

NHPC prioritises environmental protection through appropriate waste management resulting from its operational activities. In accordance with NHPC's Corporate Environment Policy, the organisation persistently promotes environmental conservation by conforming to the Waste Management Rules as notified by Government of India. By incorporating current industry standards, NHPC ensures that its waste management practices not only meet but surpass necessary regulatory requirements.

To ensure ecologically responsible disposal processes, NHPC complies with all applicable rules and regulations. It ensures that all produced waste is meticulously collected, separated and disposed of in conformity with the guidelines issued by the Government of India, the Central Pollution Control Board and in compliance with the State Pollution Control Board's (SPCB) guidelines. NHPC runs frequent awareness programmes to raise awareness and encourage responsible waste management methods.

Table 4.7: Waste generation at NHPC (in Metric Tonnes).

	2018-19	2019-20	2020-21	2021-22	2022-23
Hazardous Waste Generated (in Metric Tonnes)					
Used Batteries	2.21	0.79	4.96	2.68	15.29
E-Waste	1.91	1.76	5.77	7.60	10.9
Drums/Tins	0.00	0.00	0.00	0.00	0.00
Acrylic waste, plastic	5.75	0.46	8.48	7.21	9.12
Waste Oil	66.80	10.35	61.31	17.67	23.8
Bio-Medical Waste	2.98	0.85	3.44	1.35	1.50
Total Hazardous Waste generated	79.65	14.22	83.96	36.51	60.61
Non-Hazardous Waste Generated (in Metric Tonnes)					
Organic Waste	916.26	419.53	404.48	442.26	420.36
Demolition waste	0.00	0.00	0.00	21.76	3.41
Ferrous Scrap	3.91	355.33	1,284.91	625.78	825.39
Tyres	0.05	0.04	0.43	0.02	0.59
Non-Ferrous Scrap	12.40	16.18	63.19	47.65	99.11
Drums/Tins	0.29	0.30	10.98	0.36	10.24
Wooden Scrap	48.00	0.00	50.00	0.00	1.19
Other Non-Hazardous Waste	43.18	42.32	44.45	44.54	50.15
Total Non-Hazardous Waste generated	1,024.10	833.70	1,858.43	1,182.36	1,410.43

NHPC has adopted appropriate waste management procedures for each category of waste. Non-hazardous waste, such as scrap, ferrous metals and so on, is collected and stored in designated places and auctioned off periodically when it reaches an appropriate level. Municipal/ biodegradable waste is disposed through local municipal bodies wherever applicable. Hazardous waste (oil, batteries, e-waste, etc.) is also stored and disposed of regularly by authorised recyclers/vendors. In the buy-back policy, batteries are exchanged at a discounted rate. NHPC has adopted an E-Waste Policy and all e-waste disposal is done through authorised e-waste handlers.

Biomedical waste is either disposed of by authorised recyclers/vendors or buried in deep burial pits in the case of remote sites following Biomedical Waste Management Rules, 2016. Construction and demolition waste generated from operation and maintenance activities fills low-lying areas and road patches.

NHPC prioritises waste segregation to separate several types of waste materials for proper

handling and disposal. Non-biodegradable waste is specifically separated and transported to designated disposal locations, identified in consultation with local authorities. State Pollution Control Board monitors the waste management measures of Power Stations/ Projects at regular interval. NHPC is currently strengthening the data management system on its intranet portal for improved monitoring.

Table 4.8: Hazardous waste managed at NHPC (in Metric Tonnes).

	2018-19	2019-20	2020-21	2021-22	2022-23
Hazardous waste directed to disposal (in Metric Tonnes)					
Incineration	0.16	0.17	0.12	0.11	0.10
Landfilling	0.00	0.00	0.00	0.00	0.00
Other disposal operations	77.28	13.26	78.89	33.72	45.21
Total	77.44	13.43	79.01	33.83	45.31
Hazardous waste diverted from disposal (in Metric Tonnes)					
Recycled	0.00	0.00	0.00	0.00	0.00
Re-used	0.00	0.00	0.00	0.00	0.00
Other recovery operations	2.21	0.79	4.96	2.68	15.29
Total	2.21	0.79	4.96	2.68	15.29

Table 4.9: Non-hazardous waste managed at NHPC (in Metric Tonnes).

	2018-19	2019-20	2020-21	2021-22	2022-23
Non-Hazardous waste directed to disposal (in Metric Tonnes)					
Incineration	0.00	0.00	0.00	0.00	0.00
Landfilling	43.18	42.32	44.45	44.54	50.15
Other disposal operations	964.26	419.53	454.48	442.26	421.55
Total	1007.45	461.85	498.93	486.79	471.70
Non-Hazardous waste diverted from disposal (in Metric Tonnes)					
Recycled	0.00	0.00	0.00	0.00	0.00
Re-used	0.00	0.00	0.00	21.76	3.41
Other recovery operations	16.65	371.85	1359.50	673.81	935.33
Total	16.65	371.85	1359.50	695.57	938.74

Estate Management Services Division at Corporate Office and the Township Complex at Power Stations ensures that all the wastes generated in Residential Colonies are either disposed of responsibly by using proper waste segregation mechanism at the source or converted to value added products such as compost. For example, at NHPC Residential Colony at Corporate Office, Faridabad all the biodegradable waste produced is converted into compost and reused for horticulture purposes and no waste is discharged out of residential complex into the environment, thus identified as 'zero waste producer complex'.

At Kishanganga PS, UT of J&K, the agricultural and organic waste from domesticated animals is transformed to organic manure by vermi-composting, which is being utilised as manure in agricultural areas. A composting machine has also been installed in Sapangani Colony, Parbati-III Power Station, Himachal Pradesh.

At Kishanganga PS, the domestic waste is collected and disposed of by the Municipal Committee of Bandipora, UT of J&K. The Municipal Committee collects and transports garbage from the collecting location to designated municipal landfill sites. The Himachal Pradesh State Pollution Control Board, Shimla, has authorised Chamera Power Station, Stage-I, to operate a facility for collection, storage, treatment/disposal and/or handling of bio-medical wastes as per Biomedical Waste Management Rules, 2016.

Figure 4.14: Disposal of Organic Waste of Kishanganga PS through Bandipora Municipal Council.

Waste Management Initiatives by Loktak Power Station, Manipur

Loktak PS has taken initiatives to improve solid wastes management system of Nigthoukhong Municipal Council, Govt. of Manipur. It has provided Vertical Plastic Baler machine and Plastic Shredder (Scrape Grinding Machine) along with water pump to facilitate the waste management at the solid waste dumping site of Ningthoukhong Municipal Council located at Ningthoukhong Ward No.III for the community. In addition, this initiative supports in managing the solid wastes generated from office complex and residential colony of Loktak PS.

NHPC regularly conducts awareness programs, training to its employees, their family member residing in residential colony, contractor workers and the communities on waste management guidelines and practices to reduce waste.

Figure 4.15: Plogrun under Fit India Freedom Run 3.0 by Chamera-I PS.

Figure 4.16: Awareness drive on waste management during Swachchhta Pakhwada 2022.

Figure 4.17: Awareness drive on menstrual hygiene and waste management.

Figure 4.18: NHPC adhered to the campaign on waste management under Mission LiFE.

NHPC adheres to the goals of Mission LiFE at its Corporate Office, Regional Offices, Power Stations, Projects and Units. Mission LiFE is an India-led global mass movement to nudge individual and community action to protect and preserve the environment.

4.5. Biodiversity Conservation

NHPC asserts a profound dedication to environmental stewardship as a fundamental value, exemplifying firm commitment to sustainable practices and responsible resource management. Central to its mission is the promotion of clean and sustainable methods of power generation. This commitment extends beyond mere rhetoric, as NHPC actively demonstrates a steadfast dedication to the conservation of natural habitats and the advancement of a more sustainable future.

NHPC's primary focus lies in safeguarding and enhancing ecosystems, which involves proactive measures to protect biodiversity and ensure the long-term health of natural environments. By prioritising biodiversity conservation, NHPC contributes to the overall resilience and balance of ecosystems, supporting the well-being of both natural habitats and human communities. This commitment is evident in NHPC's thorough study of biodiversity during the Environmental Impact Assessment (EIA) process as per EIA notification 2006 across all hydroelectric projects, prior to their construction.

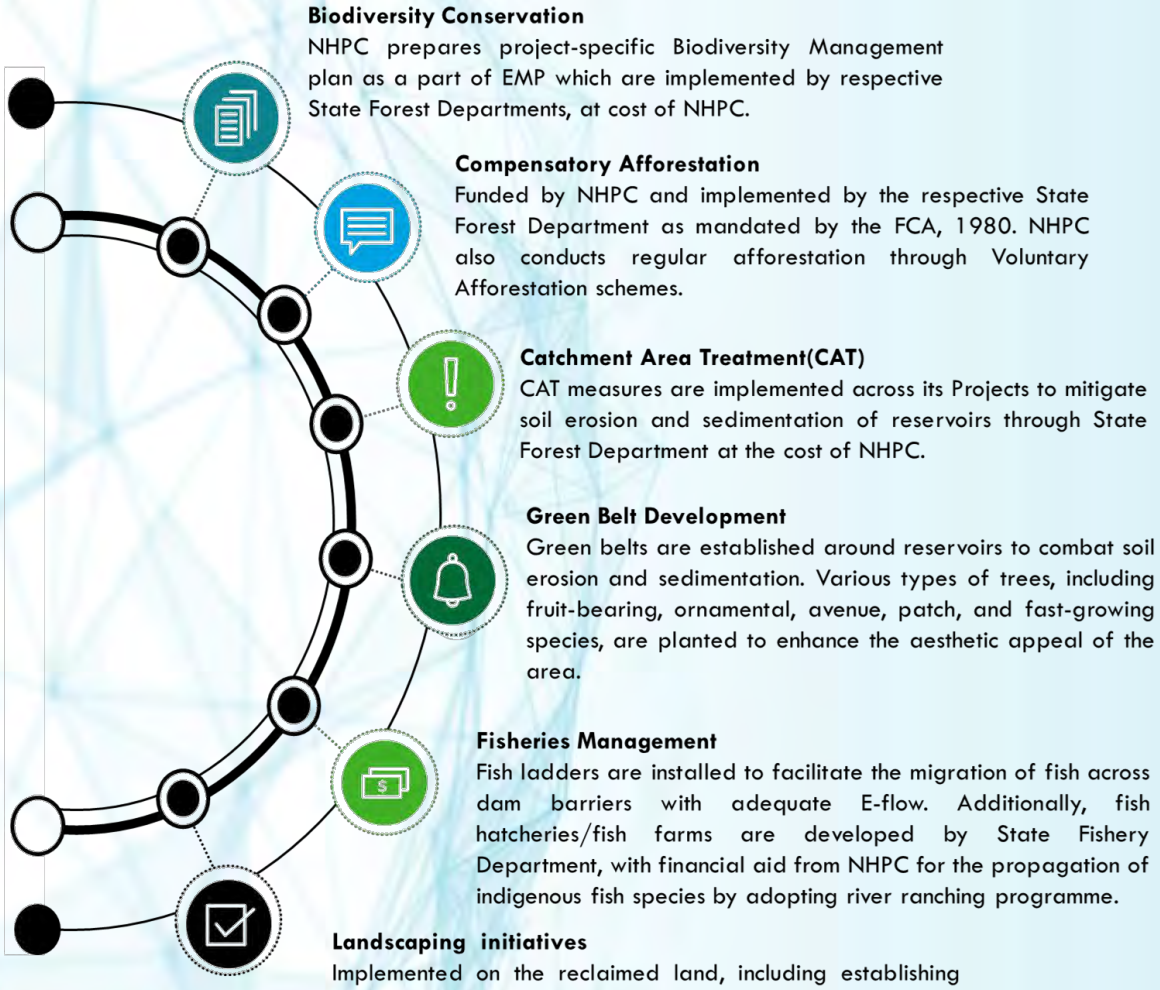


Figure 4.19: Biodiversity conservation initiatives by NHPC.

NHPC's Corporate Environment Policy serves as a guiding framework for its operations, emphasising the company's commitment to generate clean energy while upholding stringent environmental standards. It underscores the implementation of measures to mitigate environmental impacts and prioritise biodiversity conservation across all facets of NHPC's activities, including project development, operation of power stations and management of facilities.

NHPC's Biodiversity Policy, 2023, extends the principles outlined in its Corporate Environment Policy, 2022, reaffirming the company's dedication to environmental protection and sustainable development. This policy emphasises the adoption of best biodiversity management practices from the planning stages of projects, strict compliance with relevant Acts/Guidelines/Policies related to the environment, forests and wildlife and the use of modern practices to minimise adverse impacts on biodiversity. Furthermore, NHPC commits to ongoing efforts for the continuous enhancement of biodiversity within project areas, ensuring that conservation measures extend beyond regulatory compliance.

Figure 4.20: Plantation drive at NHPC Corporate Office on World Environment Day 2022.

The Environmental Management Plan (EMP) recommends project-specific conservation measures for biodiversity conservation, based on EIA studies. NHPC prepares project-specific biodiversity management plans based on EIA baseline data. These plans are implemented by respective State Forest Departments, at cost of NHPC and include activities like afforestation and habitat conservation.

Compensatory afforestation (CA), funded by NHPC and implemented by the respective State Forest Department, is a measure to offset forest land diverted for project construction, as mandated by the Forest (Conservation) Act, 1980. This involves planting locally significant tree species and maintenance of the plants as per CA scheme prepared by State Forest Department. NHPC also conducts regular afforestation as part of its Green Belt Development Plan and Voluntary Afforestation schemes.

NHPC also undertakes ex-situ conservation strategies, such as establishing Herbal Park,

Orchidarium and Butterfly Park. Through its holistic environmental management approach, NHPC not only fulfils corporate responsibilities but also leads in sustainable energy practices, integrating biodiversity conservation into its operations.

- The Lower Subansiri Project, Arunachal Pradesh and Assam, has implemented biodiversity conservation strategies to uphold and enhance the habitat for floral and faunal species including anti-poaching measures.
- The Orchidaria at Lower Subansiri Project (Gerukamukh, Assam), Tippi (Arunachal Pradesh) and at TLDP IV PS (West Bengal) have been established with the primary objective of conserving and safeguarding the diverse floral species in these regions. Habitat improvement for one horned rhinoceros under CA scheme at TLDP-IV has been carried out by Forest Department at the cost of NHPC.
- The Butterfly Park at Teesta-V PS in Sikkim was created in collaboration with the State Forest Department, with partial funding from NHPC.
- At Chamera Power Station Stage-I, Herbal Parks have been developed with the expertise of the Research Institute in Indian System of Medicine, Mandi, Himachal Pradesh, aiding in biodiversity conservation, particularly medicinal plants. These parks enhance community interest in health and environmental harmony.
- NHPC regularly conducts environmental awareness-cum-plantation as a part of various initiatives such as environment day, Van Mahostav, Azadi Ka Amrit Mahotsav at all its offices, Power Stations and Project Sites. Saplings are distributed and plantation drives were organized in collaboration with the forest department and circle office.

Figure 4.21: Plantation drive as a part of Van Mahotsav 2022.

Figure 4.22: Indoor plantation to combat indoor air pollution.

- Fish ladders are provided across four of NHPC's Power Stations viz. Uri-I, Tanakpur, Teesta Low Dam Stage-III and Teesta Low Dam Stage-IV to facilitate the migration of fishes in the river whereas fish hatcheries or fish farms have been constructed at different Projects of NHPC under Fisheries Management Plan.
- MoU has been signed with ICAR-DCFR, Bhimtal & Directorate of Fisheries, Govt of Arunachal Pradesh for providing Consultancy for Fisheries Management Plan of Subansiri Lower HEP.

Figure 4.23: MoU for Fisheries Management Plan of Subansiri Lower HEP.

Environmental conservation and restoration initiatives

Environmental Flows (E-Flow)

NHPC is dedicated to responsible hydropower generation, emphasising the conservation of aquatic ecosystems, biodiversity and downstream user needs. Environmental flow is

maintained, based on modelling studies to reduce the impact of altered flow regimes during peaking and non-peaking power generation, complying with the regulatory requirement to ensure the environmental sustainability. E-flow meters are being installed in the dam structure for real time monitoring of the downstream flow of water.

