ESG Report '24

CESC LIMITED | RP-Sanjiv Goenka Group
Growing Legacies

POWERING SUSTAINABILITY
for a Better Tomorrow

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POWERING SUSTAINABILITY FOR A BETTER TOMORROW

At CESC, our mission of "Powering Sustainability for a Better Tomorrow" highlights our unwavering dedication to sustainable practices that safeguard the environment while meeting the energy needs of today and future generations. We are committed towards harnessing renewable energy sources, promoting energy efficiency, and minimizing our environmental footprint. Through innovative technologies, decentralized power solutions, and responsible operations, we aim to power progress sustainably, ensuring a greener, more resilient future for all.

OVERVIEW OF THE REPORT

We at CESC Ltd. (from here on referred to as “CESC” or “we” or “us” or “our” or “The Company”), are pleased to present the fourth edition of our ESG report for FY 2023-24. The theme of this year’s ESG report is “Powering Sustainability for a Better Tomorrow”. This report aims at communicating to all our stakeholders, the strides as a responsible corporate we have made in improving our environmental, social and governance performance against targets, the enabling strategies, and our forward-looking actions.

Reporting Standards and Principles

Our ESG report has been developed “in reference” with the Global Reporting Initiative (‘GRI’) Standards. We have applied the following aspects to determine relevant topics that define the report content and ensure quality of information:

- GRI guiding principles for defining content: Materiality, Stakeholder Engagement, Sustainability Context and Completeness
- GRI guiding principles for defining quality: Balance, Clarity, Accuracy, Timeliness, Comparability and Reliability

Scope and Boundary of Report

This report is prepared on consolidated basis including standalone entity CESC and subsidiaries including:

- CESC Kolkata (includes Budge Budge Generating Station, Southern Generating Station and distribution)
- Noida Power Company Limited (hereafter mentioned as ‘NPCL’)
- CESC Rajasthan (includes Bharatpur Electricity Services Limited, Bikaner Electricity Supply Limited and Kota Electricity Distribution Limited)
- Malegaon Power Supply Limited (hereafter mentioned as ‘MPSL’)
- Dhariwal Infrastructure Limited (hereafter mentioned as ‘DIL’)
- Haldia Energy Limited (hereafter referred to as ‘HEL’) and
- Crescent Power Limited (hereafter referred to as ‘CPL’)

Feedback and Suggestions
As a responsible business organization, we aim to disclose the most accurate information and data pertinent to all our stakeholder groups on an annual basis. We welcome all feedback and suggestions to help us improve our reporting methods.

Contact point for clarification and additional ESG information:

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LEADERSHIP MESSAGE

CHAIRMAN

The Company has created a new Special Purpose Vehicle (SPV)- Purvah Green Power Private Limited to upscale its renewable power generation business.

Dr. Sanjiv Goenka
Chairman

Dear Stakeholders,

I am pleased to present CESC's ESG Report for FY 2023-24, which underscores our unwavering commitment to sustainable practices and our leadership in the Indian power sector. This report highlights our dedication to renewable energy, decentralized power solutions, and advanced technologies while maintaining responsible operations. As India continues its rapid economic growth as the world's fastest-growing major economy, the demand for power has escalated. Our strong position as a pioneer in the Indian power sector enables us to meet this rising demand effectively. Sustainability remains the cornerstone of our operations, allowing us to reduce our ecological footprint and combat climate change. Our investment in renewable energy offerings and battery energy storage systems ensures we meet peak load requirements and enhance our network's adaptability to renewable energy integration. In addition to our existing 18 MW solar plant in Ramnad, Tamil Nadu, we have formulated plans to further make substantial investment in the renewable energy generation space. We aim to add another 3 GW capacity of hybrid renewable projects over the next 4-5 years. The Company has created a new Special Purpose Vehicle (SPV)- Purvah Green Power Private Limited to upscale its renewable power generation business.

We also adopt green building principles to optimize resources and efficiency, During the reporting period, I am proud to convey that we have added several new green buildings to our portfolio and thereby increasing the number 21 certified green buildings. As an endeavour to promote clean energy within our organisation and distribute the same to our consumers. Our customers can now avail 100% green electricity to premium rates facilitated through open access and decentralised power generation.

Our responsibility as a corporate citizen extends beyond our organization to enhance community welfare and building supplier chain relations. Our community projects focusing on education, environment, health, skill building, and employment generation have positively impacted nearly 3.42 lakh lives. We are delighted to share that in FY 2023-24, our corporate stewardship earned us the prestigious FAME National Award for CSR initiatives.