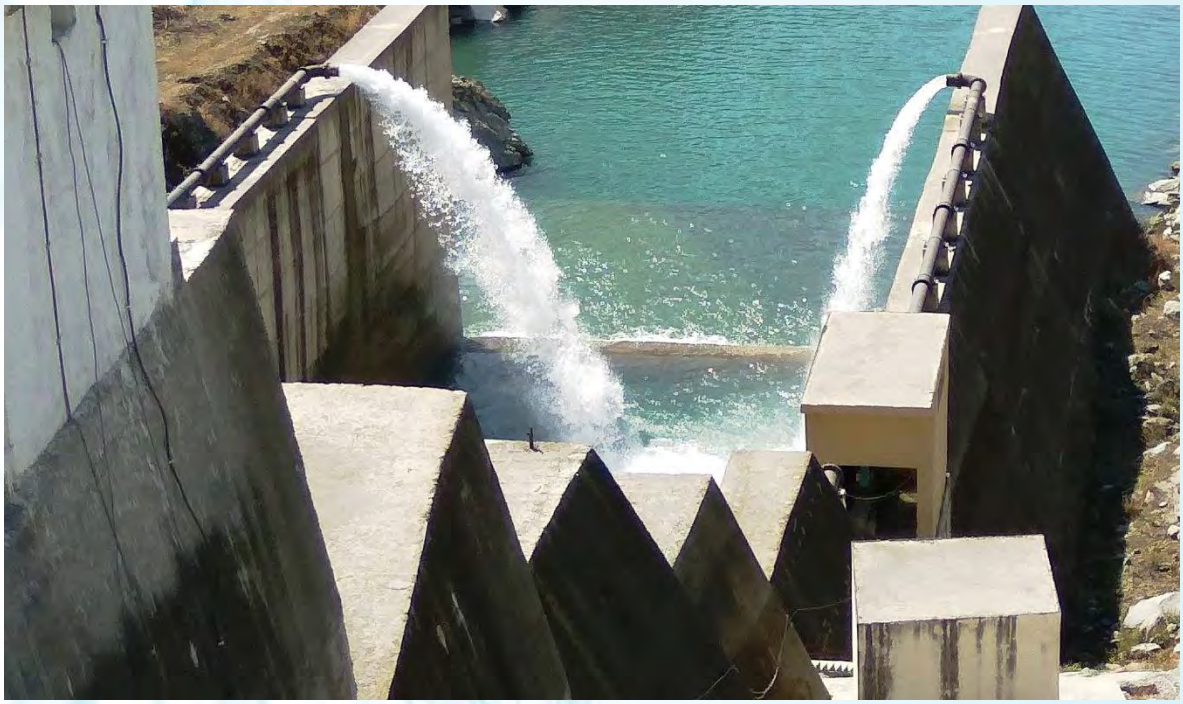


Figure 4.24: E-Flow provision at Parbati-III PS, Himachal Pradesh.

Restoration of Dumping Sites and construction areas

NHPC identifies dumping sites for disposal of muck generated from tunnelling or road works as a crucial step during the planning stage of its Projects. Construction of Projects involves the dumping of muck, levelling and partial reuse of aggregates. Subsequently, restoration efforts include soil placement, afforestation and handing over to the State Forest Department if forest land is involved. NHPC ensures meticulous restoration of dumping areas and quarry sites to prevent any blemish on the natural landscape. This includes proper stacking and slope stabilisation using gabion structures, the construction of retaining walls and the implementation of afforestation/restoration measures.

The Mining Department in Himachal Pradesh authorises the crusher plant owners to lift the dumped muck from the authorised dumping sites and transport to its crushing plant for further processing to aggregates. This practice prevents harnessing of new quarry sites, while enabling the State Government to collect royalties from crusher plant owners. Currently, the Himachal Pradesh Mining Department has allotted lifting of dumped muck from the Tarera dumping site (DS-3) of Parbati-III for aggregate purposes.

After completion of dumping activities, NHPC undertakes appropriate restoration measures on dumping sites and other construction areas to mix up with natural landscape. This proactive restoration not only enhances the aesthetics but also prevents muck spillage into adjacent areas or the river, setting a precedent for environmentally responsible project management. Through innovative biotechnological approaches, NHPC has successfully restored the dumping sites with

plantation at some of the sites. For example, at Parbati II HEP, Himachal Pradesh, NHPC collaborated with the Institute of Himalayan Bio-resource Technology in Palampur, Himachal Pradesh, and has restored the closed dumping sites. The restoration initiatives are published in journals. After restoration of the dumping sites and the commissioning of the Project, those dumping sites located on the forest land are returned back to State Forest Department, in compliance to Forest Clearance Approval. Presently, some of the dumping sites are under restoration by state forest department at Parbati-II HEP, Himachal Pradesh.

Reservoir Rim Treatment

NHPC undertakes Reservoir Rim Treatment to provide stability and prevent soil dislodgment from unstable areas like landslides and slips around the periphery of the reservoir, depending upon the topography and suitability of the area. Additionally, NHPC initiates Green Belt Development to mitigate soil erosion, thereby averting reservoir sedimentation.

Catchment Area Treatment

NHPC actively employs comprehensive Catchment Area Treatment measures across its Projects to mitigate soil erosion and sedimentation of reservoirs. These measures are implemented by State Forest Department at cost of NHPC and include various engineering, bio-engineering and biological techniques such as check dams, gabion walls, catch water drains, brushwood/bamboo check dams and plantation of native tree species.

Figure 4.25: Awareness creation for school children on environmental initiatives at Chamera III PS.

4.6. Sustainable Procurement

NHPC fosters sustainability across its supply chain through innovative procurement strategies, actively promoting a sustainable and socially responsible ecosystem. NHPC's Sustainable Procurement Policy aims to achieve efficiency, transparency, economy, fairness, integrity, fit for purpose and value for money by following standards, policies, procedures & practices, guidelines and uniformity in all procurement of the Corporate Office and Projects/Power Stations of NHPC. The ESG expectations from suppliers include on the directives related to Occupational Health and Safety, Labour and Human Rights, Environmental Sustainability and Business Integrity and Ethics.

NHPC has a systematic supplier screening approach to identify significant suppliers and it provides supplier support (remote/on-site) on implementation of corrective/improvement actions, as and when required. During FY 2022-23, total number of tier-1 supplier were 2386. All the suppliers directly supply goods & services to NHPC and therefore, NHPC does not have any non-tier-1 suppliers.

NHPC leverages the Government of India's e-tendering platform, GeM, to efficiently engage with a wide range of vendors and suppliers, facilitating smooth coordination and efficient resource distribution. All tender processes are conducted via the Central Public Procurement (CPP) Portal and the GeM Portal, both of which adhere to the Government of India's guidelines for transparent and efficient procurement practices. This commitment to transparency and efficiency fosters fairness in the bidding process, ensuring equal opportunities for all interested parties to participate and thrive.

NHPC adheres meticulously to all relevant government policies governing public procurement, including the 'Public Procurement (Preference to Make in India) Order' 2017, the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order 2012 and policies related to Land Border sharing, among others. Additionally, NHPC maintains its own preferential policy for project-affected families. Tenders undergo evaluation by a dedicated committee in accordance with Central Vigilance Commission (CVC) guidelines and vendor/supplier assessment criteria are comprehensive, encompassing social, environmental and governance considerations. Under the integrity pact, there is a mutual commitment of Bidder(s)/Contractor(s) as well as employer (NHPC) to follow the transparent procedure during tendering and execution of the contract.

NHPC diligently follows the latest directives from the Government of India on Public Procurement, prioritising indigenous products and fostering opportunities for Micro and Small Enterprises (MSEs) and Start-Ups. NHPC achieved significant milestones in its procurement efforts during the fiscal year 2022–23. With a procurement rate of 50.16% of Goods produced and Services rendered by Micro and Small Enterprises (MSEs), surpassing the mandated target of 25% set by the Ministry of Micro, Small and Medium Enterprises, Government of India, NHPC demonstrates its commitment in supporting small scale enterprises. Furthermore, NHPC's procurement included 4.54% from SC/ST MSEs and 4.15% from women owned MSEs, exceeding the respective sub-targets of 4% and 3%. These efforts benefited a total of 2,663 MSEs, including 133 owned by SC/ST entrepreneurs and 342 owned by women entrepreneurs.

NHPC strictly follows the International Competitive Bidding (ICB) system to ensure the selection of the most qualified agencies for hydropower projects. The evaluation process adheres to internationally recognised ICB practices, Central Vigilance Commission (CVC) guidelines and Government of India norms. Through a recent Memorandum of Understanding (MoU) with Transparency International India, NHPC is committed to effective implementation of the Integrity Pact Programme, as per CVC guidelines. Additionally, the grievance redressal policy, outlined in bid/tender documents, includes engagement of Independent External Monitors (IEMs) to ensure accountability and address concerns during procurement.

Supplier Code of Conduct

NHPC expects from its vendors and suppliers to strictly follow or adhere to the Supplier Code of Conduct for procurement of Goods, Services and Works and encourages all the vendors and suppliers to comply with the said principles. NHPC is committed to responsible, sustainable and ethical business practices to encourage environmental conservation, adhere to human rights and labour standards, promote social welfare and community development, ethical business conduct and is aligned with ESG landscape.

NHPC adheres with the tendering process which is well defined and transparent and takes due care of all dimensions of Human Rights and Labour to eliminate Forced Labour, Child labour, comply with occupational health and safety standards, discrimination and harassment, freedom of associations and collective bargaining etc. The process incorporates environmental aspects and various Government guidelines viz; minimum wages, labour laws etc. are in the tender document as a minimum qualification criterion.

NHPC's procurement is conducted in line with the procurement manual as well as the standard tender document for procurement of Goods, Services and Work as it evaluates vendors on basis of well-defined tender terms and conditions that includes various social and environmental aspects. NHPC regularly organises training programs for various stakeholders like suppliers/ contractors and vendors, Project Affected Families and employees on varied socio-environmental and governance parameters.

The vendors and suppliers are expected to be committed to supply products and services of desired quality that meet all applicable standards including product packaging, labelling and after-sales service obligations. Compliance to Human Rights and Labour laws regarding Forced Labour, Child labour, Occupational health and safety, discrimination and harassment, freedom of associations and collective bargaining etc. is sought for. The supplier is expected not to indulge in Corrupt, Bribery, Fraudulent, Collusive, Coercive practices and comply with all applicable laws and regulations, both in letter and in spirit, in all the territories in which it operates. It should strive to provide a safe, healthy and clean working environment for its employees, workers and extended workforce while aiming for environmental sustainability and resource efficiency, particularly for GHG emission, water management, waste and hazardous materials management. Under the integrity pact, there is a mutual commitment of Bidder(s)/ Contractor(s) as well as employer (NHPC) to follow the transparent procedure during tendering and execution of the contract.

ESG Expectations from Suppliers

NHPC is establishing guidelines for its suppliers to encourage them to adhere to the ESG framework requirements, which are part of the collaborative approach to sustainability. NHPC aims to create a more responsible and resilient business ecosystem by upholding these standards. Most of NHPC's vendors and suppliers are reputed companies with strong ESG practices. Since NHPC has established procedures for sustainable sourcing, all procurements are considered sustainable and safe. However, these are exhaustive in nature and procured from different sources. NHPC places a premium on ensuring that its operations and suppliers have no direct negative environmental and social impact on any stakeholders or community members.

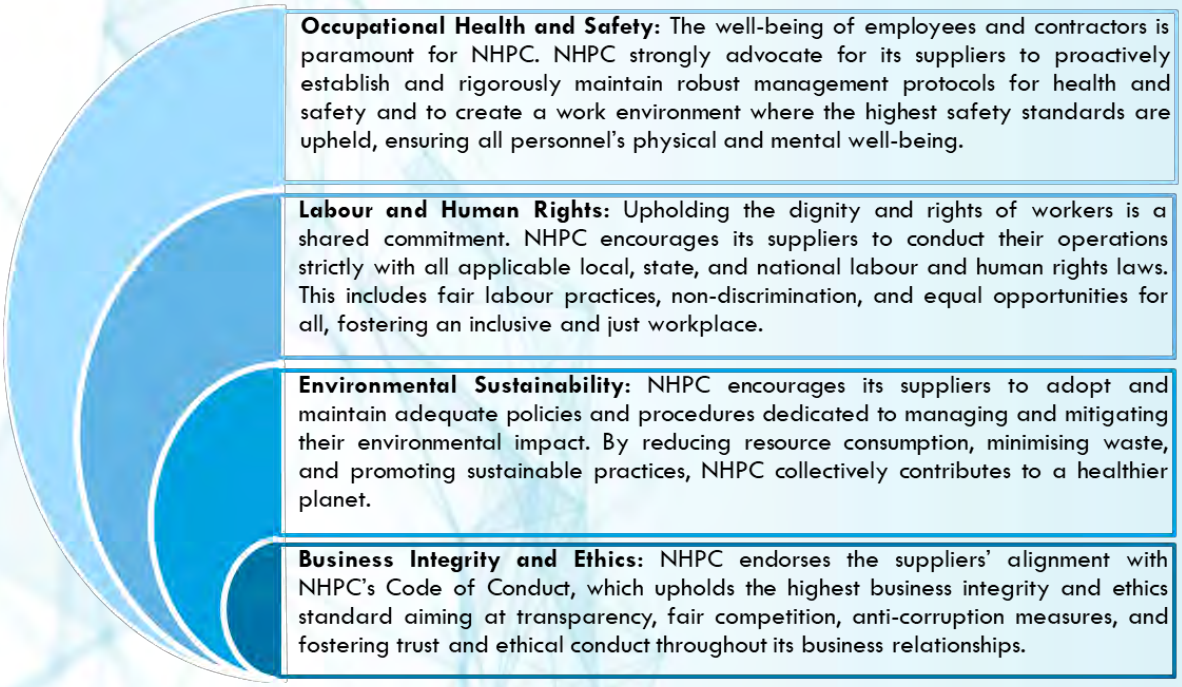


Figure 4.26: NHPC expectation from suppliers.

These efforts underscore the shared values of NHPC and the principles that guide the collaboration with the supply chain. By embracing these standards, NHPC works together to create a more responsible and sustainable business environment where social, environmental and ethical considerations are integral to the collective success.

5

Resilient Workforce, Sustainable Future

5. Resilient Workforce, Sustainable Future

NHPC places the highest priority on the well-being and safety of the employees, recognising their indispensable role in its achievements. Their dedication, expertise and commitment enable us to consistently deliver value to its customers, investors and stakeholders. NHPC is committed to fostering their professional growth, prioritising their physical and mental health and providing continuous support for their development. Employee wellness encompasses physical, mental and emotional health, supported by initiatives such as fitness programs and mental health wellbeing. Workplace safety measures ensure a hazard-free environment, promoting employee well-being and productivity through risk assessments and safety protocols. Together, these efforts create a thriving work environment conducive to success.

5.1. Human Resource Development

NHPC places great emphasis on Human Resource Development (HRD), which is the process of enhancing the skills, knowledge and abilities of employees within the organisation to elevate their performance and capabilities. HRD encompasses a range of activities such as training, career development, performance management, organisational development and succession planning.

At NHPC, HRD is not just a series of activities; it's a strategic approach to align employee competencies with the organisation's overarching goals. This ensures that NHPC's workforce remains adaptable, innovative and capable of addressing current and future challenges in the dynamic industry landscape. NHPC's commitment to HRD is reflected in the exceptional team of highly talented and committed experts that NHPC has cultivated over the years. This team excels not only in their individual roles but also in their collaborative efforts towards achieving NHPC's ambitious objectives. NHPC recognise and value the immense potential within the workforce, understanding that their skills, creativity and dedication are essential drivers of its success.

NHPC's approach to HRD extends beyond recruitment. NHPC implements holistic strategies to attract, develop and retain top talent, ensuring that NHPC remains competitive, innovative and flexible in an ever-evolving industry environment. By investing in HRD, NHPC not only enhances employee engagement but also drives organisational effectiveness and sustainable growth.

In the fiscal year 2022-23, NHPC proudly showcases a remarkable and dedicated team of 11,798 individuals, demonstrating its commitment to excellence. This exceptional team comprises 3,339 highly committed permanent employees and 1,753 skilled permanent workers.

NHPC's workforce stands at 4,776 employees as of March 31, 2023, demonstrating a strong and dedicated team. Among them, 3,084 are executives and 1,692 are non-executives. Notably, 502 of these employees are women.

Table 5.1: Gender wise distribution of workforce of NHPC.

	2018-19		2019-20		2020-21		2021-22		2022-23	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Permanent Workforce										
Management	246	10	212	10	235	12	240	13	1734	149
Other Employees (Non-management)	3,130	309	3,023	303	2,932	298	2,797	289	1,343	151
Permanent workers	2,666	392	2,247	336	1,812	280	1,510	243	1,197	202
Total Permanent Workforce	6,042	711	5,482	649	4,979	590	4,547	545	4,274	502
Temporary Workforce										
Contract Workers	4,941		5628		6,264		6,241	781	6,241	781
Total Workforce	11,694		11,759		11,833		12,114		11,798	

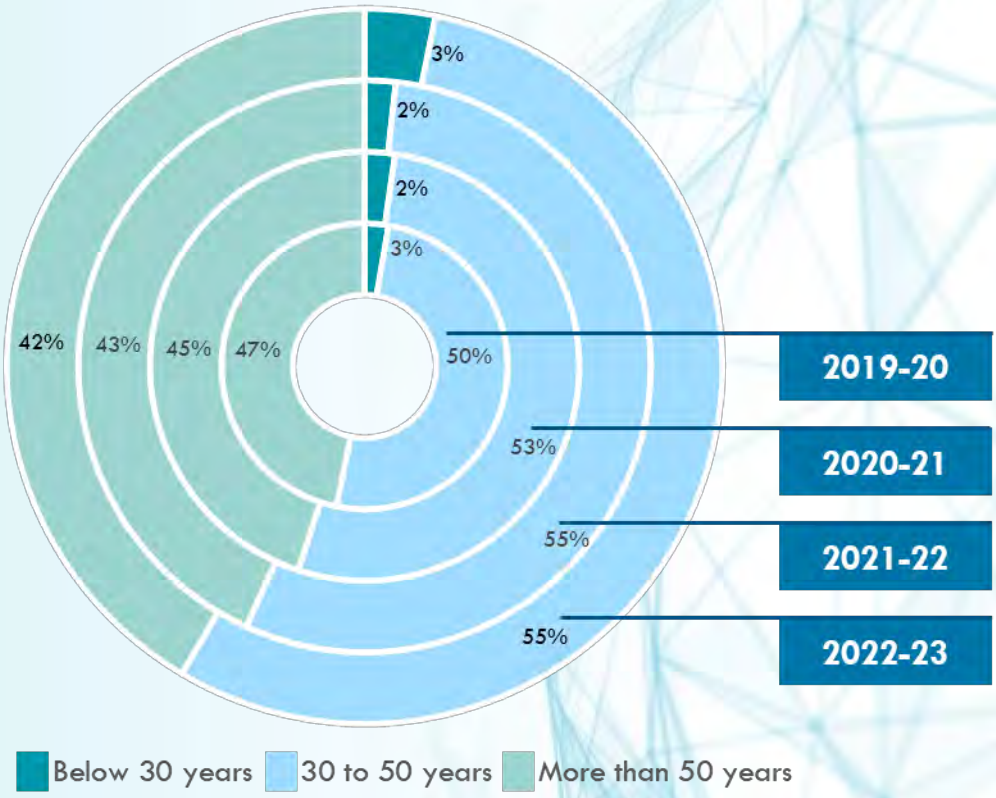


Figure 5.1: Age wise distribution of the permanent workforce.

Table 5.2: Permanent workforce Turnover at NHPC.

	2018-19	2019-20	2020-21	F2021-22	2022-23
Male	531	554	518	470	427
Female	56	62	59	45	43
Total	587	616	577	515	470

This includes retiring, resigning, terminated and deceased employees during the year.

New Employee Hires

During the fiscal years 2018–19 and 2019–20, there were no hires made. In the year 2021-2022, there were a total of 42 new hires, whereas in the year 2022-23, there were a total of 157 new hires. About 52% of hires were from northern India and 24% from eastern India. For the first time in last five years, four new hires from the north-eastern region of India have been inducted in NHPC.

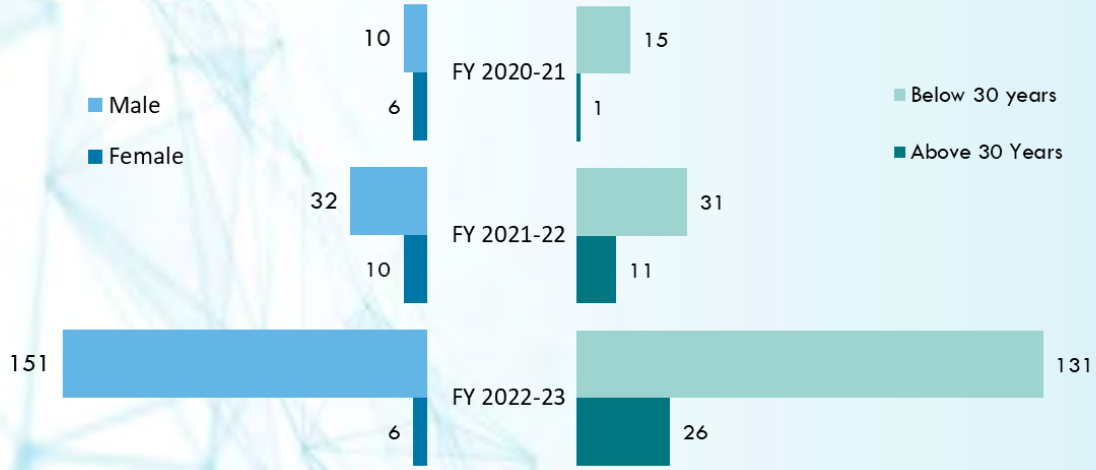


Figure 5.2: Overview of new employee hire.

Diversity and Inclusion

NHPC places paramount importance on diversity and inclusion (D&I), which embodies its commitment to create a workplace environment where individuals from diverse backgrounds thrive. D&I initiatives at NHPC are aimed at fostering a culture where every employee feels valued, respected and empowered to contribute fully to the organisation's goals. The female workforce constitutes ~11% of the total employee strength.

Figure 5.3: Gender diversity at NHPC.

Diversity within NHPC encompasses a broad spectrum of human differences, including but not limited to race, ethnicity, gender, sexual orientation, age, physical abilities, religious beliefs, socio-economic status and cultural background. In line with this, NHPC actively promotes inclusion, which involves deliberate efforts to ensure that all employees, regardless of their diverse backgrounds, are welcomed, supported and integrated into every aspect of the organisation.

NHPC's commitment to D&I is exemplified through its Equal Opportunity Policy, which underscores the organisation's dedication for maintaining a fair and inclusive workplace. This policy ensures that every member of NHPC's workforce, irrespective of gender, nationality, community, religious beliefs, or physical and mental abilities, receives the highest level of respect and dignity. NHPC is registered under Companies Act in India and listed in NSE & BSE, stock exchange of India and as per Indian regulations, law and rules; companies are not mandated to gather information on ethnicity or on the racial details.

Figure 5.4: Newspaper and social media advertisements for recruitment drive.

NHPC recognises that embracing diversity is not only a moral imperative but also a strategic advantage. By harnessing the diverse talents and perspectives of its workforce, NHPC cultivates an environment conducive to innovation, creativity and collaboration. Through its steadfast commitment to D&I, NHPC not only fosters a dynamic work environment but also positions itself as a socially responsible and forward-thinking organisation.

NHPC strictly adheres to the guidelines set forth by the Department of Personnel and Training (DoPT), thereby ensuring the implementation of reservation and relaxation policies for candidates hailing from the Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Classes (OBC) categories during the process of direct recruitment. The same approach, which encompasses relaxed criteria and reservation, also applies to SC/ST employees during the promotion evaluation process.

Table 5.3: SC/ST/OBC employees as of March 31, 2023.

Total Workforce	SC	Percentage	ST	Percentage	OBC	Percentage
4776	732	15.33%	345	7.22%	874	18.30%

The management diligently organises regular meetings to actively engage with the esteemed SC/ST/OBC employees and effectively address any specific concerns they may have. To

enhance the well-being of the SC/ST and OBC employees, NHPC has taken the initiative to establish specialised cells, each headed by a dedicated Liaison Officer.

Support to Differently abled employees

NHPC is dedicated to actively removing barriers that could hinder the involvement and career advancement of individuals with disabilities. Aligned with the Rights of Persons with Disabilities Act 2016, Equal Opportunity policy prioritises the establishment of accessible work environments, offering reasonable accommodations and nurturing a culture that emphasises respect and empathy. Embracing diversity, including disability, serves as a significant driver for enhancing the workforce, fostering innovation and reinforcing NHPC's commitment to social responsibility.

Table 5.4: Differently abled Workforce at NHPC.

	2018-19	2019-20	2020-21	2021-22	2022-23
Male	116	111	110	106	109
Female	6	6	6	8	8
Total	122	117	116	114	117

In the fiscal year 2022-23, NHPC had the privilege of having 117 exceptional individuals with disabilities (VH=Visual Handicap, HH=Hearing Handicap, OH= Orthopaedic Handicap) as part of the workforce. These talented individuals accounted for 2.45% of the total permanent team.

NHPC places paramount importance on diversity and inclusion (D&I), which embodies its commitment to create a workplace environment where individuals from diverse backgrounds thrive. D&I initiatives at NHPC are aimed at fostering a culture where every employee feels valued, respected and empowered to contribute fully to the organisation's goals. NHPC has effectively implemented various measures to prioritise and ensure the well-being of its esteemed employees with disabilities. These measures include providing reservation and relaxation in both direct recruitment and promotions, in accordance with guidelines from the Department of Personnel and Training (DoPT) and the Ministry of Social Justice & Empowerment.

NHPC takes pride in offering a comprehensive array of welfare schemes meticulously tailored to address the unique needs of differently abled employees. For caregivers responsible for physically or mentally disabled children, NHPC grants exemptions from rotational transfers and allows them to select their preferred posting locations during transfers or promotions.

Table 5.5: Differently abled Workforce at NHPC 2022-23.

	Category of the Differently abled employees				% of total workforce
Total workforce	VH	HH	OH	Total	Percentage
4776	12	3	102	117	2.45%

NHPC provides financial assistance for vocational training to dedicated employees who unfortunately experience physical handicaps during their tenure with the company. Additionally, NHPC operates a reimbursement program for valued employees who are deaf and their dependents, covering expenses associated with the purchase of hearing aids.

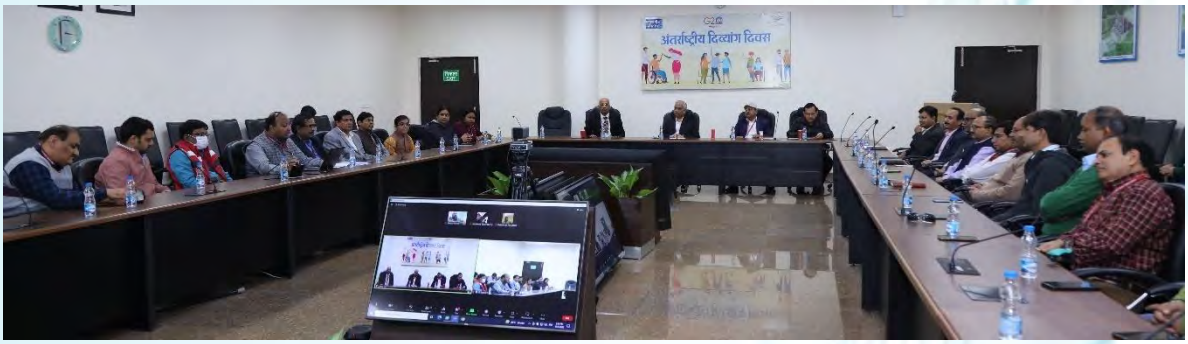


Figure 5.5: International Day of Persons with Disabilities (IDPD) celebration at NHPC.

NHPC is deeply committed to the well-being of its employees and their families, exemplified through the provision of interest-free loans for acquiring artificial limbs. This initiative reflects its dedication to support the workforce in every possible manner. In ensuring fairness and accessibility to medical benefits, NHPC compassionately waives age restrictions for children with physical or mental disabilities who are considered dependents.

NHPC's Retired Employees' Health Scheme ensures lifelong medical benefits for dependent children with disabilities of 40% or higher, extending to retired or deceased employees. Upholding the interests of employees with disabilities, the Grievance Redressal Committee includes at least one member who is a person with disabilities. These comprehensive measures underscore NHPC's commitment to foster an inclusive and supportive environment for differently abled employees, demonstrating the commitment their welfare and ensuring equitable access to essential support services.

Employee Benefits

NHPC provides a comprehensive range of employee benefits that prioritise the well-being and satisfaction of the workforce. Comprehensive health insurance is provided through Central Government Health Scheme (CGHS) and is enrolled with C-DAC e-Sushrut, a Hospital Management Information System (HMIS). The regular employees of NHPC receives extensive coverage through the Group Personal Accident Insurance Scheme and the Employee's Deposit Linked Insurance Scheme (EDLI).

NHPC offers support for House Building Advance (HBA), Motor Vehicle Advance (MVA) and higher education advances for the children of deceased employees. This holistic benefits package reflects the commitment to offer competitive compensation that recognises the significant contributions its employees make to NHPC.

NHPC believes that by providing these benefits, it not only demonstrates the appreciation for the workforce but also support their financial security and personal development, fostering a caring and professional environment where employees can thrive.

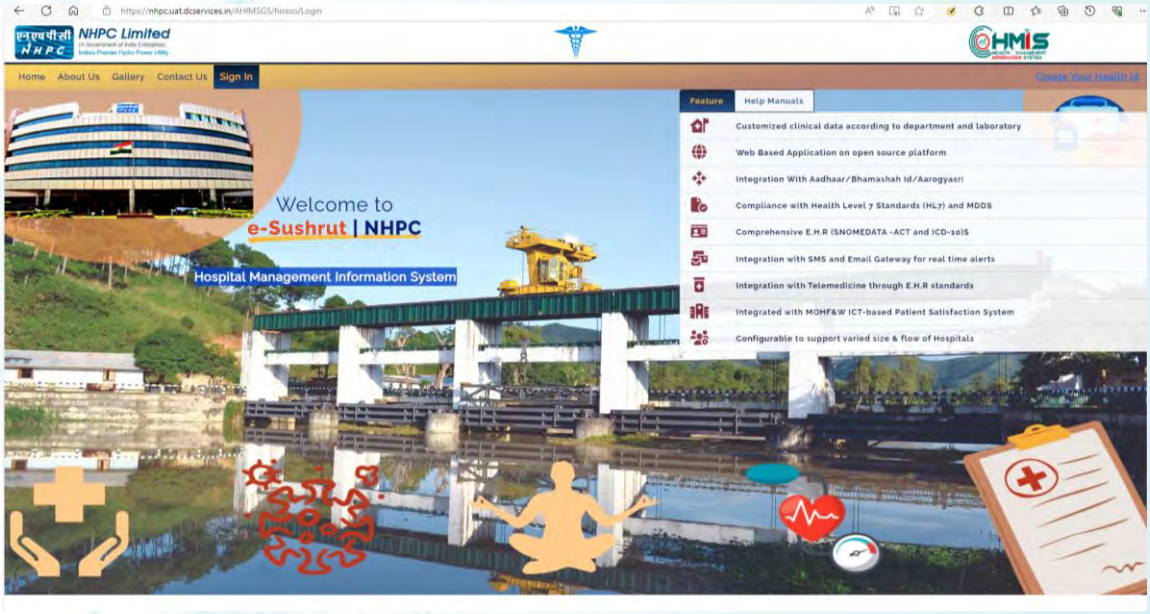


Figure 5.6: Hospital management system for employee wellbeing.

Defined Contribution Plans

Social Security Scheme: The Company provides a monthly matching contribution for each employee. The program has been established to aid and support families who have experienced the loss of an employee due to death or permanent total disability.

Employees-Defined Contribution Superannuation Scheme (EDCSS): The organisation offers an employee-defined contribution superannuation scheme to provide pension benefits to its employees. According to the scheme, each employee is required to contribute 5% of the Basic Pay and Dearness Allowance.

Defined Benefit Plans

Provident Fund: The Company provides a fixed contribution to the Provident Fund at predetermined rates. This contribution is directed to a separate Trust, which invests the funds in permitted securities.

Gratuity: The Company offers a defined benefit gratuity plan, which adheres to the ceiling limit established by the Payment of Gratuity Act of 1972. Employees who have completed five or more years of service are entitled to a gratuity of 15 days per year, up to a maximum of INR. 0.20 Crores in the event of superannuation, resignation, termination, disablement, or death.

Retired Employees Health Scheme (REHS): The Company offers a Retired Employee Health Scheme that provides medical facilities to past employees, spouses and eligible dependent children of deceased/former employees. These facilities are available in both company hospitals and empanelled hospitals.

Allowances on Retirement/Death: The Company provides relocation assistance for employees transitioning to a new location after retirement. Additionally, in the unfortunate event of an employee's passing, their family can also receive this benefit, which is determined through actuarial valuation.

Memento to employees on attaining the age of superannuation: The Company has a policy to provide employees with a Memento valued at INR 10,000/- upon the superannuation.

NHPC Employees Family Economic Rehabilitation Scheme: The scheme, implemented in April 2021, is designed to provide financial assistance and support to employees in the event of Permanent Total Disability and families in the event of death of employee. It is important to note that the Permanent Total Disability or death must occur during the employee's tenure with the Company to be eligible for this assistance.

Other long-term employee benefits (Leave Benefit): The Company provides employees with earned and half-pay leave, which accumulate annually at a rate of 30 and 20 days, respectively. These leaves can be converted into cash while the employee is still employed.

Learning, Development and Knowledge Dissemination

NHPC is dedicated to the continuous learning and development of its employees. Through a variety of developmental programs in behavioural, managerial skills and core competencies, NHPC ensures its workforce stays updated with the latest industry developments. These programs, conducted in-house or through esteemed management and engineering institutions, aim to enhance productivity and effectiveness. NHPC also sponsors its executives to acquire higher qualifications, further enriching their capabilities.

The company strategically designs training programs to align with industry trends, ensuring employees remain ahead in a rapidly evolving landscape. NHPC actively promotes job rotation and inter-location transfers, fostering career development and broadening perspectives across the organisation. This commitment to employee growth underscores NHPC's dedication to nurture talent and maintaining excellence in its workforce.

NHPC is committed to foster continuous learning among its employees, recognising the importance of staying updated with the latest developments and changes within their areas of operation. To achieve this, the company organises various learning initiatives, either conducted internally or in partnership with renowned management and engineering institutions.

Table 5.6: Average hours of training per year.

	2018-19	2019-20	2020-21	2021-22	2022-23
Total Average Hours Per Employee	9.51	16.20	17.84	19.4	23.22
Total Average Hours Per Male Employee	9.77	15.48	17.55	18.85	23.47
Total Average Hours Per Female Employee	7.33	22.21	20.27	24.03	21.1

These initiatives cover a diverse range of topics, including but not limited to Engineering, Finance, HR, Information Technology/Cyber Security, Renewable Energy and Geology. By offering such comprehensive programs, the company ensures that its workforce remains equipped with the necessary knowledge and skills to excel in their respective roles and contribute effectively to the company's success. In the fiscal year 2022-23, a total of 23.22 average hours of training was provided to all permanent employees and on an average, INR

2,500 was spent per employee on training and development.