To promote the essence of sustainability in our value chain, we strive towards having a value chain which is not only resilient but also responsible. In this endeavour, we are constantly engaging with our value chains partners in capacity building sessions around various topics of environment and social sustainability.

We believe harnessing technological advancements through digitalization and automation, incorporating Artificial Intelligence (AI) and the Internet of Things (IoT) is the future. In this endeavour, these innovations enhance our safety initiatives, reduce environmental impacts, and improve customer service. One such example has been the launch of Metaverse during the reporting period. The platform merges reality with the virtual world using Virtual Reality, Augmented Reality, Artificial Intelligence, and Blockchain Technology and enriches experience for our customers and communities, offering real-time support, efficient issue resolution, and reduced physical operation costs. Our Intelligent Outage Management System continues to reduce downtime effectively. By leveraging advanced Industry 4.0 technologies, we have transitioned from preventive to predictive maintenance using the Internet of Things (IoT). This shift ensures more proactive and efficient operations, minimizing disruptions and enhancing service continuity, thereby elevating the customer experience through continuous and reliable power.

Fostering a work environment that is both inclusive and safe has been upmost priority for us. Committed towards zero incidents, we uphold the highest standards of safety management system. As an equal opportunity employer, we aim to increase female diversity in our workforce to 12% by 2030. In this pursuit, we have achieved 8% female diversity. We feel proud to be recognized as one of the great places to work by Great Place to Work (GPTW) for the fifth consecutive year.

As we move forward, we remain committed to embracing innovative technologies, decentralized power solutions, and renewable energy sources while maintaining responsible operations. We extend our heartfelt gratitude to our stakeholders for their unwavering support in our journey towards a sustainable future and greater prosperity.

Dr. Sanjiv Goenka
Chairman

LEADERSHIP MESSAGE

MD DISTRIBUTION

Dear Stakeholders,

As we present this year's Sustainability Report, I am filled with a sense of pride and responsibility. At CESC, we are not just a power utility company, but a collective force committed towards powering progress with sustainability at its core.

The journey towards sustainability is an ongoing one, and we have embraced this path with unwavering dedication. Our commitment is reflected in every aspect of our operations, from the adoption of cleaner energy sources to the implementation of energy-efficient practices across our distribution networks.

This past year has been particularly significant. We have made substantial strides in reducing our carbon footprint, conserving water, and minimizing waste. Our investment in smart grid technologies has not only enhanced the reliability of our services but has also empowered our consumers to make informed decisions about their energy use.

The Company embraces the principles of Green Building to enhance resource optimization and efficiency. During the reporting period, we have added multiple new green buildings to our portfolio and at present proudly own 21 certified green buildings establishments. We also extend 100% green power offerings to consumers at a premium rate and are proud to have 11 such designated customers in Kolkata, with a cumulative consumption of 87 MUs. This not only contributes towards reducing the carbon footprint of our customers but also helps us set a benchmark in the power utility sector. Our green power offering is a significant development in the energy sector, especially in a densely populated and industrially active region.

Building up on the principles of 3R, we have incorporated a renewed waste management practice within the organization with a focus on effective and judicious use of materials. Through the new waste management culture embedded within our organization, all waste generated is ensured for safe handling, processing, and disposal in line with the applicable regulations by authorized players.

We have developed robust Artificial Intelligence/Machine Learning (AI/ML) applications that have transformed our ability to predict high-tension (HT) cable faults, address low voltage complaints, and conduct health indexing of transformers. In addition to AI/ML, we have successfully deployed Robotic Process Automation (RPA) technology to automate manual and rule-based routine tasks, particularly in the processing of New Connection applications.

During the reporting period of FY 2023-24, we have successfully launched and implemented the CESC Metaverse. The Metaverse is a platform that merges reality with the virtual world using Virtual Reality, Augmented Reality, Artificial Intelligence and Blockchain Technology. The Metaverse creates a platform to provide an enriching and enjoyable experience to our customers and the communities we operate in. The platform provides real time support to our valued customers, efficient issue resolution and cuts down the costs incurred on physical operations. Moreover, it also offers gaming zones and fun lounges for public engagement. Our Intelligent Outage Management System continues to deliver remarkable success in reducing downtime. By embracing advanced and disruptive Industry 4.0 technologies. Through Internet of Things (IoT), we have shifted from a preventive to a predictive maintenance approach. This paradigm shift ensures that our operations are more proactive and efficient, further minimizing disruptions and enhancing service continuity. This enhances the customer experience we offer through continuous and reliable power.

To our customers and partners, your trust and collaboration have been invaluable. Together, we are not just illuminating homes and businesses; we are illuminating the way towards a more sustainable and resilient future.

Thank you for your continued support and for joining us in our mission to deliver energy sustainably. Together, we will continue to make a positive impact on our community and the environment.

Mr. Vineet Sikka
Managing Director- Distribution

LEADERSHIP MESSAGE

MD GENERATION

During the reporting period, we have made considerable progress around our set targets on attaining zero liquid discharge, and reducing specific water consumption to 2.11Kl/MWh against the industry benchmark of 2.5 Kl/MWh

Dear Stakeholders,

It gives me immense pleasure to share our annual ESG report for FY 2023-24 with you, which outlines our environmental, social, and governance performance during the reporting period. The report throws light on the future direction of our generation facilities. CESC and all its subsidiaries are aligned with India's commitment to reach net-zero emissions by 2070. In alignment with the same goal, we have taken significant strides towards achieving a sustainable future through innovations in technology and the integration of renewable energy.

As we work towards establishing a resilient power utility infrastructure, we have continuously optimized our processes and systems through technology and digitalization. With the ongoing focus on renewables, we have also started identifying alternative energy sources. We have started exploring the possibility of using biomass as a fuel blended with coal to reduce our dependency on fossil fuels. Along with our efforts in sourcing renewable raw materials, our plantations at BBGS and HEL play a pivotal role in reducing the amount of atmospheric carbon dioxide. As a way forward, we are also in the process to develop urban forests at all our power stations using the Miyawaki technique.

To combat cyber security threats, all generating stations are certified to ISO 27001 standards for Information Security Management Systems. During the reporting period, we have made considerable progress around our set targets on attaining zero liquid discharge, and reducing specific water consumption to 2.11Kl/MWh against the industry benchmark of 2.5 Kl/MWh. For the reduction of NOx emissions, we have installed DeNOx equipment at the Haldia and Dhariwal plants. We are proud to declare that again during FY 2023-24, all our generating stations have successfully fulfilled the target of 100% ash utilization.

Our commitment towards "zero incidents" in the workplace is reflected in our continued efforts to improvise all our systems and processes from a safety perspective. This is one of the crucial measures which has resulted in CESC being recognized as "One of the Greatest Places to Work" yet again in FY 2023-24.

I once again take this opportunity to thank all our stakeholders for their unwavering trust and support. With your cooperation and our commitments, we can certainly achieve our combined goal of making a sustainable future for the next generations.

Mr. Brajesh Singh
Managing Director- Generation

01

COMPANY OVERVIEW

We stand as India's pioneer in establishing a fully integrated electric utility firm, with our central operations based in Kolkata, West Bengal. With a history of over a hundred years, our commitment lies in delivering secure, affordable, low carbon and reliable energy to our diverse customers, which includes households and businesses.

Within the licensed area of CESC, we serve more than 4.4 million customers over an area of 1,335 sq. km. Our subsidiary Noida Power Company Ltd, distributes power in Greater Noida, Uttar Pradesh with a licensed area of 335 sq. km. CESC also operates three Distribution Franchisee (DF) in Rajasthan at Kota, Bharatpur, and Bikaner. CESC also won the Distribution Franchisee for Malegaon circle near Nashik in Maharashtra, which commenced operations in FY 2019-20.

Our generating stations cumulatively has a generating capacity of 2,143 MW. They also contribute towards meeting bulk of the power requirements for our licensed areas in Kolkata and Noida.

CESC and its subsidiaries are strongly driven by a skilled workforce comprising of 7,450 dedicated employees. They play a pivotal role in ensuring supply of reliable power across the states of West Bengal, Maharashtra, Tamil Nadu, and Rajasthan.

Our core values underscore the organization's commitment to sustainability, ethical practices, and social responsibility. These values not only reflect the company's dedication to creating a positive impact on society and the environment but also its resolve to maintain transparency, integrity, and accountability in our operations.

Our core values are represented below which ensures meeting the expectations of all our stakeholders while contributing to the broader goals of sustainable development.