NHPC administers a comprehensive five-week induction training program on hydropower development including allied business operations of NHPC, for newly onboarded engineer trainees and trainee officers. Additionally, NHPC demonstrates its commitment to employee growth by consistently sponsoring executives to pursue advanced qualifications and specialised training, thereby enhancing their productivity and effectiveness in their roles.

Figure 5.7: NHPC at INCOLD Annual Meeting, Gothernburg, Sweden.

NHPC's achievements were showcased at INCOLD Annual Meeting 2023, Gothernburg, Sweden in presence of Shri R.P. Goyal. Director (Finance) & Shri Biswajit Basu, Director (Projects).

NHPC has initiated the 'Scheme for Engagement of Retired Executives (Below Board Level) of NHPC, as Consultant' to harness the wealth of knowledge and expertise possessed by retired executives. Through this scheme, NHPC engages retired executives as consultants to utilise their extensive experiences, specialised skills and domain knowledge acquired during their tenure of service. Moreover, these seasoned executives play a crucial role in training young executives, facilitating a culture of knowledge exchange and fostering a conducive learning environment within NHPC.

The training sessions cover a range of topics including Financial Management, Lifestyle Management, Emotional and Physical Health Management, as well as the Corporation's post-retirement schemes and facilities. This initiative reflects NHPC's commitment to support both its retired and current employees, ensuring continuous learning and professional development across the organisation.

Figure 5.8: NHPC at 56th Boori-Boot Yullo Festival-2023 at Dollungmukh, Arunachal Pradesh.

Employee Welfare and Wellness

NHPC's employee welfare and wellness programs underscore the company's commitment to nurture a thriving workforce, enabling employees to reach their fullest potential while maintaining a harmonious work-life balance. These initiatives encompass a wide range of measures aimed at fostering a supportive and well-being-focused work environment. NHPC goes beyond conventional offerings to provide comprehensive wellness programs that prioritise physical health, mental well-being and overall quality of life.

Figure 5.9: Health awareness session for female workforce at Corporate Office.

The company's dedication to employee welfare is evident through its efforts to promote work-life balance and provide resources for health and fitness. NHPC organises various regular activities, seminars and awareness sessions on wellness topics, empowering employees with

knowledge and tools to make informed choices for their health and happiness.

Recognising the importance of significant life transitions, such as becoming parents, NHPC places importance on parental leave as a crucial component of its employee welfare initiatives. This policy enables employees to allocate time and financial resources to attend to the needs of a new-born or recently adopted child, further demonstrating NHPC's commitment to support its employees through all stages of their lives.

NHPC recognises the importance of maintaining a healthy work-life balance and demonstrates its commitment by offering parental leave to create a supportive work environment. This initiative aims to alleviate stress for new parents, promote gender equality by encouraging equal involvement of both parents and showcase NHPC's unwavering dedication to employee well-being and family values. Parental leave is available to all permanent employees, with female employees entitled to paid childcare leave for up to 730 days. This policy is specifically designed to support them in fulfilling their responsibilities towards their children until they reach the age of 18, with no age limit for children with a minimum disability of 40%. This comprehensive parental leave policy underscores NHPC's commitment to support its employees through all stages of their personal and professional lives. Return to work rate of employees that took parental leave and return to work rate of employees that took parental leave was 100%.

During February 2023, NHPC's T&HRD Division organized training program for employees having Divyang children; titled 'Everyone is Special'. The program covers stress management, future planning, behaviour/health issues, employment/entrepreneurship etc.

Figure 5.10: Training programme for employees having Divyang children.

Table 5.7: Parental benefit available (and availed) by employee.

		2019-20	2020-21	2021-22	2022-23
Total number of employees that were entitled to parental leave	Male	5482	4979	4547	4274
	Female	649	590	545	502
Total number of employees that took parental leave.	Male	87	84	71	75
	Female	15	14	10	6
Total number of employees that returned to work in the reporting period after parental leave ended.	Male	87	84	71	75
	Female	15	14	10	6
Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work.	Male	87	84	71	75
	Female	15	14	10	6

NHPC encourages its employees to participate in various sports events, tournaments and yoga events. For example, NHPC won 2 Gold, 1 Silver & 1 Bronze Medals in Inter CPSU Badminton Tournament (9-13 January 2023) organised by REC Limited under the aegis of Power Sports Control Board, Ministry of Power, Government of India at Thyagaraj Stadium, New Delhi.

Figure 5.11: NHPC Participation in the CPSU Badminton Tournament.

NHPC sponsors the participation of its employee in various international sports events. Ms. Arunachalam Nalini, Senior Manager (Finance), has several medals to her credit won at various National and International sports events. She has won Gold Medal in Boccia (Team Event), Bronze Medals in Badminton Women's Singles and Badminton Women's Double at 7th World Dwarf Games 2017 at the University of Guelph, Ontario, Canada. At World Dwarf Games 2023 (Cologne, Germany), she has won 3 Bronze medals (Shot put, Discus throw and Badminton doubles events).

Figure 5.12: 12th Inter CPSU Athletics Tournament hosted by NHPC, December 2022.

Other benefits for employee

Flexitime/work-from-home

At NHPC's Corporate Office, a flexitime/work-from-home scheme has been introduced to accommodate employees' varying commuting needs, considering traffic conditions. This scheme aims to address traffic congestion, improve productivity, support a healthier work-life balance, empower employees with greater autonomy and enhance morale. Under this policy, all Corporate Office employees are eligible for flexi-timing (with 10 AM to 5 PM as primary working hours), while executives in grades E5 and above are entitled to work-from-home benefits once per week, subject to approval from the Head of Department (HoD). This initiative reflects NHPC's commitment to provide a supportive and caring work environment that prioritises employee well-being and flexibility.

Crèche Facility - "Anchal"

NHPC Corporate Office established the crèche facility in 2003 to support NHPC employees with childcare needs and support in balancing their work and family responsibilities. Currently, the facility employs four dedicated nannies for the childcare.

Star Student Awards

NHPC recognises the excellent academic performance of the children of employees, including those who work at JVs or subsidiaries. The awards were given out based on the results of the

Class X and Class XII board exams. The top five awards came from the CBSE, the top two awards came from the ICSE and the top two awards came from the State Boards. The memento /Award is worth INR 3000/- along with a certificate. It is given out at the NHPC Day celebration on 7th November.

Figure 5.13: Star Student award for the children of NHPC employees.

Performance Reviews

NHPC prioritises employee growth and development through regular performance and career development reviews. These assessments facilitate constructive conversations between employees and supervisors regarding achievements, areas of expertise and growth opportunities. Ensuring alignment between employee goals and company objectives, NHPC actively explores potential advancement opportunities for its workforce. The company's committee to conduct these reviews highlights its commitment to foster supportive work environment. All permanent employees undergo performance and career development reviews, ensuring they receive valuable feedback, establish career goals and receive necessary guidance to enhance their professional development and contribute effectively to NHPC's growth.

NHPC has established a structured appraisal system for both cadre employees and educationists, conducted at specified intervals. For cadre-level employees, appraisals are conducted annually on a financial year basis, while for deputationists, the appraisal period

spans 12 months as determined by their parent departments. The appraisal process involves three key roles: the "Initiating Officer," who drafts the appraisal; the "Reviewing Officer," responsible for reviewing it; and the "Accepting Officer," who approves it. However, for personal staff attached to General Managers, Heads of Departments, Directors, or the Chairman and Managing Director, the same individual serves as the Initiating, Reviewing and Accepting Officer.

Employee appraisals entail an objective assessment of capability, performance, personality, strengths and weaknesses. A predetermined percentage ceiling of PAR marks or grading is assigned for each employee category, including workers, supervisors and executives from levels E1 to E5, as well as executives at level E6 and above. The HR Wing thoroughly reviews each appraisal to ensure completeness. Appraisals for all cadre executives are forwarded by the Heads of HR Wing in the Projects to the Corporate Personnel Wing in a timely manner, while retaining a copy for Project reference. This meticulous process ensures transparency, fairness and consistency in evaluating employee performance and potential across NHPC. During Annual Raising Day celebration, "Star of NHPC' award is presented to recognise and appreciate the consistently excellent work done by the employees.

Figure 5.14: Star Employee Awards distribution by Shri R.K Singh., Hon'ble Minister of Power and New and Renewable Energy.

5.2. Respecting Human Rights

NHPC is dedicated towards upholding, protecting and advancing the fundamental human rights of all stakeholders. The approach integrates human rights principles into its operations and business practices, adhering to internationally recognised standards such as the Universal Declaration and the Fundamental Human Rights Conventions of the International Labour Organisation. Additionally, NHPC prioritises the preservation of rights outlined in the Constitution of India.

NHPC is committed to ensure and safeguard human rights across key domains, including the supply chain, labour rights, communities and security. Human rights considerations are integral to its strategic decisions, including acquisitions, mergers and investments. Throughout the reporting period, NHPC maintained an exemplary record, with no reported instances of human rights violations. This highlights its commitment to professionalism, ethical conduct and respect for human dignity. NHPC's dedication to sustain human rights not only reflects its core values

but also strengthens the reputation as a responsible and ethical corporate citizen, fostering trust and collaboration with all stakeholders.

NHPC's Human Rights Policy highlights a steadfast commitment to essential labour principles and firmly opposes any involvement of child labour or forced/compulsory labour within its supply chain and facilities. During 2022-23, NHPC received no reports of child labour or instances of forced/compulsory labour. This demonstrates NHPC's unwavering dedication to upholding human rights standards and ensuring compliance with ethical labour practices across its operations.

Eliminating Discrimination and Harassment

NHPC strictly adheres to a zero-tolerance policy regarding unlawful discrimination or harassment directed at its employees or partners throughout its value chain. The company is steadfast in its commitment to safeguard against discrimination stemming from factors such as age, gender, marital status, economic status, disability, race, national or regional origin, ancestry, indigenous status, personal beliefs, religion and spiritual practice, political affiliation, sexual orientation and HIV/AIDS. This commitment is integral to every aspect of NHPC's operations and is upheld through focused training programs designed to align employee conduct with these principles.

Furthermore, NHPC maintains stringent measures to prohibit sexual harassment in the workplace, in line with its zero-tolerance policy. The company has enacted a comprehensive policy on the Prevention, Prohibition and Redressal of Sexual Harassment of Women at the workplace, adhering to the Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013. Internal Complaints Committees are established at all NHPC locations to effectively address and manage complaints of sexual harassment, with the committee at the Corporate Office in Faridabad led by a senior female officer and including a member from an NGO.

NHPC has implemented clear protocols and proactive measures to address and prevent instances of sexual harassment, including its inclusion as misconduct in the comprehensive "NHPC Conduct, Discipline and Appeal Rules," along with comprehensive training sessions on these policies and procedures.

In addition to contain sexual harassment, NHPC proactively endeavours to eradicate gender discrimination and empower women. This includes the appointment of women representatives on selection boards/committees for employee promotions and recruitment, provision of flexible attendance options for female employees at the Corporate Office, establishment of a Forum of Women in Public Sector (WIPS) Cell and consistent nomination of female employees for programs and seminars aimed at prioritising women's empowerment and addressing pertinent topics. These initiatives highlight NHPC's commitment to foster a professional and inclusive workplace environment.

Figure 5.15: Training workshop on prevention of sexual harassment at workplace.

Fair Labour Practices

NHPC places paramount importance on preserving the dignity of its employees, extending this commitment across its entire workforce. This commitment ensures that every employee feels secure in their personal space and operates within a workplace environment that is not only safe and clean but also conducive to overall well-being. Moreover, NHPC is steadfast in its commitment on eradicating any form of harassment or abuse within its premises, thereby fostering a culture of respect and inclusivity.

In line with its values of fairness and integrity, NHPC ensures that all interactions with employees and workers are conducted with the utmost transparency and equity. This includes administering wages, benefits and other employment conditions in strict accordance with the regulations stipulated by the Government of India. Furthermore, NHPC fully supports employees' fundamental right to freedom of association, acknowledging their autonomy in forming associations and participating in collective bargaining processes.

When it comes to the recruitment of contract labour, NHPC meticulously follows the guidelines outlined in project contracts and considers specific skill requirements under the oversight of the contract department. The contractor assumes responsibility for deploying labour as per operational demands. Additionally, NHPC places great emphasis on the training and integration of contract workers, ensuring they are well-versed in the company's policies, procedures and safety protocols.

Compensation, incentives and overtime remuneration for both regular and contract workers adhere strictly to the provisions laid out in the Minimum Wages Act and other relevant regulations. NHPC has also established a bipartite agreement with the workers' community, outlining clear provisions for consultation and negotiation on matters related to NHPC's

operations. This agreement emphasises NHPC's commitment to promote open dialogue and collaborative decision-making processes with its workforce. Moreover, in accordance with legal requirements, NHPC adheres to provide a minimum notice period of 21 days, as stipulated under Section 9A of the Industrial Disputes Act 1947, before implementing significant operational changes that may impact employees and their representatives. This approach reflects NHPC's commitment to fair labour practices and ensuring that employees are well-informed and involved in decisions that affect their livelihoods.

Community Engagement

NHPC acknowledges the importance of community engagement for successful timely implementation of its project. Prior to commencement of construction works of the project, public consultation is conducted to gather the opinion of local community as a part of environment and forest clearance process. During land acquisition process, as per the provisions of the "Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013," the respective State Government develops Rehabilitation and Resettlement plan for Project Affected Families (PAFs). This involves public consultation meetings for formulation of packages under R&R scheme.

Furthermore, NHPC promotes community engagement through additional support to PAFs by providing them with preferential opportunities for employment and work contracts. The Company also actively engages in various CSR activities aimed at benefiting the communities residing in the vicinity of its Power Stations and Project Sites.

5.3. Grievance Redressal Mechanism

NHPC has established Employee Grievance Redressal Cell to effectively manage issues related to human rights and fair labour practices, in compliance with relevant policies and statutory provisions. During 2022-23, the management successfully resolved 92.85% of the complaints received through the Employee Grievance Redressal Cell, showcasing NHPC's dedication to efficient grievance resolution and employee satisfaction.

Table 5.8: Number of complaints with the Employee Grievance Redressal Cell.

Opening Balance on 01.04.2022	Received during 2022-23	Resolved during 2022-23	Closing Balance as on 31.03.2023
5	9	13	1

Table 5.9: Employee satisfaction survey.

	2019-20	2020-21	2021-22	2022-23
% of employees with top level of engagement satisfaction and wellbeing	90%	92%	95%	98%
% of employees who responded to the survey	100%	100%	100%	100%

5.4. Safety and Working Conditions

NHPC maintains this dedication by scheduling routine health screenings for both its employees

and contracted laborers, in accordance with the guidelines outlined in the Factories Act, 1948 and The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act of 1996. NHPC ensures occupational health check-ups for relevant employees, facilitated by dedicated medical teams available at its Power Stations, Projects and Corporate Office. Furthermore, NHPC actively organises medical camps on a regular basis through its Power Station/Projects Medical Division, demonstrating its proactive approach to promote health and safety in the workplace and surrounding communities. For example, health screening of 216 employees, family members, contract workers were conducted on May 24, 2022 at Corporate Office, consultations were given regarding various diseases and free tests were also conducted.

Figure 5.16: Medical check-up camp at NHPC Corporate Office on May 24, 2022.

NHPC recognises the critical importance of creating a safe and secure workplace environment for the continued success of its operations. The company actively cultivates a culture of workplace safety through the implementation of stringent standards, constant monitoring, continuous improvements and active engagement of employees via comprehensive training programs. This commitment ensures that employees, visitors and assets are protected from potential risks, threats, or hazards. NHPC's dedication to maintain a secure workplace prioritises the protection of individuals and assets while fostering a healthy and productive work environment.

NHPC places a primary focus on Occupational Health and Safety (OHS), emphasising a comprehensive framework to ensure workplace well-being. This encompasses the development and implementation of robust policies, procedures and practices covering various aspects such as hazard identification, risk assessment, accident prevention, emergency preparedness and compliance with relevant regulations and standards. NHPC's commitment to OHS extends

beyond its employees to encompass contract laborers and the communities surrounding its Power Stations and Projects.

Policies and Commitment

NHPC has introduced its Safety Policy, aimed at fortifying a secure work environment across NHPC Projects, Power Stations and Offices. This policy underscores NHPC's commitment to achieve a hazard-free workplace environment for all individuals directly or indirectly associated with NHPC Power Station or Project sites. The provisions outlined in this Safety Policy are obligatory for all NHPC employees and those working at NHPC Sites, or otherwise linked to NHPC through agreements. Most operating sites hold certification under the Occupational Health and Safety Management System (ISO 45001).

NHPC reaffirms its dedication to comply with all relevant legal requirements concerning Occupational Health and Safety at NHPC Power Stations/Projects with the goal of achieving "Zero Injuries, Zero losses and Environmental Protection" to the utmost extent. Moreover, NHPC ensures that its contractors adhere to all applicable safety acts, rules, regulations, standards and requirements.

Safety Governance

NHPC's safety governance framework is spearheaded by the Power Station/Project Head at the Station/ Project level, aided by the corporate-level Safety Division. The HoP monitors the administrative safety duties at the Power Station/Project, while the Corporate Head of the Safety Division manages functional safety responsibilities. Corporate policies, objectives and directives are devised, with Project-Level Teams tasked with their implementation. Safety Committees are established at all Power Stations/Projects, ensuring representation from both management and workers as per statutory requirements. These committees offer a platform for workers to address safety concerns and audit recommendations. Safety Committee meetings are conducted regularly, with Construction Projects convening monthly and Power Stations quarterly. Decisions are made collectively under the leadership of the safety committee chairperson.

NHPC Power Station/Projects have developed various safety documents, including Emergency Plan/Emergency Action Plan (EAP), Safety Manual, Reservoir Operation Manual, O&M Manual, Crisis & Disaster Management Plan (C & DMP), Standard Operating Procedure (SOP) for downstream water release, to adhere to relevant legislation such as the Factories Act, 1948, State's Factories Rules (applicable to the location), The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and Central Rules 1998, The Central Electricity Authority (Safety Requirements for Construction Operation and Maintenance of Electric Plants and Electric Lines) Regulations, 2011, or any other relevant legislation.

Hazard Analysis and Risk Management

NHPC's structured safety management system facilitates hazard identification, risk assessment, risk control and control measure review. Each project stage undergoes a thorough Job Safety Analysis (JSA) and Risk Assessment and Method Assessment (RA & MA). A Site Hazard

Communication (HazCom) Program is established, featuring an inventory monitoring system and Material Safety Data Sheets (MSDS) for all hazardous materials used on-site. These safety measures are further enhanced by ensuring that MSDS sheets are available in local languages or languages spoken by the employees present at the site, ensuring effective communication and compliance.

Incident Management System

NHPC mandates the prompt reporting of accidents, hazardous incidents and near misses to fulfil statutory obligations and ensure compliance. Detailed procedures for reporting such occurrences are outlined in NHPC Safety Manual. These reports serve to maintain comprehensive records and facilitate analysis for identifying trends and implementing preventive measures. Each incident undergoes a thorough investigation to determine causes, assess losses and identify responsible parties, with the aim of preventing similar incidents from occurring in the future.

Emergency Management Plan

NHPC has implemented a robust Emergency Management System at each Power Station to effectively address potential emergencies. NHPC has put in place a Crisis and Disaster Management Plan to address potential disruptions caused by natural calamities (such as earthquakes, landslides, floods, cyclones, storms, etc.) as well as man-made disasters (such as major accidents, terrorist activities, sabotage etc. It conducts Mock Drills at predefined frequency (monthly/ quarterly/half-yearly/yearly basis.) on various scenarios as per the Crisis and Disaster Management Plan. Comprehensive Off-Site Emergency Management Plan is meticulously crafted to outline the strategic approach in effectively addressing unforeseen emergencies, such as fire explosions or toxic releases, which may arise near the power generating station. Ensuring the execution of a mock drill on bimonthly basis is a fundamental aspect of the offsite emergency plan.

Early warning systems (EWS) are also installed/in progress at all Power Stations/Projects to receive early warnings from upstream of the river. Hooters are installed in the dam and Power Stations to alert the public in the vicinity areas/downstream. Knowing the importance of EWS, a Master Control Room for EWS is already set up by NHPC at Faridabad in Haryana State of India for 24X7 monitoring. It is being strengthened and automated by implementing comprehensive software application named e-Aabhas. Automatic water level sensors along with telemetric data transmission are installed at sufficient upstream location of dam sites of NHPC Power Stations and Projects.

Safety Inspections & Audits

NHPC assigns specific responsibilities to designated officials in alignment with its Safety Policy and Safety Manual to ensure employee safety and prevent accidents, fires and dangerous occurrences. These assigned authorities conduct regular inspections to assess adherence to these duties, review various processes and evaluate the effectiveness of safety management systems by identifying, assessing and controlling potential hazards. A system for Safety Inspection and Audits has been developed and mentioned in the Safety Manual as follows:

- Regular safety inspections are carried out at Power Station/Projects by Safety

Officer.

- Internal safety audits on a predefined safety checklist are conducted annually by officers of the Corporate Safety Division.
- Annual External Safety Audits (Third Party) are conducted annually per IS:14489 by Competent Safety Auditors.

NHPC diligently maintains records of every safety inspection and audit conducted. These records encompass essential information such as the visited location, inspection date, identified hazards, necessary corrective actions and the targeted completion date for these actions. This meticulous record-keeping enables NHPC to maintain a clear overview of safety inspections and effectively monitor progress in addressing identified hazards.

Safety Awareness

NHPC has developed a comprehensive Safety Manual detailing statutory mandates and defining the essential duties and accountabilities of its personnel, ensuring the seamless adoption of advanced safety protocols across all NHPC sites. The Safety Manual is constantly updated to ensure compliance with the Central Electricity Authority's (CEA) Regulations for constructing, operating and maintaining electrical plants and electric lines.

NHPC conducts regular training sessions aimed at enhancing safety awareness among employees at both Power Stations and Projects. This comprehensive program covers a range of crucial topics, including effective safety protocol management during operations and maintenance, strategic disaster preparedness, advanced fire safety techniques along with general safety awareness, first aid, proper use of personal protective equipment and firefighting procedures.

Figure 5.17: Joint mock-drill with 12th battalion NDRF and the CISF on earthquake preparedness among the workers and residents at the Subansiri Lower Hydroelectric Project, Assam and Arunachal Pradesh.

These training initiatives are strategically designed to enhance knowledge and encourage the adoption of safe practices and across various levels within the organisation. NHPC mandates a minimum of 10 hours of training for all contract workers, encompassing topics such as safety awareness, first aid, personal protective equipment usage, firefighting techniques, handling of emergencies and awareness of site-specific hazards.

NHPC Safety Performance

Identifying and mitigating potential hazards require a comprehensive approach, which includes conducting both External and Internal Safety Audits, along with implementing Hazard Identification and Risk Assessment (HIRA) Processes. The systematic evaluation aids in the identification of potential threats and hazards, thus promoting a safer environment by recognising and mitigating risks before they escalate into actual incidents.

Table 5.10: Employees and Contract workers who sustained injuries.

		2019-20	2020-21	2021-22	2022-23
a. Employee					
Fatalities because of work-related injury	Number	0	0	0	2
	Rate	0.00	0.00	0.00	0.26
High-consequence work-related injuries (excluding fatalities)	Number	0	0	0	0
	Rate	0.00	0.00	0.00	0.00
Recordable work-related injuries	Number	0	0	0	2*
	Rate	0.00	0.00	0.00	0.26
Number of hours worked	Million	9.27	8.69	8.07	7.69
b. For all workers who are not employees but whose work and/or workplace is controlled by NHPC					
Fatalities because of work-related injury	Number	0	7	7	7
	Rate	0.00	0.38	0.27	0.21
High-consequence work-related injuries (excluding fatalities)	Number	0	1	2	1**
	Rate	0.00	0.05	0.08	0.03
Recordable work-related injuries	Number	3	3	3	25#
	Rate	0.16	0.16	0.12	0.73
Number of hours worked.	Million	18.49	18.59	25.93	34.08

Note: The rates have been calculated based on 10,00,000 hours.
* 1 work related injury was minor and was reported later.
** 1 high consequence work related injury was reported later.
# Number of accidents are considered in place of injuries.

6

Empowering Communities

6. Empowering Communities

NHPC is committed to the wellbeing of the communities, located in vicinity of its business operations. NHPC aims to pursue initiatives that foster positive social impact, aligning with national development priorities while also supplementing United Nations' Sustainable Development Goals.

NHPC's power stations and project sites are situated in remote, mountainous regions. This positioning necessitates the development of essential infrastructure such as access roads, bridges, telecommunications, healthcare facilities, markets and more for timely completion of projects. Over the years, it is observed that the previously underdeveloped areas are transformed with improved access to amenities and connectivity to nearby urban centres, fostering socio-economic development. The initiation of Project construction activities generates employment opportunities in construction and ancillary sectors, creating a ripple effect in demand for goods and services.

Upon commissioning of Projects, the availability of affordable and eco-friendly electricity catalyses industrial growth in the region. During the operational phase, NHPC provides revenue in the form of royalty (12% of power generation) to the State Government on annual basis. In addition, NHPC contributes to the Local Area Development Fund (LADF) to the tune of 1% of the power generated from each commissioned project to the State Government as Hydropower Policy 2008(GoI). The host State/UT government provides a matching contribution of 1% from their share of the 12% free power received from the respective project to LADF. This collective fund serves as a corpus for local area development throughout the project's lifespan.

The Local Area Development Fund (LADF) ensures a consistent revenue stream for income generation, welfare schemes and the continual development of additional infrastructure and shared facilities. Besides LADF, the Corporate Social Responsibility (CSR) scheme of NHPC also foster holistic development of the community, located in and around its business operation.

6.1. NHPC's CSR Vision & Mission

NHPC is conducting its business in a socially responsible way by maintaining high level of organisational integrity and ethical behaviour, in conformity with expected standards of transparency in reporting and disclosing the performance in all spheres of its activities, demonstrating concern for social welfare, adopting the best management practices and effective operational methods to win the trust and confidence of its stakeholders.

NHPC has strengthened its commitment to CSR in line with statutory provisions specified in Section 135 of the Companies Act, 2013, along with the Companies (Corporate Social Responsibility Policy) Rules, 2014 and subsequent amendments. Additionally, NHPC adheres to the CSR guidelines set forth by the Department of Public Enterprises (DPE). NHPC's CSR Policy serves as a testament to its commitment to meet stakeholders' expectations, thereby fostering sustainable development.

NHPC's CSR vision

To contribute to sustainable development and inclusive growth while taking care of People, Planet and Organisational goals/ growth.

NHPC's CSR Mission

6.2. NHPC's CSR Project Management

A management structure exists in NHPC for selection, implementation and monitoring of CSR schemes/ initiatives. CSR schemes are identified through consultations with various stakeholders, including administrative authorities at the district, sub-divisional, block and panchayat levels, in the areas where NHPC operates. Selection of CSR Schemes is done in such a manner that maximum benefits are directed towards the underprivileged and needy sections of the society.

Table 6.1: Committee of Directors on CSR & Sustainability.

	Name of Director	Designation/Nature of Directorship
1.	Prof. (Dr.) Rashmi Sharma Rawal	Chairman of the Committee (Independent Director)
2.	Dr Uday Sakharam Nirgudkar	Independent Director- Member
3.	Prof. (Dr.) Amit Kansal	Independent Director- Member
4.	Shri Jiji Joseph	Independent Director- Member
5.	Sh. Rajendra Prasad Goyal	Director (Finance) - Ex-Officio Member
6.	Sh. Biswajit Basu	Director (Projects)- Ex-Officio Member

Six meeting were held in 2022-23.

Table 6.2: CSR Project management at NHPC.

Selection of CSR Initiatives:	Implementation & Monitoring
The proposals received are compiled and further scrutinised in accordance with Schedule VII of the Companies Act, 2013, as well as the availability of funds. The proposals are initially evaluated by the internal CSR Committee of the CSR & SD Division and further by the GM Level committee having an external member/ expert and then recommended for consideration by the Committee of Directors on CSR & Sustainability. The Committee of Directors on CSR & Sustainability recommends the CSR proposal to the Board of Directors for approval. Preference to the Local area – 80% allocation. Other locations may be chosen based on the needs and as per Govt. directives on national schemes. Selection is done solely on the merit of proposals.	A management structure is established to effectively implement, monitor and review the CSR initiatives: • The Board level Committee on CSR headed by an Independent Director. • Nodal Officer of the Rank of Executive Director, assisted by his team. • Regional ED/ Project Head/ Unit Head and his team for implementation and monitoring. The Unit Head reports the progress of CSR schemes under implementation at each location to the Nodal Officer at the Corporate Office every month. These records are being maintained along with photographs/ videos to show the progress of work. Reports on progress of the implementation of CSR and Sustainability activities are reviewed by the CSR Committee and NHPC Board.

Figure 6.1: NHPC's Committee of Directors on CSR & Sustainability visit to Teesta Low Dam-IV Power Station (West Bengal).

6.3. CSR Expenditure by NHPC

NHPC publishes reports of its CSR activities on its website featuring the CSR Policy, guidelines for implementing agencies, approved plans and activities. During FY 2022-23, CSR projects were undertaken in three designated aspirational districts as allotted to NHPC by Government of India: Baramulla, UT of J&K (INR 4.99 Crore), Chamba Himachal Pradesh (INR 7.56 Crore) and Gyalshing, Sikkim (INR 3.91 Crore).

Table 6.3: Details of CSR Expenditure for 2022-23.

Sl. No.	Details of the expenditure head	Amount (INR in Crore)
1	Average net profit as per sub-section (5) of section 135	3607.15
2	2% of average net profit as per sub-section (5) of section 135	72.14
3	Surplus arising out of the CSR Projects or programmes or activities of the previous financial years	0.00
4	Amount required to be set- off for the financial year	60.04
5	Total CSR Obligation for the financial Year [(2)-(4)]	12.10
6	Amount spent on CSR Projects	122.04
7	Amount spent in Administrative Overheads	5.15
8	Amount spent on Impact Assessment, if applicable	0.12
9	Total amount spent for 2022-23 [(6) +(7) +(8)}	127.31
10	Excess amount spent for 2022-23 [(9) -(5)]	115.21

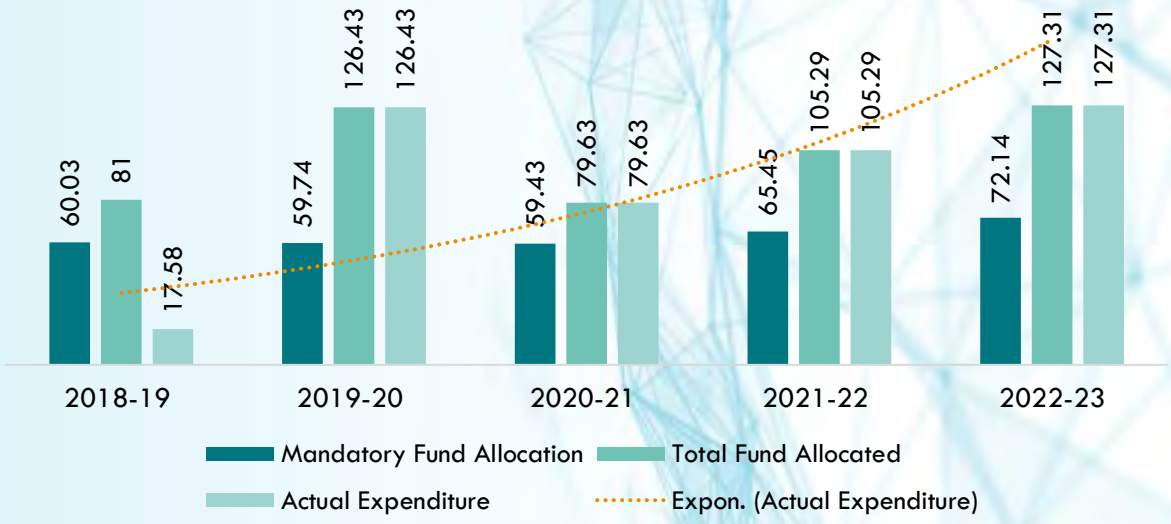


Figure 6.2: CSR Project Expenditure (INR, in Crores) (2018-2023).

Impact Assessment of CSR initiative was done in accordance with sub-rule (3) of Rule 8 of the Companies (Corporate Social Responsibility Policy) Rules, 2014 and its subsequent

amendments. The Impact Assessment of the CSR project "Development of Bandipora Nishat Garden" was assigned to an independent agency which observed that initiative has resulted in increase of tourism opportunities in Bandipora District in the last two years, which is creating opportunity for economic growth of people in many ways.

6.4. CSR initiatives for 2022-23

NHPC's CSR initiatives are in line with the areas or subject specified in Schedule VII of the Companies Act, 2013. During FY 2022-23, NHPC has implemented several CSR initiatives for the community living in and around its Projects/ Power Stations/ Units in the areas of Healthcare, Education, Sanitation, Rural Development, Skill Development, Environmental sustainability, Women Empowerment, Promotion of sports etc. The CSR initiatives has benefited over 65 lakhs person in 2022-23 across twenty states/UT of India.