OUR VISION

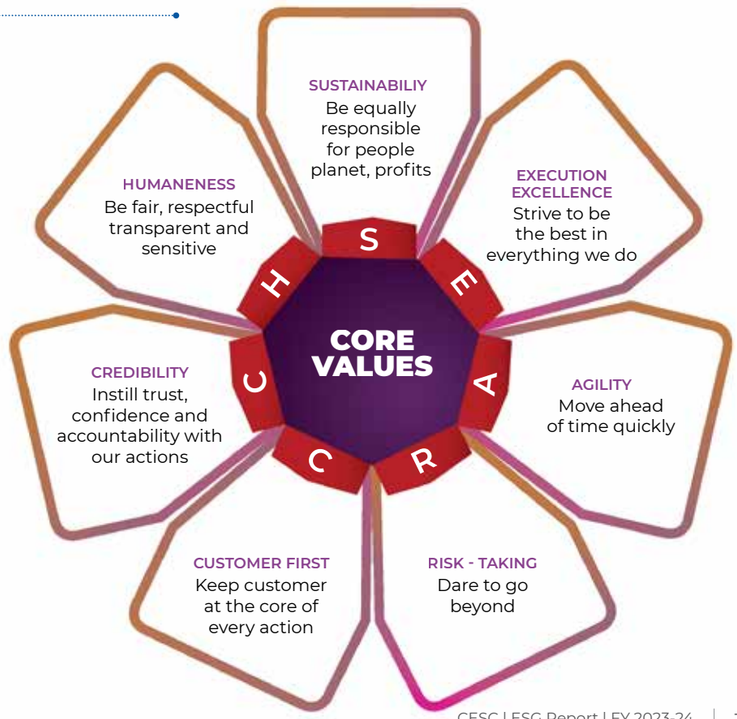
We will be a profitable consumer-oriented power utility consistent with global standards meeting the expectations of consumers, employees, and other stake holders.

OUR MISSION

We will meet consumer's expectations continuously by providing safe, reliable and economic electricity through optimization of available resources.

CORE VALUES

Our core values reflect our commitment towards business integrity, customer satisfaction, operational excellence and sustainability. These values guide every aspect of our business, ensuring delivery of consistent, reliable and high-quality services while fostering trust with all our stakeholders.



CORPORATE GOVERNANCE

We manage our business as a responsible member of society, showing respect to the laws, customs and needs of the different markets where we operate. Our governance framework focuses on ethical and transparent conduct of business while upholding the integrity of its management and Board of Directors.

The Board comprises of an appropriate balance of Executive and Non-Executive Directors, conforming to the relevant requirements of the Companies Act, 2013, and the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations 2015 ("Listing Regulations").

Board Committee members play a vital role in CESC's governance framework and are also entitled to deal with domains as required by the mandated regulations. The Board currently has five statutory committees represented below:

AUDIT COMMITTEE

The Audit committee meets quarterly to review the financial position, discuss internal audit findings and review the adequacy of internal control mechanisms.

NOMINATION AND REMUNERATION COMMITTEE

The Audit committee meets quarterly to review the financial position, discuss internal audit findings and review the adequacy of internal control mechanisms.

CORPORATE SOCIAL RESPONSIBILITY COMMITTEE

The CSR committee meets as required to monitor the ongoing CSR programs and approves the annual CSR budget to devise and implement projects.

RISK MANAGEMENT COMMITTEE

Conducts bi-annual committee meetings to monitor and review the risk management plan.

STAKEHOLDER RELATIONSHIP COMMITTEE

Responsible for reviewing shareholder grievances and instantly resolving them. The committee meets quarterly.