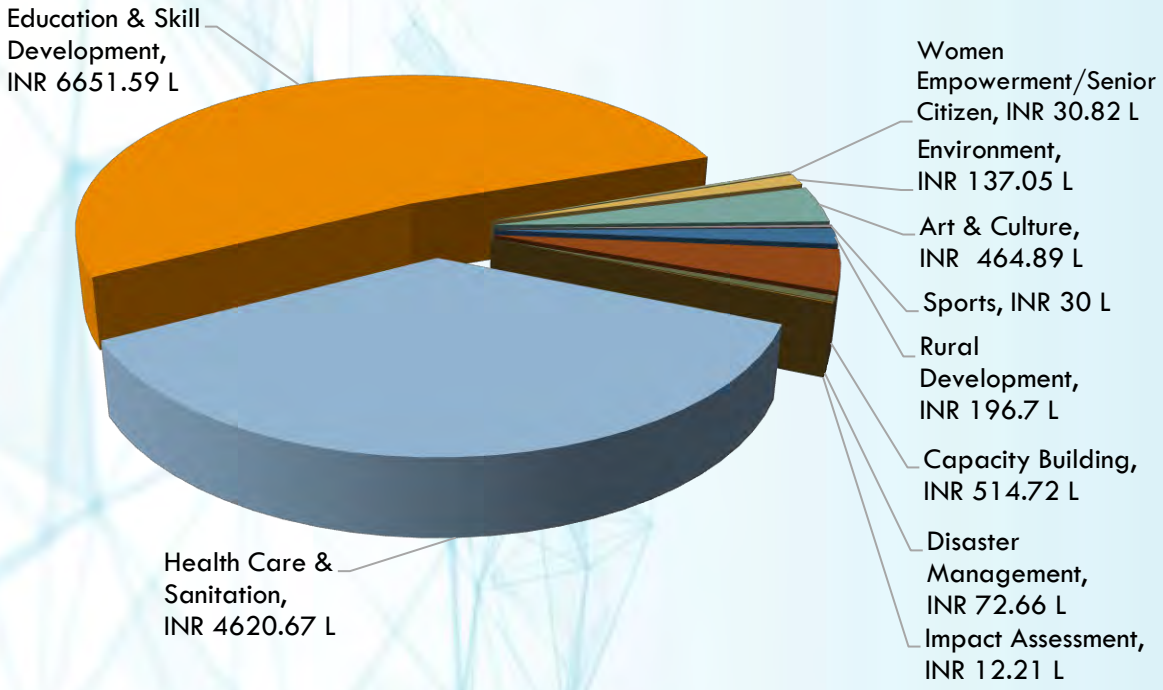


Figure 6.3: Sector-wise Details of the CSR Initiatives undertaken during 2022-23.

(Values are expressed as INR in lakhs.)

Table 6.4: CSR Project beneficiaries (2020-2023).

	2020-21	2021-22	2022-23
Number of male CSR beneficiaries	24,98,801	22,16,164	35,88,689
Number of female CSR beneficiaries	23,22,063	20,80,732	29,18,252

Health & Sanitation

During 2022-2023, NHPC has spent INR 46.21 Crores for Health & Sanitation sector, as part of its Corporate Social Responsibility (CSR) Initiatives. This included expenditures on health care and Sanitation, facilities for hospitals/dispensaries for outsiders, Swachh Vidyalaya Abhiyan, Swachh Bharat Abhiyan and Central Government Fund (i.e PM Cares Fund).

- NHPC allocated funds for strengthening of various healthcare facilities such as Primary Health Centres (PHC), Community Health Centres (CHC) and Sub-District Hospitals. Various Medical equipment such as USG Colour Dopplers, X-ray machines, urine analysers, cardiac monitors, oxygen concentrators, generator sets and CR systems were purchased with the CSR support. NHPC also facilitated the establishment of two 500 LPM oxygen plants in Kargil and Sankoo, within the Union Territory of Ladakh.
- Medical camps, mobile medical unit and ambulances were arranged by NHPC to meet the requirements of the rural community at multiple locations to promote health care including preventive health care. Financial support amounting to INR 58.94 lakh was extended for providing five ambulances, benefiting Longding District, Lohit District, Lower Dibang Valley District and Dibang Valley District of Arunachal Pradesh.

Figure 6.4: Medical camps under CSR initiatives at various places.

- CSR Support of INR 20.74 lakh was extended for providing ambulances for Mariyang, Upper Siang District and Chowkham, Namsai District of Arunachal Pradesh. Furthermore, INR 27.12 lakh was allocated for the establishment of a Mobile Medical Unit in the rural area of Sunaam, District Sangrur, Punjab. An allocation of INR 50.00 lakh was done for providing healthcare access in remote areas of Himachal Pradesh through Medical

Mobile Unit. CSR support amounting to INR 25.32 Lakh was also provided for purchase of a Mobile Cancer Screening Van.

Figure 6.5: Strengthening medical infrastructure: (a) X-ray machine, (b) Oxygen plant.

Figure 6.6: Strengthening healthcare outreach: mobile cancer screening van.

NHPC has also provided CSR support of INR 30.00 Crores in Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PM CARES Fund)

NHPC has also worked to secure clean water supply in several locations, including Civil Hospital and Tehsil Office in Dalhousie, Chamba District, Himachal Pradesh. Public sanitation services were established at multiple locations such as village Khet, Balling (Darma) and Fultari (Nigalpani) in the Pithoragarh District of state of Uttarakhand.

- The Swachh Vidyalaya Abhiyan is a significant initiative that plays a crucial role in promoting hygiene and sanitation in schools across India. This campaign aligns with the broader objective of the Swachh Bharat Abhiyan, focusing specifically on educational institutions.
- NHPC spent a sum of INR 385.75 Lakh for the rectification/ maintenance/ refurbishment work of the dysfunctional toilets (constructed under Swachh Vidyalaya Abhiyan) at various places to make them workable.

- Improvement/extension of Water Supply to village Kotla and Theru collaborative MOU with the District Authority has led to an allocation of INR 41.50 Lakh for enhancing water supply. This initiative ensures better access to clean and safe drinking water for the local population, addressing a fundamental necessity.

Figure 6.7: Refurbishment work of the dysfunctional toilets (constructed under Swachh Vidyalaya Abhiyan) at various places.

Figure 6.8: Handing over of waste collection vehicle to Dhemaji Municipal Board, Assam.

Education & Skill Development

NHPC aims to enhance the overall quality of education in the areas of its operation, making it more accessible for students to pursue their studies.

- NHPC has undertaken CSR initiatives in the field of education by spending a substantial amount of INR 3686.36 Lakh in Kendriya Vidyalayas and other school operating in the vicinity of NHPC Townships, aiming to provide quality education to children from rural communities.

Figure 6.9: Supporting Kendriya Vidyalaya under CSR initiatives.

- NHPC has also provided support for strengthening of infrastructure of various schools at multiple locations near NHPC's Projects/ Power Stations.

Figure 6.10: MoU with DAV Police Public School, Faridabad for providing interactive panels for smart classes under CSR initiative.

- NHPC's CSR initiative in the education sector includes constructing a new school building for Gingle High School, Baramulla, UT of J&K to replace the old one damaged in the earthquake of 2005. This effort ensures a safe and conducive learning environment for students, addressing the risk associated with outdated buildings.
- Infrastructure development projects related to Education sector like the work related to construction of an Engineering College at Takdah, District Darjeeling, West Bengal, work related to Hydro Engineering College at Bilaspur, Himachal Pradesh and the development of Kindergarten in Vivekananda Vidyalayam, Kothamangalam, Ernakulam, Kerala, involved expenditure of INR 1,663.20 Lakh during FY 2022-23.

Figure 6.11: Work of Hydro Engineering College in Bilaspur, Himachal Pradesh.

Figure 6.12: Support to the underprivileged student community under CSR initiatives.

NHPC signed MOU with Shikshan Vikas Seva Trust on September 9, 2022, towards furnishing Shikshan Sankul Hostel Building for SC Students at Sarkhej (Gujarat) for an amount of INR 50 Lakh under CSR.

Figure 6.13: NHPC Teesta-V Power Station (Sikkim) distributes scholarships.

510 MW NHPC Teesta-V Power Station (Sikkim) distributed Scholarships under its Scholarship Award Scheme of CSR-SD on March 14, 2023. Shri Sonam Lama, Hon'ble Minister of Cooperation Deptt., Ecclesiastical Deptt. and Rural Development Deptt, Govt. of Sikkim graced the occasion as Chief Guest & handed over the Scholarships to 25 meritorious students (out of which 21 are girls & 3 girl students are from remotest Dzongu area of North Sikkim). Under the Scheme, each student received INR 24000/- for the FY 2022-23.

- Employment oriented vocational training/skill development, & livelihood enhancement programs involved expenditure of INR 908.49 Lakh. This includes arranging employment oriented vocational training through NSDC for 3,000 youths and 1,000 Divyangjans/ PwDs, on-job training for students of ITI Roing and livelihood enhancement training for women in Dollungmukh, Arunachal Pradesh.

Figure 6.14: Livelihood enhancement programme for local community, Dollungmukh Circle, Distt. Kamle, Arunachal Pradesh.

Figure 6.15: Employment oriented vocational training of youth at Kargil, UT of Ladakh.

Women Empowerment

NHPC upholds a strong commitment to women's empowerment. This commitment is evident in the array of empowerment programs that it has successfully implemented across various locations on training women in diverse courses aimed at promoting self-employment and economic independence.

NHPC has collaborated with the Self-Help Groups (SHGs) to provide training programs aimed at livelihood generation and employment opportunities for the local population in Sikkim. These training initiatives are conducted with a focus on skill development. NHPC has organised two separate training programs. One of these programs focuses on the manufacturing of paper bags, emphasising the importance of skill development and fostering self-reliance within the local community.

Figure 6.16: Vocational course for women under CSR initiatives.

- NHPC also provided CSR support for construction of a two-storey addition to the existing Balika Niketan building in Amphalla, Jammu, in alignment with its commitment towards supporting women's welfare.

NHPC initiative in livelihood generation training

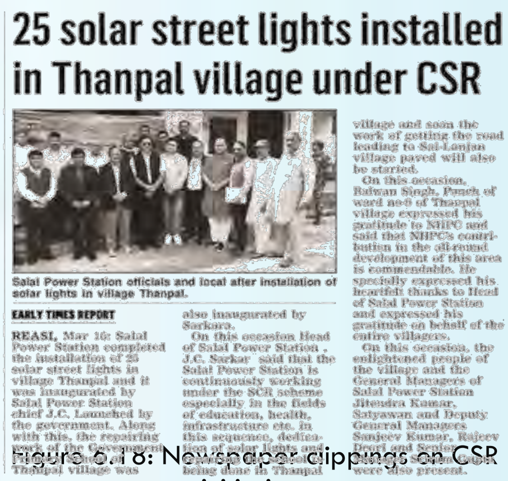
GANGTOK, FEB 22/--/ NHPC Teesta-V Power Station has organized two training programmes on livelihood generation for 15 different self-help groups under the Women Empowerment Sector of corporate social responsibility and skill development. These progammes were inaugurated by HOP Teesta V Power Station and Teesta IV Hydro Electric Project on January 28 for seven SHGs at Salebong and another on January 30 for eight SHGz in Lower Samdong in collaboration with Medhavi Skill University, Singtam, for more than 100 SHG members. The two programmes concluded on Wednesday in the presence of vice president Teesta Ladies Club Rumi Das. Certificates were distributed to all the participants. ——EOIC

Figure 6.17: Newspaper clippings on CSR initiatives

Environmental Sustainability

NHPC aims to contribute to environmental sustainability through various CSR initiatives. These efforts demonstrate a commitment to responsible stewardship and promotion of a sustainable future.

- NHPC has allocated funds for Pollution Abating Plants Abhiyan (PAPA) for a cleaner, healthier and more sustainable environment.
- NHPC has allocated funds for activities like procurement of diesel engine centrifugal pumps in Bandipora, UT of J&K and providing lift irrigation pump for the apricot orchard, Minji Gond in Kargil, UT of Ladakh to address needs of the local community. These projects not only provide essential resources for agriculture and daily life in these regions but also contribute to effective water conservation and management, vital for maintaining ecological balance.



25 solar street lights installed in Thanpal village under CSR

Salal Power Station officials and local after installation of solar lights in village Thanpal.

EARLY TIMES REPORT

REASI, Mar 16: Salal Power Station completed the installation of 25 solar street lights in village Thanpal and it was inaugurated by Salal Power Station chief J.C. Launched by the government. Along with this, the repairing work of the Government [illegible] Thanpal village was also inaugurated by Sarkara.

On this occasion Head of Salal Power Station, J.C. Sarkar said that the Salal Power Station is continuously working under the SCR scheme especially in the fields of education, health, infrastructure etc. In this sequence, dedication of solar lights and [illegible] being done in Thanpal village and soon the work of getting the road leading to Sai-Lanjan village paved will also be started.

On this occasion, Balwan Singh, Panch of ward no-6 of Thanpal village expressed his gratitude to NHPC and said that NHPC's contribution in the all-round development of this area is commendable. He specially expressed his heartfelt thanks to Head of Salal Power Station and expressed his gratitude on behalf of the entire villagers.

On this occasion, the enlightened people of the village and the General Managers of Salal Power Station Jitendra Kumar, Satyawan and Deputy General Managers Sanjeev Kumar, Rajeev Deori and Senior [illegible] were also present.

Figure 6.18: Newspaper clippings on CSR initiatives

- NHPC has installed solar lights at several locations for energy conservation (example Thanpal Railla in District Reasi & District Bandipora in the UT of J&K and Mirzapur, Uttar Pradesh)

Rural Development

NHPC has been instrumental in bringing about significant transformations in the areas surrounding its operations, particularly in rural development. Its CSR initiatives exemplify commitment to improve the quality of life in rural communities, which are often underprivileged and lacking essential facilities and infrastructure.

Figure 6.19: CSR support for enhancing amenities for underprivileged girls.

- Construction of Balika Ashram in Chilli, Tissa (HP) by NHPC is aimed at contributing to gender equality and providing enhanced amenities for underprivileged girls. MoU has been signed with Govt of HP on August 22, 2022. Work is in progress.
- Construction of Community Halls at various locations serves as focal points for various community activities, fostering social cohesion and providing venues for gatherings and events that benefit village communities. (Examples Pounshali Village in District Reasi & Basohli Village in Kathua District in the UT of J&K; at Village Mawaiya and Village Rehnas of Block Sarsaul of District Kanpur, Uttar Pradesh).
- Construction of Market Shed at Ithai village, Manipur supported economic activities and infrastructure development, providing a dedicated space for local vendors and entrepreneurs. Construction of PCC Road at village Laxmanpur, Bihar has improved local transportation infrastructure, making commuting more convenient for villagers.
- NHPC allocated INR 116.00 Lakh for the holistic development of villages Sai Lanjan and Bidda in district Reasi of the Union Territory of Jammu and Kashmir through adoption initiatives. This initiative aimed at improving infrastructure and connectivity.
- NHPC's commitment to rural development is exemplified by the fund allocation for the

modernisation of horticulture nurseries at Khwaja Bagh, Baramulla and Baghi Sundari Sopore in District Baramulla of the Union Territory of Jammu and Kashmir. This initiative aims to enhance the capacity and productivity of these nurseries, contributing to the region's economic growth and sustainability.

Figure 6.20: Modernisation of horticulture nurseries.

Sports, Art & Culture

NHPC has also been undertaking CSR initiatives aimed at promoting sports and protecting art and culture as part of its commitment to holistic community development. These efforts recognise the integral role of these areas in enriching society and enhancing individual well-being.

Sports training is being provided to People with Intellectual and Development Disabilities through dedicated & trained coaches for 3 years commencing from FY 2022-23. This CSR initiative is providing a platform for the Special Athletes to continuously practice and upgrade sporting skills that would strengthen their chances of participating at local, district, state, national or international levels. NHPC has signed MoU on July 19, 2022 regarding the support of 20 Centres for three years (commencing from FY 2022-23) with a total outlay of INR 3.00 Crores in Himachal Pradesh (9 nos), Assam (6 nos), Jammu & Kashmir (02 nos), Ladakh (01 no.), Arunachal Pradesh (01 no.) & Tripura (01 no.), INR 30.00 Lakh was spent during FY 2022-23.

Figure 6.21: Sports training to People with Intellectual and Development Disabilities.

- Construction of Civic Amenity Building, at Badrinath Dham: An MoU was signed with Shri Kedarnath Utthan Charitable Trust (SKUCT)on October 18, 2021 for the construction of Civic Amenity Building, at Badrinath Dham. Project cost is INR 18.58 Crores and work is in progress.

Figure 6.22: Construction of a Civic Amenity Building in Badrinath Dham.

Disaster Management

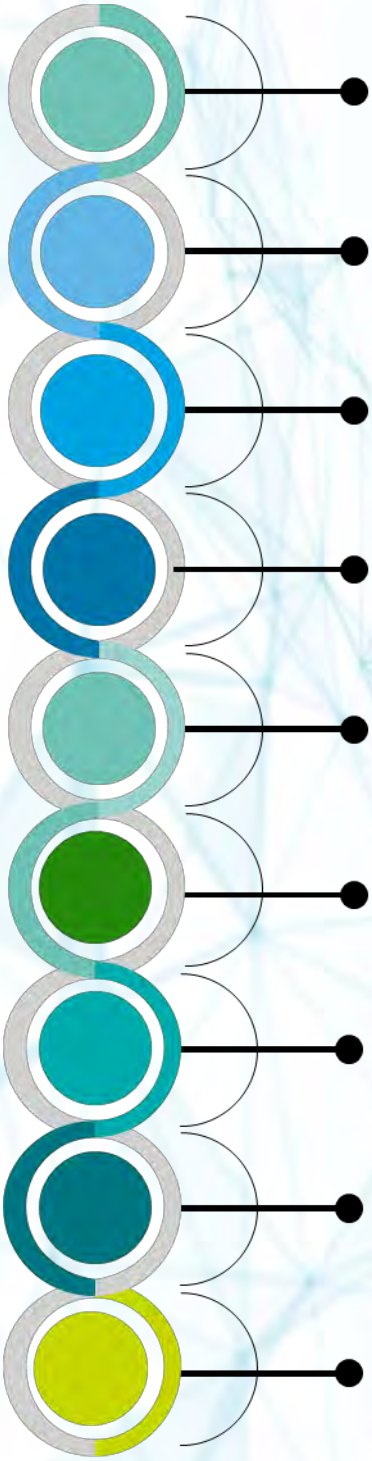
NHPC has supported the families affected by Fire at Bhunter in the state of Himachal Pradesh.

Figure 6.23: Support to fire affected families at Bunter, Himachal Pradesh.

7

Awards & Acclaims

7. Awards & Acclaims



'Best Globally Competitive Power Company of India – Hydropower and Renewable Energy Sector' at PRAKASHmay '15th Enertia Awards 2022', held at New Delhi on December 22, 2022.

'Second Best Enterprise award' for Mini-Ratna Category from Director General, SCOPE at WIPS (Women in Public Sector) 33rd National meet at Kolkata on February 10, 2023.

"PSU developer of the Year" award in Gold Category on April 13, 2022, by EQ International during EQ's PV Invest Tech India Conference & Awards at New Delhi.

"Data Centre Champion-2022" award by Express Computer (IT business publication of Indian Express Group) in recognition of NHPC's towards building a strong Digital India & vibrant Data Center Ecosystem.

'Use of Emerging Technologies Data Centre Award' at Governance Now-9th PSU Awards & Conference at New Delhi on February 16, 2023 in recognition of NHPC's towards building a strong Digital India & vibrant Data Center Ecosystem.

Certificate of Appreciation and Special Commendation award for 'Innovative Training Practices: 2020-21' by Indian Society for Training & Development on June 25, 2022.

Gold Medal for best presented annual report for FY 2020-21 (Infrastructure & Construction Sector category) at South Asian Federation of Accountants Awards, 2021, Kathmandu, Nepal on December 18, 2022.

'Second Prize' under 'Rajbhasha Kirti Puruskar' in Region 'A' by Ministry of Home Affairs, Govt. of India, for 2021-22 under 'Rajbhasha Kirti Puruskar' scheme. NHPC received the award from Hon'ble Minister of State for Home Affairs, Shri Nisith Pramanik during Hindi Diwas ceremony organized at Surat, Gujarat.

First Prize for the year 2020-21 for excellent implementation of Rajbhasha by Shri R.K. Singh, Hon'ble Union Minister of Power and New and Renewable Energy and Shri Krishna Pal Gurjar, Hon'ble Minister of State for Power and Heavy Industries during the meeting of Hindi Salahkar Samiti at New Delhi in May 2022. NHPC was also conferred the second prize for the year 2018-19 for excellent implementation of Rajbhasha during the meeting.

Annexures

Annexures

(A) Materials used by weight or volume.

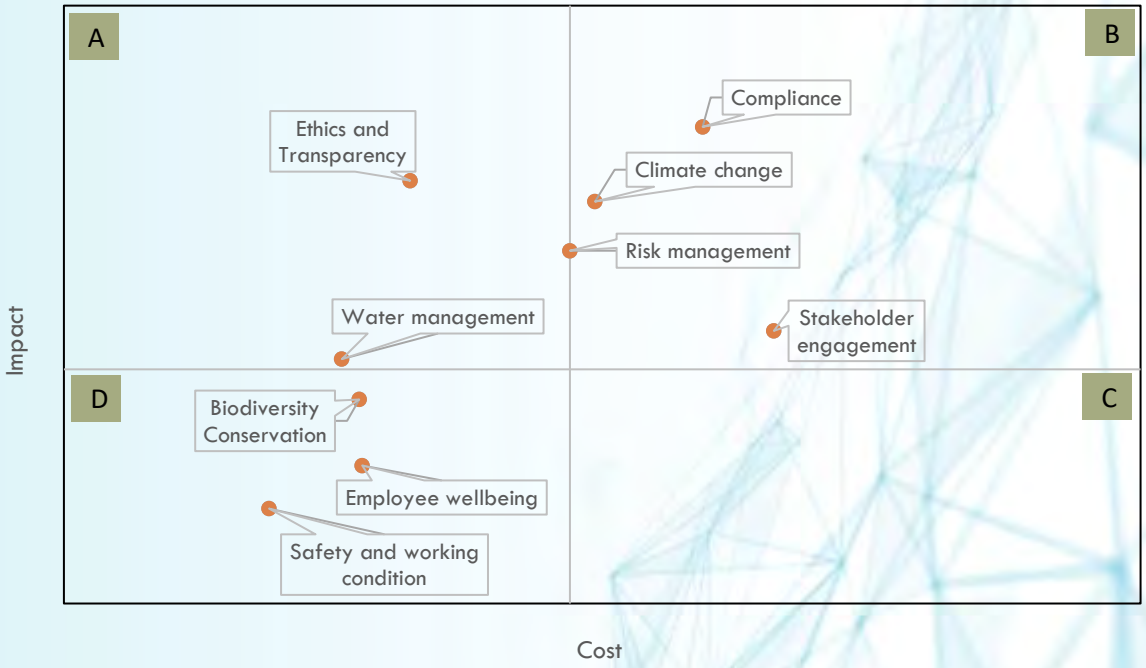
GRI 301-1 Materials used by weight or volume in (O&M).

	Measure	2018-19	2019-20	2020-21	2021-22	2022-23
Cement	MT	1,772.42	2,392.00	2,154.64	3,591.78	3,513.58
Steel	MT	92.25	67.82	59.87	359.49	334.12
Aggregates	MT	8,570.37	6,549.75	6,692.28	14,565.55	9,431.99
Tin Sheet	MT	4.33	4.28	6.20	4.34	1.85
Sand	Cubic metre (m^3)	3,620.22	4,052.52	3,743.64	5,895.79	5,034.24
Stone dust	Cubic metre (m^3)	-	-	-	383.00	-
Soil	MT	-	-	-	51.53	-
Bitumen	MT	125.03	131.12	-	167.94	129.59
Plastic	MT	-	-	-	0.78	1.09
Oil/Lubricant:	Kilo Litre (KL)	1,111.26	933.78	1,616.37	2,066.68	735.66
Foam for firefighting	Kilo Litre (KL)	0.67	0.64	0.06	0.81	1,502.00
DCP Powder procured for firefighting	MT	1.06	1.43	1.68	2.23	2,385.00

GRI 301-2: Recycled input materials used.

		2018-19	2019-20	2020-21	2021-22	2022-23
Fly Ash	MT	0.00	0.00	0.00	65.27	182.86

(B) Cost Impact matrix for material topics



The cost impact matrix (or action priority matrix) is derived from the perception-based stakeholder consultation surveys conducted during the materiality assessment.

- Quadrant A: Early Wins (High Impact, Low Cost): The stakeholders of NHPC consider Ethics and Transparency and Water Management as a prioritized material topics towards ESG eminence.
- Quadrant B: Priorities (High Impact, High Cost): Climate Change, Risk management, Stakeholders engagement and compliance are perceived as the most vital material topics in context of impact of external factors on NHPC business operations and vice versa. NHPC has integrated these topics its policies and procedures.
- Quadrant C: Postpone (Low Impact, High Cost): No material topic was identified in this box.
- Quadrant D: Fill ins (Low Impact, High Cost): Material topics such as biodiversity conservation, employee wellbeing and safety-working conditions were identified as the low impact topics for the business operation of NHPC as they are well integrated into day-to-day activities of NHPC.

(C) GRI Content Index

GRI STANDARD	DISCLOSURE	REPORT SECTION/CHAPTER	Page No
GRI 2: General Disclosures 2021	2-1 Organizational details	About NHPC Limited	16 -26
	2-2 Entities included in the organization's Sustainability Report	About the report	2
	2-3 Reporting period, frequency and contact point	About the report	2
	2-4 Restatements of information	About NHPC Limited	16-26
	2-5 External assurance	About the report	2
	2-6 Activities, value chain and other business relationships	About NHPC Limited	16-26
	2-7 Employees	About NHPC Limited	16-27
	2-8 Workers who are not employees	Resilient Workforce, Sustainable Future-Human Resource Development	96-118
	2-9 Governance structure and composition	Governance and Commitments-NHPC Organisation Structure	28- 48
	2-10 Nomination and selection of the highest governance body	Governance and Commitments-NHPC Organisation Structure	28- 48
	2-11 Chair of the highest governance body	Governance and Commitments-NHPC Organisation Structure	28- 48
	2-12 Role of the highest governance body in overseeing the management of impacts	Governance and Commitments-NHPC Organisation Structure	28- 48
	2-13 Delegation of responsibility for managing impacts	Governance and Commitments-NHPC Organisation Structure	28- 48
	2-14 Role of the highest governance body in sustainability reporting	Governance and Commitments-•NHPC Organisation Structure	28- 48
	2-15 Conflicts of interest	Ethics and Integrity	37-40
	2-16 Communication of critical concerns	Ethics and Integrity	37-40
	2-17 Collective knowledge of the highest governance body	Governance and Commitments -Capacity Building of Board Members	33
	2-18 Evaluation of the performance of the highest governance body	Governance and Commitments -Board Evaluation	32
	2-19 Remuneration policies	Governance and Commitments -Board Compensation	31
	2-20 Process to determine remuneration	Governance and Commitments -Board Compensation	31
	2-21 Annual total compensation ratio	Governance and Commitments -Board	31

		Compensation	
	2-22 Statement on sustainable development strategy	From Chairman's Desk	3-4
	2-23 Policy commitments	NHPC Vision & Mission Statements ESG Strategy & Management	26 50-54
	2-24 Embedding policy commitments	ESG Strategy & Management	50-58
	2-25 Processes to remediate negative impacts	ESG Strategy & Management - Management Approach for Material topics	55-58
	2-26 Mechanisms for seeking advice and raising concerns	Governance and Commitments -Ethics and Integrity	36-40
	2-27 Compliance with laws and regulations	ESG Strategy & Management - Management Approach for Material topics	50 55-58
	2-28 Membership associations	About NHPC Limited- Association & Corporate Partnership	25
	2-29 Approach to stakeholder engagement	Stakeholder Engagement & Materiality Assessment	50
	2-30 Collective bargaining agreements	*Not Applicable* NHPC has no established union or association.	
GRI 3: Material Topics 2021	3-1 Process to determine material topics	ESG Strategy & Management - Approach towards Materiality Assessment	50-58
	3-2 List of material topics	ESG Strategy & Management - Impact materiality Assessment for NHPC Double Materiality Assessment	– 52-54
	3-3 Management of material topics	ESG Strategy & Management - Management Approach for Material topics	55-58
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Economic Value Generation	22-24
	201-2 Financial implications and other risks and opportunities due to climate change	Strategic Risk Management	40-44
	201-3 Defined benefit plan obligations and other retirement plans	Resilient Workforce, Sustainable Future- Human Resource Development	96-118
GRI 202: Market Presence	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Information not available. NHPC is internally deliberating on the data	
	202-2 Proportion of senior		

2016	management hired from the local community	collection process.	
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	Empowering Communities	120-136
	203-2 Significant indirect economic impacts	Empowering Communities	120-136
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Nurturing Environmental Sustainability - Sustainable Procurement	92-94
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Governance and Commitments -Ethics and Integrity	37-40
	205-2 Communication and training about anti-corruption policies and procedures	Governance and Commitments -Vigilance Mechanism	38
	205-3 Confirmed incidents of corruption and actions taken	Governance and Commitments -Vigilance Mechanism	38
GRI 206: Anti-competitive Behaviour 2016	206-1 Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	Governance and Commitments -Ethics and Integrity	37-40
GRI 301: Materials 2016	301-1 Materials used by weight or volume	Annexure- Material Usage break-up	140
	301-2 Recycled input materials used	Annexure- Material Usage break-up	140
	301-3 Reclaimed products and their packaging materials	*Not Applicable* NHPC generates electricity from non-consumptive use of renewable sources such as water (hydropower), wind and solar.	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Energy Conservation	70
	302-2 Energy consumption outside of the organization	NHPC is internally deliberating on the process of tracking its upstream and downstream energy consumption.	
	302-3 Energy intensity	Nurturing Environmental Sustainability - Energy Management	70-73
	302-4 Reduction of energy consumption	Nurturing Environmental Sustainability - Energy Management	72-73
	302-5 Reductions in energy requirements of products and services	Nurturing Environmental Sustainability - Energy Management	72-73
GRI 303: Water and	303-1 Interactions with water as a shared resource	Nurturing Environmental Sustainability - Water Conservation	78-80

Effluents 2018	303-2 Management of water discharge-related impacts	Nurturing Environmental Sustainability - Water Conservation	78-80
	303-3 Water withdrawal	Nurturing Environmental Sustainability - Water Conservation	78-80
	303-4 Water discharge	Nurturing Environmental Sustainability - Water Conservation	78-80
	303-5 Water consumption	Nurturing Environmental Sustainability - Water Conservation	78-80
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Nurturing Environmental Sustainability - Biodiversity Conservation	86-91
	304-2 Significant impacts of activities, products and services on biodiversity	Nurturing Environmental Sustainability - Biodiversity Conservation	86-91
	304-3 Habitats protected or restored	Nurturing Environmental Sustainability - Biodiversity Conservation	86-91
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Nurturing Environmental Sustainability - Biodiversity Conservation	86-91
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Nurturing Environmental Sustainability - Emissions Management	74-77
	305-2 Energy indirect (Scope 2) GHG emissions	Nurturing Environmental Sustainability - Emissions Management	74-77
	305-3 Other indirect (Scope 3) GHG emissions	NHPC is internally deliberating on the process of tracking its Scope 3 emissions.	
	305-4 GHG emissions intensity	Nurturing Environmental Sustainability - Emissions Management	74-77
	305-5 Reduction of GHG emissions	Nurturing Environmental Sustainability - Energy Conservation- NHPC's initiatives to reduce energy consumption	74-77
	305-6 Emissions of ozone-depleting substances (ODS)	Not measured	
	305-7 Nitrogen oxides (NOx), sulphur oxides (SOx) and other significant air emissions	Nurturing Environmental Sustainability - Air Quality	77
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Nurturing Environmental Sustainability - Waste Management	80-85
	306-2 Management of significant waste-related impacts	Nurturing Environmental Sustainability - Waste	80-85

		Management	
	306-3 Waste generated	Nurturing Environmental Sustainability - Waste Management	80-85
	306-4 Waste diverted from disposal	Nurturing Environmental Sustainability - Waste Management	80-85
	306-5 Waste directed to disposal	Nurturing Environmental Sustainability - Waste Management	80-85
GRI 307: Environmental Compliance	307-1 Non-compliance with environmental laws and regulations	ESG Strategy & Management	50-58
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Nurturing Environmental Sustainability - Sustainable Procurement	92-94
	308-2 Negative environmental impacts in the supply chain and actions taken	Nurturing Environmental Sustainability - Sustainable Procurement	92-94
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Resilient Workforce, Sustainable Future- Human Resource Development- New Employee Hires	98
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Resilient Workforce, Sustainable Future- Human Resource Development- Employee Benefits	101-103
	401-3 Parental leave	Resilient Workforce, Sustainable Future- Human Resource Development- Employee Welfare and Wellness	105
GRI 402: Labour/ Management Relations 2016	402-1 Minimum notice periods regarding operational changes	Respecting Human Rights- Fair Labour Practices	112
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Resilient Workforce, Sustainable Future- Safety and Working Conditions	113-118
	403-2 Hazard identification, risk assessment and incident investigation	Resilient Workforce, Sustainable Future- Hazard Analysis and Risk Management	113-118
	403-3 Occupational health services	Safety and Working Conditions- Occupational Health and Safety	113-118
	403-4 Worker participation, consultation and communication on occupational health and safety	Resilient Workforce, Sustainable Future- Safety and Working Conditions	113-118
	403-5 Worker training on	Resilient Workforce,	117-

	occupational health and safety	Sustainable Future- Safety and Working Conditions	117-118
	403-6 Promotion of worker health	Resilient Workforce, Sustainable Future- NHPC Safety Performance	118
	403-7 Prevention and mitigation of occupational health and safety impacts linked by business relationships	Safety and Working Conditions- Emergency Management Plan	116
	403-8 Workers covered by an occupational health and safety management system	Resilient Workforce, Sustainable Future- Safety and Working Conditions	113-118
	403-9 Work-related injuries	Resilient Workforce, Sustainable Future- NHPC Safety Performance	118
	403-10 Work-related ill health	Resilient Workforce, Sustainable Future- NHPC Safety Performance	113-118
-118GRI 404: Training and Education 2016	404-1 Average Hours of training per year per employee	Resilient Workforce, Sustainable Future- Learning, Development and Knowledge Dissemination	103-105
	404-2 Programs for upgrading employee skills and transition assistance programs	Resilient Workforce, Sustainable Future- Learning, Development and Knowledge Dissemination	103-105
	404-3 Percentage of employees receiving regular performance and career development reviews	Resilient Workforce, Sustainable Future- Performance Review	109
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Governance and Commitments-NHPC Organisation Structure	29-34
	405-2 Ratio of basic salary and remuneration of women to men	Information not available. NHPC is internally deliberating on the data collection process.	
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Resilient Workforce, Sustainable Future- Respecting Human Rights	98
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	*Not Applicable* NHPC has no established union or association.	