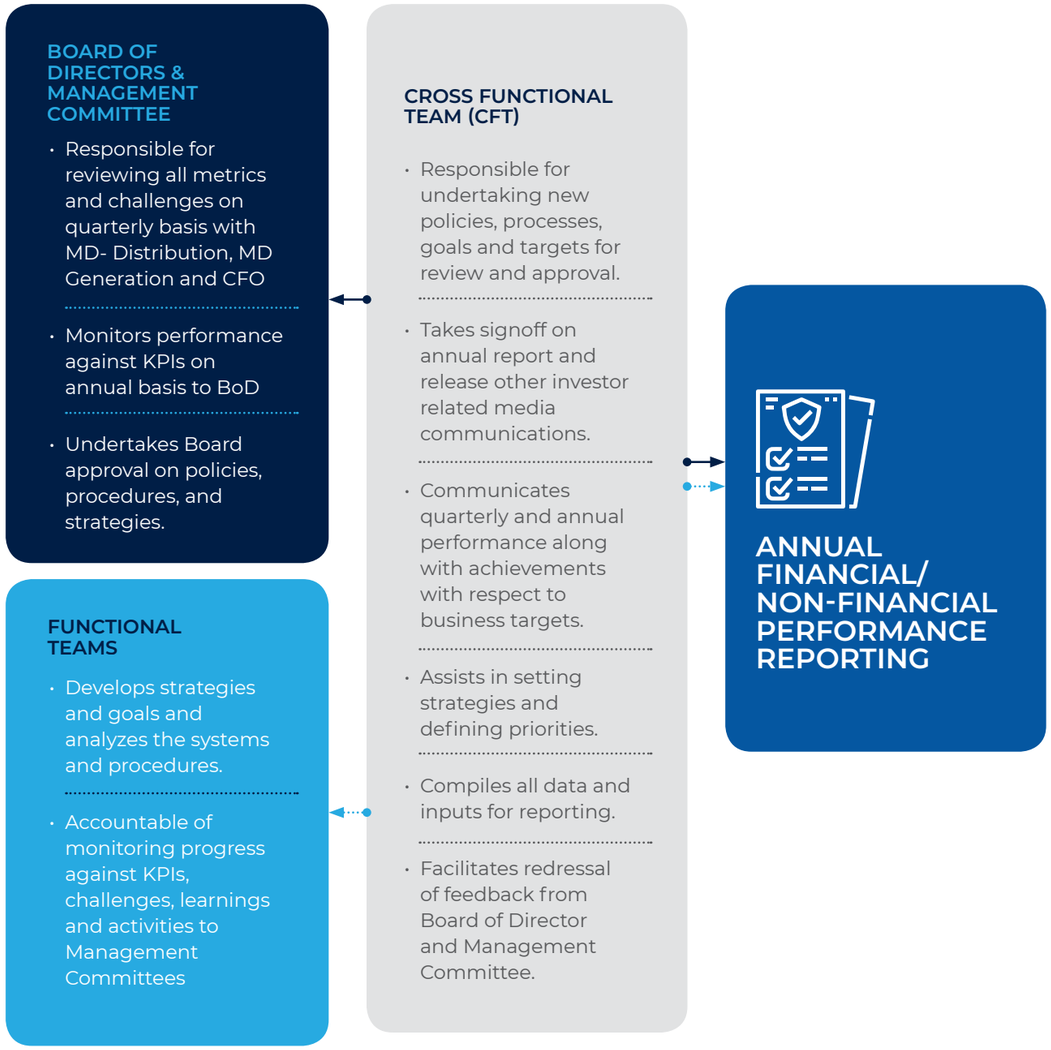
Name	Category	Gender	Audit Committee	Risk Management Committee	Nomination and Remuneration Committee	Stakeholders Relationship Committee	Corporate Social Responsibility Committee
Sanjiv Goenka	Chairman	Male	✓	✗	✓	✓ Chairperson	✓ Chairperson
Debanjan Mondal	Independent Director	Male	✗	✗	✓	✗	✗
Shaswat Goenka	Vice-Chairman	Male	✗	✗	✗	✗	✗
Pradip Kumar Khaitan	Non-Executive, Non-Independent Director	Male	✗	✓ Chairperson	✓	✗	✗
Chandra Kumar Dhanuka	Independent Director	Male	✓ Chairperson	✗	✓ Chairperson	✗	✓
Pratip Chaudhuri	Independent Director	Male	✓	✓	✓	✓	✗
Rekha Sethi	Independent Director	Female	✓	✗	✓	✗	✗
Debasish Banerjee	Managing Director (Till 27th May 2024)	Male	✗	✓	✗	✗	✗
Vineet Sikka	Managing Director (Effective from 28th May, 2024)	Male	✗	✓	✗	✗	✗
Rabi Chowdhury	Managing Director (Till 27th May 2024)	Male	✗	✓	✗	✓	✓
Brajesh Singh	Managing Director (Effective from 28th May, 2024)	Male	✗	✓	✗	✓	✓
Sunil Mitra	Independent Director	Male	✗	✗	✗	✗	✗

ESG GOVERNANCE

CESC acknowledges the need to address environmental challenges and reduce its ecological footprint. As part of our commitment to sustainable operations, CESC firmly believes in maintaining the highest standards of governance and ethical behaviour across all its operations and value chain.

The Management Committee, which comprises of the Managing Directors, Chief Financial Officer, Company Secretary, and all department leaders, plays a role in formulating strategies and overseeing the advancement towards realizing CESC's ESG (Environmental, Social, and Governance) goals.

The Chairman and other board members are kept informed on the discussions held at the Management Committee by the Managing Directors who represent the Board.



VALUE AND ETHICS

CESC is committed to conducting its business in a responsible, accountable, and transparent manner. To ensure this we have The Ethics and Code of Conduct (The Code), which guides the moral of our employees and forbids incidences of bribery and corruption across CESC and its subsidiaries. We have also adopted an Anti-bribery and Anti-corruption Policy (The Policy) to conduct the business in an honest and ethical fashion.

Both the Code and the Policy act as a guidance for our employees to recognize any unethical events such as harassment, discrimination, corruption, bribery, and insider trading. The Company Secretary and Compliance office of CESC ensures the implementation of the same.