GRI 408: Child Labour 2016	408-1 Operations and suppliers at significant risk for incidents of child labour	Resilient Workforce, Sustainable Future- Respecting Human Rights	110-113
GRI 409: Forced or Compulsory Labour 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	Resilient Workforce, Sustainable Future- Respecting Human Rights	110-113
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	Resilient Workforce, Sustainable Future- Respecting Human Rights	110-113
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	Resilient Workforce, Sustainable Future- Respecting Human Rights	110-113
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments and development programs	Empowering Communities	120-136
	413-2 Operations with significant actual and potential negative impacts on local communities	Empowering Communities -CSR Expenditure	120-136
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Nurturing Environmental Sustainability - Sustainable Procurement	92-94
	414-2 Negative social impacts in the supply chain and actions taken	Nurturing Environmental Sustainability - Sustainable Procurement	92-94
GRI 415: Public Policy 2016	415-1 Political contributions	NHPC does not make any contribution towards any political parties either financially or through in-kind contributions	
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	NHPC is a power generation company and sells its power to various DISCOMs which sell it further to end consumers. It does not advertise its products and services.	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services		
GRI 417: Marketing and Labelling 2016	417-1 Requirements for product and service information and labelling	Not a material topic for NHPC	
	417-2 Incidents of non-compliance concerning product and service information and labelling		
	417-3 Incidents of non-compliance concerning marketing communications		

GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	NHPC has a well-defined IT & Cyber Security policy in place. There is no issue relating to advertising, delivery of essential services, cyber security and data privacy of customers. No penalty has been imposed by any regulatory authorities i.e., CERC, SERC and Appellate Tribunal for Electricity (APTEL) on safety of products/services.

(D) SASB Content Index

SASB Topic	Accounting metric	Unit of measure	Code	Corresponding GRI-metric / Section/ Remarks
GHG Emissions	Gross global scope 1 emissions, percentage covered under emissions-limiting regulations and emissions-reporting regulations	Metric tons (t) CO_2e, Percentage (%)	IF-EU-110a.1	GRI 305-1: Direct GHG emissions (scope 1)
	GHG emissions associated with power deliveries	Metric tons (t) CO_2e	IF-EU-110a.2	GRI 305-2 Energy indirect (Scope 2) GHG emissions
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, missions reduction targets and an analysis of performance against those targets	N/A	IF-EU-110a.3	Strategic ESG Goals and Targets
Air Quality	Air emissions of the following pollutants: CO, NOx (Excluding N_2O), Sox, particulate matter (PM_{10}) mercury (Hg) lead (Pb) and volatile organic compounds	Metric tons (t), Percentage (%)	IF-EU-120a.1	GRI 305-7: NOx, SOx and other significant air emissions.

SASB Topic	Accounting metric	Unit of measure	Code	Corresponding GRI-metric / Section/ Remarks
Water management	Total fresh water withdrawn, total fresh water consumed, percentage of each in regions with high or extremely high baseline water stress	Thousand cubic meters, percentage	IF-EU-140a.1	GRI 303-3 Water withdrawal GRI 303-4 Water discharge GRI 303-5 Water consumption
	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards and regulations	Number	IF-EU-140a.2	GRI 307-1 Non-compliance with environmental laws and regulations
	Description of water management risks and discussion of strategies and practices to mitigate those risks	N/A	IF-EU-140a.3	Water Conservation
Coal Ash Management	Amount of coal combustion residuals (CCR) generated; percentage recycled	Metric tons (t), Percentage (%)	IF-EU-150a.1	The topic does not directly apply to NHPC, since it's a renewable energy producer.
	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	Number	IF-EU-150a.2	
Energy Affordability	Average retail electric rate for (1) residential, (2) commercial and (3) industrial customers	Rate	IF-EU-240a.1	NHPC is a power producing company and the produced energy is sold through Power purchase agreements to Power Grid Corporation of India (PGCIL) and State DISCOMS. The topic does not directly apply to
	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	Reporting currency	IF-EU-240a.2	

SASB Topic	Accounting metric	Unit of measure	Code	Corresponding GRI-metric / Section/ Remarks
	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	IF-EU-240a.3	NHPC.
	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	N/A	IF-EU-240a.4	
Workforce Health & Safety	(1) Total recordable incident rate (TRIR), (2) fatality rate and (3) near miss frequency rate (NMFR)	Rate	IF-EU-320a.1	GRI 403-9 Work-related injuries GRI 403-10 Work-related ill health
End-Use Efficiency & Demand	Percentage of electric utility revenues from rate structures that (1) are decoupled and (2) contain a lost revenue adjustment mechanism (LRAM)	Percentage (%)	IF-EU-420a.1	NHPC is a power producing company and the produced energy is sold through Power purchase agreements to Power Grid Corporation of India (PGCIL) and State DISCOMS. The topic does not directly apply to NHPC.
	Percentage of electric load served by smart grid technology	Percentage (%) by megawatt Hours (MWh)	IF-EU-420a.2	
	Customer electricity savings from efficiency measures, by market	Megawatt Hours (MWh)	IF-EU-420a.3	
Nuclear Safety & Emergency Management	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	Number	IF-EU-540a.1	The topic does not directly apply to NHPC, since it's a renewable energy producer.
	Description of efforts to manage nuclear safety and emergency	N/A	IF-EU-540a.2	

SASB Topic	Accounting metric	Unit of measure	Code	Corresponding GRI-metric / Section/ Remarks
	preparedness			
Grid Resiliency	Number of incidents of non-compliance with physical and/or cybersecurity standards or regulations	Number	IF-EU-550a.1	GRI 418: Customer Privacy 2016
	(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI) and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	Minutes, Number	IF-EU-550a.2	NHPC is a power producing company and the produced energy is sold through Power purchase agreements to Power Grid Corporation of India (PGCIL) and State DISCOMS. The topic does not directly apply to NHPC.

(E) Linkage with BRSR Content Index

SEBI - BRSR Framework	Chapter/ Section in report	Page no
Section A: General Disclosures		
I. Details of Listed Entity	About NHPC Limited	16 -26
II. Products / Services	About NHPC Limited	16 -26
III. Operations	About NHPC Limited	16 -26
IV. Employees	About NHPC Limited, Resilient Workforce, Sustainable Future	16 -26, 96-118
V. Holding, Subsidiary and Associate Companies (Including joint ventures)	About NHPC Limited	16 -26
	ESG Strategy & Management	50-67
	Materiality Analysis	52-54
Section B: Management and Process Disclosures		
B1 -B3	Governance and Commitments	28-48
B5-B6	Materiality Analysis	52-54
B7-B9, B11	Governance and Commitments	28-48
Section C: Principle wise Performance Disclosure		
PRINCIPLE 1 Businesses should conduct and govern themselves with integrity, and in a manner that is ethical, transparent, and accountable.		
P1-E1	Governance and Commitments Resilient Workforce, Sustainable Future (Human Resource Development)	28-48 96-118
P1-E2-E7	Governance and Commitments Ethics and Integrity	28-48

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P1 L1	Sustainable Procurement	92-94
P1-L2	Governance and Commitments Ethics and Integrity	28-48
PRINCIPLE 2 Businesses should provide goods and services in a manner that is sustainable and safe		
P2-E1	Governance and Commitments	28-48
P2-E2	Sustainable Procurement	92-94
Principle 3: Businesses should respect and promote the well-being of all employees, including those in their value chains		
P3-E1-E3	Well-being of employees, Human Resource Development	96-118
P3-E4	Well-being of employees, Human Resource Development, Diversity and Inclusion	96-118
P3-E5	Return to work and Retention rates of permanent employees and workers that took parental leave	107-119
P3-E6	Grievance Redressal Mechanism	113
P3-E8	Learning, Development and Knowledge Dissemination	103-104
P3-E9	Performance Reviews	109
P3, E10-E12	Safety and Working Conditions	113-118
P3-E13	Grievance Redressal Mechanism	113
P3-L1	Employee Benefits	101-109
P3-L3	Safety and Working Conditions	113-118
Principle 4: Businesses should respect the interests of and be responsive to all its stakeholders		
P4-E1	Stakeholder Relationship Stakeholder Engagement & Materiality Assessment	35-37 50-54
P4-E2	Stakeholder Relationship and the frequency of engagement with each stakeholder group.	35-37
P4-L1-L3	Stakeholder Relationship and the frequency of engagement with each stakeholder group.	35-37
PRINCIPLE 5 Businesses should respect and promote human rights		
P5 E1-E10, L3-L4	Respecting Human Rights Clean Energy for Sustainable Future	110-113 58-66
PRINCIPLE 6: Businesses should respect and make efforts to protect and Businesses should respect and make efforts to protect and restore the environment		
P6-E1, P6-L1	Energy Conservation	70-74
P6-E3-E4/L2 -L3	Water Conservation	78-80
P6-E5	Air Quality	70
P6-E6	Emissions Management	74-77
P6-E7	Energy Conservation- Energy and emission reduction through different NHPC initiatives	72-73
P6-E8-E9	Waste Management	80-83
P6-E10, L5	Biodiversity Conservation	86-91
P6-L4	NHPC is internally deliberating on the process of tracking its Scope 3 emissions.	
P6-L8-L9	ESG Expectations from Suppliers	94
PRINCIPLE 7: Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent		
P7-E1	Association & Corporate Partnership	25
Principle 8: All Businesses should promote inclusive growth and equitable development		

SEBI - BRSR Framework	Chapter/ Section in report	Page no
P8-E1	Empowering Communities	120-136
P8-E3	Ethics and Integrity- Grievance Redressal Procedure	39-40
P8-E4	Sustainable Procurement	92-94
P8-L2, P8-L6	Empowering Communities	120-136
PRINCIPLE 9 Businesses should engage with and provide value to their consumers in a responsible manner		
P9-E1	Ethics and Integrity- Grievance Redressal Procedure	39-40
P9-E5-E6	Strategic Risk Management	40-44
P9-L1	About NHPC Limited	16-26

(F) List of Abbreviations

Abbreviations	Meaning
AEOHD	Association of Environmental & Occupational Health, Delhi
AGM	Annual General Meeting
AIMA	All India Management Association
APTEL	Appellate Tribunal for Electricity
AP	Arunachal Pradesh
BEE	Bureau of Energy Efficiency
BOD	Board of Directors
BRSR	Business Responsibility and Sustainability Reporting
BSE	Bombay Stock Exchange
BSUL	Bundelkhand Saur Urja Limited
CAIDI	Customer Average Interruption Duration Index
PM CARES	Prime Minister's Citizen Assistance and Relief in Emergency Situations
CBIP	Central Board of Irrigation & Power
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CERs	Certified Emission Reduction
CERC	Central Electricity Regulatory Commission
CESL	Convergence Energy Services Limited
CFD	Computational fluid dynamics
CIGRE	International Council on Large Electric Systems
CISF	Central Industrial Security Force
CMD	Chairman and Managing Director
COP	Conference of the Parties
CTE	Consent to Establish
CTO	Consent to Operate
CPCB	Central Pollution Control Board
CPGRAMS	Centralised Public Grievance Redressal & Monitoring System
CPP	Central Public Procurement
CPSE	Central Public Sector Enterprises
CPSU	Central Public Sector Undertaking

Abbreviations	Meaning
CSR	Corporate Social Responsibility
CVC	Central Vigilance Commission
CVPPPL	Chenab Valley Power Projects [P] Limited
DCP	Dry Chemical Powder
DELNET	Developing Library Network
DG	Diesel Generator
DISCOM	Distribution Company
DMP	Disaster Management Plan
DPE	Department of Public Enterprises
DPR	Detailed Project Report
DSCI	Data Security Council of India
EAP	Emergency Action Plan
EC	Environment Clearance
ECA	Export Credit Agencies
EDCSS	Employees Defined Contribution Superannuation Scheme
EDLI	Employee's Deposit Linked Insurance Scheme
EHS	Environment, Health, and Safety
EIA	Environmental Impact Assessments
EMC	Environment Monitoring Committee
EMP	Environmental Management Plans
ERM	Enterprise Risk Management
ESG	Environmental Social and Governance
EU	European Union
FPP	Fire Protection Program
FY	Financial Year
GEDCOL	Green Energy Development Corporation of Odisha Ltd.
GeM	Government e Marketplace
GHG	Green House Gases
GHNP	Great Himalayan National Park
GIS	Geographic Information System
GoI	Government of India
GRAT	GHG Risk assessment tool
GRI	Global Reporting Initiative
GRIHA	Green Rating for Integrated Habitat Assessment
GW	Gigawatt
HazCom	Hazard Communication
HBA	House Building Advance
HEP	Hydroelectric Project
HH	Hearing Handicap
HIRA	Hazard Identification and Risk Assessment
HOD	Head of Department
HOP	Head of Project
HP	Himachal Pradesh
HR	Human Resources

Abbreviations	Meaning
HT	High-tension
HVAC	Heating, Ventilation and Air Conditioning
ICAI	Institute of Chartered Accountants of India
ICB	International Competitive Bidding
ICSI	Institute of Company Secretaries of India
IEM	Independent External Monitors
IF-EU	Infrastructure - Electric Utilities & Power Generators
IHA	International Hydropower Association
IICA	Indian Institute of Corporate Affair
IIT	Indian Institute of Technology
ILO	International Labour Organization
ILR	Ice Lined Refrigerators
IMS	Integrated Management System
INCOLD	Committee for International Commission on Large Dams,
INHA	Indian National Hydropower Association
INR	Indian Rupee
IPCC	Intergovernmental Panel on Climate Change
IPO	Initial Public Offering
IREDA	Indian Renewable Energy Development Authority
ISEG	Indian Society of Engineering Geology
ISMS	Information Security Management System
ISO	International Organization for Standardization
ISRM	International Society for Rock Mechanics
ISWM	Integrated Solid Waste Management
IUCN	International Union for Conservation of Nature
J&K	Union Territory of Jammu and Kashmir
JKSPDCL	Jammu & Kashmir State Power Development Corporation Limited
JSA	Job Safety Analysis
JV	Joint Venture
KL	Kilo Litres
KPIs	Key Performance Indicators
KV	Kilovolt
KVA	Kilovolt-Ampere
KWH	Kilowatt Hour
KWP	Kilowatt Peak
Ladakh	Union Territory of Ladakh
LED	Light-emitting diode
LODR	Listing Obligations and Disclosure Requirements
LPM	Litres per minute
LRAM	Lost revenue adjustment mechanism
LT	Low tension
LTHPL	Lanco Teesta Hydro Power Pvt Ltd.
MASW	Multichannel Analysis of Surface Waves
MCA	Ministry of Corporate Affairs

Abbreviations	Meaning
MoA	Memorandum of Association
MOEF&CC	Ministry of Environment, Forest and Climate Change
MoU	Memorandum of Understanding
MSDS	Material Safety Data Sheet
MSW	Municipal Solid Waste
MT	Metric Tonnes
$MTCO_2e$	Metric Tonnes of Carbon Dioxide Equivalent
MU	Million Units
MVA	Motor Vehicle Advance
MW	Mega Watt
NDC	Nationally Determined Contributions
NDRF	National Disaster Response Force
NGO	Non-governmental Organization
NIPM	National Institute of Personnel Management
NIT	National Institute of Technology
NMFR	Near Miss Frequency Rate
NRC	Nuclear Regulatory Commission
NSDC	National Skill Development Corporation
NSE	National Stock Exchange
OBC	Other Backward Classes
ODS	Ozone-depleting Substances
OEM	Original Equipment Manufacturer
OHSAS	Occupational Health and Safety Assessment Series
PAFs	Project Affected Families
PAF	Plant Availability Factor
PAT	Profit after Taxes
PCC	Portland Cement Concrete
PGCIL	Power Grid Corporation of India
PHE	Public Health Engineering
PPA	Power Purchase Agreements
PPE	Personal Protective Equipment
PS	Power Station
PSU	Public sector undertakings
PV	Photovoltaics
PVC	Polyvinyl Chloride
PwD	Persons With Disabilities
QSP	Quality System Procedure
RA & MA	Risk Assessment and Method Assessment
RCC	Roller-Compacted Concrete
REC	Renewable Energy Certificate
REHS	Retired Employees Health Scheme
RFCTLARR	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act
RO	Regional Office

Abbreviations	Meaning
RPC	Regional Power Committees
RTA	Registrar & Share Transfer Agent
SAFA	South Asian Federation of Accountants
SASB	Sustainable Accounting Standards Board
SC	Scheduled Castes
SCADA	Supervisory Control and Data Acquisition
SDG	Sustainable Development Goals
SEBI	Securities and Exchange Board of India
SERC	State Electricity Regulation Commission
SIA	Social Impact Assessment
SPCB	State Pollution Control Board
SRMTT	Society for Rock Mechanics and Tunnelling Technology
ST	Scheduled Tribes
STP	Sewage Treatment Plant
TAI	Tunneling Association of India
TBM	Tunnel Boring Machines
TEC	Techno-economic Clearance
TII	Transparency International India
TLD	Teesta low dam
TRIR	Total Recordable Incident Rate
UK	Uttarakhand
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UPPCL	Uttar Pradesh Power Corporation Limited
USA	United States of America
USD	US Dollar
UT	Union Territory
VERs	Voluntary Emission Reductions
VCS	Verified Carbon Standard
VCU	Verified Carbon Units
VGF	Viability Gap Funding
VH	Visual Handicap
VOC	Volatile organic compounds
WB	West Bengal
WIPS	Women in Public Sector Forum

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Shri Rajeev Ranjan Prasad,
DGM (Environment)

Shri Manoj Kr Singh,
GSM (Environment),
Nodal Officer (ESG/BRSR)

Ms. Pooja Sundi,
Manager (Environment)

NHPC Limited

(A Government of India Enterprise)

NHPC Office Complex, Sector 33,
Faridabad, Haryana, India 121003
CIN: L40101HR1975GOI032564
https://www.nhpcindia.com