Furthermore, through the Whistle Blower Policy, we enable our stakeholders to raise any concern about unethical practices within the organization. The policy ensures confidentiality and protection against discrimination for complainants.

By organizing regular trainings for our employees, including awareness sessions and refresher courses, we ensure that full compliance to the Code and the Policy is followed. The refresher courses and awareness sessions aim to familiarize employees about situations resulting in unethical activities and ensures new joiners are cognizant of the available resources that enable them to report malicious incidents. During the reporting period, there were no cases/ complaints pertaining to violations of the code, bribery, and corruption nor were any complaints received through the whistle-blowing mechanism.

MANAGING OUR ACTIONS THROUGH POLICIES

We uphold the trust bestowed on us by the people by promoting good governance. To achieve this, our organization has implemented various policies that ensure compliance and drives business commitments to operate sustainably and create long term stakeholder value.

The following are the policies available in the public domain:

Web Link: CESC Policies

Customer Policy	Dividend Distribution Policy	Related Party Policy	Materials Policy	ESG Policy	CSR Policy	Preservation of Materials and Documents Policy
Familiarization programme of Independent Directors Policy	Materials Subsidiary and Material Events Policy	Waste Management Policy	Energy, Carbon, and Environment Policy	Water Stewardship Policy	Anti-corruption and Anti-bribery Policy	Public Advocacy Policy
Code of Conduct	Occupational Health and Safety Policy	Insider Trading and Prohibition Code Policy	Whistle Blower Policy	Ethics, Transparency and Accountability Policy	Inclusive Growth and Equitable Development Policy	Remuneration Policy
Human Resources Policy	Stakeholder Engagement Policy	Employee Welfare Policy	Biodiversity Policy	Sustainability Policy	POSH Policy	Product Stewardship Policy

MANAGEMENT SYSTEMS

Management Systems are systematic frameworks designed to manage an organization's policies, procedures and processes, while promoting continual improvement within. The list of management systems at CESC includes various certifications from International Organization for Standardization (ISO) including ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 50001:2015 and ISO 27001:2013.

The different management systems implemented at CESC and its subsidiaries are mapped below:

	ISO 9001: 2015 Quality Management System	ISO 14001: 2015 Environment Management System	ISO 45001: 2018 Occupational Health and Safety Management Systems	ISO 27001: 2013 Information Security Management Systems Management Committee	ISO 50001: 2015 Energy Management System
CESC Kolkata	Yes	Yes	Yes	Yes	Yes
Noida Power Company Limited (NPCL)	Yes	Yes	Yes	Yes	Yes
Crescent Power Limited (CPL)	Yes	Yes	Yes	-	Yes
Haldia Energy Limited (HEL)	Yes	Yes	Yes	Yes	Yes
Dhariwal Infrastructure Limited (DIL)	Yes	Yes	Yes	Yes	Yes

ABIDING WITH APPLICABLE COMPLIANCES

Our business is regulated by various laws, covering areas like labor rights, environmental standards, trade restrictions, competition, and taxation. Any non-compliance with these regulations may impact both our operational efficiency and reputation. Compliance is also challenging due to the evolving regulatory landscape, which continuously introduces new requirements. However, through our strong risk management framework, effective compliance system, and diligent internal controls, we have established trust and confidence among all stakeholders. The following section provides more details on these efforts.

RISK MANAGEMENT FRAMEWORK

At CESC, we have established a comprehensive risk management framework. This framework operates at various levels throughout the organization, collectively forming the strategic defence structure of our risk management. We maintain a strong organizational setup to manage and report on risks. We have constituted the Risk Management Committee to oversee the company's risk management systems and risk governance. The Committee has the authority to review and recommend modifications in the Risk Management Policy to the Board, and it regularly updates the Board on risk management and governance matters.

Through internal controls and systems, the Board oversees the risk management and governance process. The Committee assists the Board in discharging its responsibilities towards management of material business risk (material business risks include but not limited to operational, financial, sustainability, compliance, strategic, ethical, reputational, product quality, human resource, industry, cyber security, legislative or regulatory and market related risks) including monitoring and reviewing of the risk management plan / policies in accordance with the provisions of SEBI (LODR).

Our Risk Management Flowchart

	1. Risk Identification
	2. Risk Analysis
	3. Develop a Risk Mitigation Plan
	4. Risk Monitoring
	5. Control Risk

We maintain a strong organizational setup to manage and report on risks. We have constituted the Risk Management Committee to oversee the Company's risk management systems and risk governance.

COMPLIANCE MANAGEMENT SYSTEMS

Our robust “Compliance Management Framework” provides the foundation for assessing existing regulatory requirements and monitoring the changing regulatory landscape. There are numerous economic, environmental, and social compliances that we are subjected to, and these are an integral part of this framework. Within our organization, the Legal Head and Company Secretary, provide the highest executive oversight on ensuring compliances from various departments.

We at CESC have robust internal control mechanism to implement and monitor the effectiveness of our compliance systems through various aspects as mentioned below.

ASPECTS COVERED IN OUR COMPLIANCE MANAGEMENT FRAMEWORK

REVIEW	EXTERNAL AUDITS	IMPLEMENT	PERIODIC REVIEW
Review of internal systems and controls by internal auditors to examine adequacy and effectiveness of process	External audits to identify and mitigate material misstatements against statutory laws and reporting standards	Implementation of compliance management software provides a systematic follow-up and status of compliance to the applicable laws	Periodic review of compliance reports of the laws that apply to CESC at the Board level.

During the FY 2023-24 period, all the compliance requirements of SEBI Regulations, Companies Act and other applicable statutes were met and required disclosures were made.

02

ESG PRIORITIES

STAKEHOLDER ENGAGEMENT

We comprehend and value our stakeholders' interest in promoting long term value generation and actively support joint efforts towards realizing the United Nations Sustainable Development Goals (SDGs).

We enhance our connections with stakeholders by maintaining honest and open conversations with them and incorporating their unique perspectives in formulating policies and strategies. Actively seeking their input allows us to collaborate on long-term solutions for reducing environmental, social, and governance risks.
Our engagement strategy factors in aspects like dependency, immediacy, accountability, vulnerability, and influence when determining our primary stakeholder groups. These key groups comprise investors, lenders, regulatory bodies, customers, employees, trade unions, suppliers, local communities, Non-Governmental Organizations (NGOs), and the media.

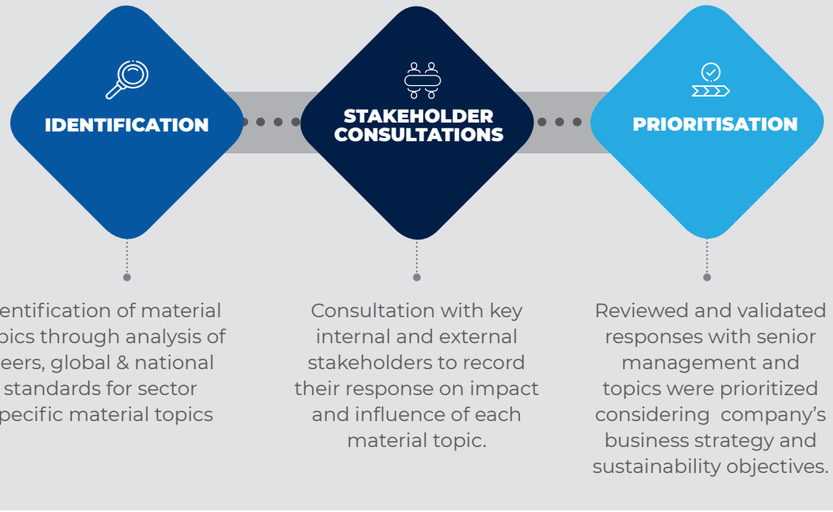
We enhance our connections with stakeholders by maintaining honest and open conversations with them and incorporating their unique perspectives in formulating policies and strategies.

Stakeholder Group	How we engage	Key expectations
Investors	• Annual General Meeting • Grievances through Registrar and Share Transfer Agent • Investor update presentations • Regular interaction with institutional investors • Periodic press release	• Improved profitability and earnings per share • Dividend payout • Transparent disclosure • Improvements in ESG disclosure
Lenders	• Periodic meetings	• Maintaining healthy working capital • Liquid fund position
Regulatory bodies	• Periodic public advocacy • Regular liasioning	• Ensuring environmental, social and economic compliance
Consumers	• Regular on-call surveys for distribution service • Regular online digital survey • Annual perception survey • Regular customer awareness • Ongoing complaint redressal system	• Agile fault management • Accurate and transparent billing • Affordable solutions
Employees	• Weekly Coffee with MD • Annual employee opinion surveys • Employee grievance redressal mechanism • Regular interactions for celebrating days of individual, organizational, national and international significance	• Learning and development • Career growth opportunities • Rewards and recognition • Facilities and well-being • Health and safety at workplace • Respecting human rights
Trade unions	• Annual	• Health and safety at workplace • Respecting human rights
Suppliers	• Vendor meet • Regular vendor audit • Periodic vendor interactions for sampling and grievance redressal	• Payment cycle • Business opportunities • Capacity building of suppliers on improvements in environmental and social performance
NGOs/ Community	• Regular community meetings • Annual beneficiary perception survey	• Access to clean drinking water, sanitation and hygiene • Opportunities for education • Improvement in maternal and newborn child health and nutrition • Improvement in healthcare infrastructure • Creating a clean environment
Media	• Ongoing one on one interactions • Periodic press release and press conference	• Transparent and accurate disclosure • Brand reputation

These interactions with our stakeholders lay down the foundations of our exhaustive materiality assessment and stakeholder inclusive sustainability strategy. The details of our materiality assessment exercise are provided in the next section.

MATERIALITY ASSESSMENT

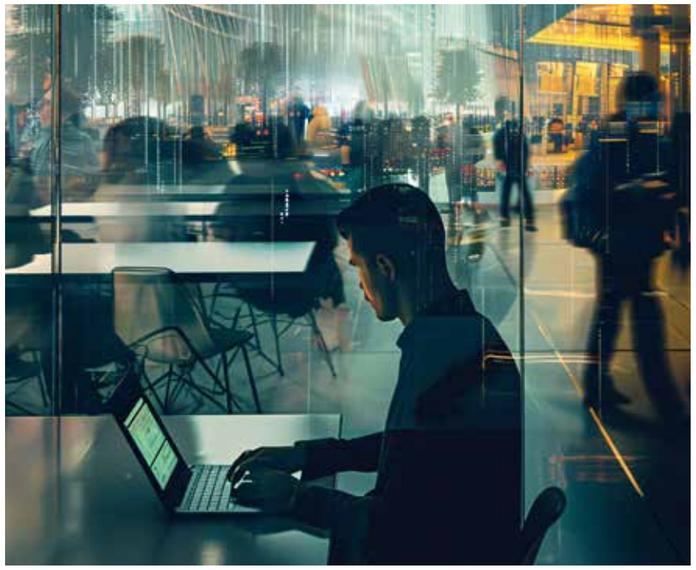
Material topics refer to crucial risks and opportunities that could significantly affect a company's ability to build, maintain, or deplete economic, environmental, and social value for both the company and its stakeholders. Materiality is the method of identifying, assessing, and prioritizing these significant topics to establish a comprehensive framework for enduring stakeholder capitalism. In the FY 2021-22, CESC used a three pronged approach to determine these topics. These include the following:



Identification of material topics through analysis of peers, global & national standards for sector specific material topics

Consultation with key internal and external stakeholders to record their response on impact and influence of each material topic.

Reviewed and validated responses with senior management and topics were prioritized considering company's business strategy and sustainability objectives.



During the reporting period, we reassessed our materiality map to reflect the emerging material topics faced by our diverse set of internal and external stakeholders. The outcome of the materiality assessment exercise is presented in the form of matrix that depicts the material topics in respect to two dimensions- significance to external stakeholders and Importance to business.

Material Topics	Linkages with capitals	UN SDG Linkages
Preservation of environment and natural resources Climate Change Waste Management Water Management Biodiversity		6 CLEAN WATER AND SANITATION; 7 AFFORDABLE AND CLEAN ENERGY; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION; 13 CLIMATE ACTION; 14 LIFE BELOW WATER; 15 LIFE ON LAND
Sustainable Supply Chain Responsible Supply Chain		8 DECENT WORK AND ECONOMIC GROWTH; 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
Responsible business Corporate Governance Data privacy Innovation Management		7 AFFORDABLE AND CLEAN ENERGY; 8 DECENT WORK AND ECONOMIC GROWTH; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Our People Community Development Human Rights Workforces Welfare Occupational Health and Safety Public Safety		3 GOOD HEALTH AND WELL-BEING; 5 GENDER EQUALITY; 8 DECENT WORK AND ECONOMIC GROWTH; 10 REDUCED INEQUALITIES; 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
Customer Delight Customer Focus Energy Access		8 DECENT WORK AND ECONOMIC GROWTH; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 10 REDUCED INEQUALITIES; 11 SUSTAINABLE CITIES AND COMMUNITIES

Financial Capital | Manufactured Capital | Intellectual Capital | Human Capital | Social & Relationship Capital | Natural Capital

IR VALUE CREATION MODEL

	INPUTS	OUTPUTS & OUTCOMES	SDG IMPACTED
Financial Capital	• INR 28,350.64 Crore total assets • INR 9,888.05 Crore Net worth • INR 463.76 Crore Capex	• INR 15,293 Crore revenue from operations • INR 1,447 Crore profit after tax • INR 15,544 Crore total income • INR 5.85 earnings per share	
Manufactured Capital	• 2,143 MW generation capacity • 18 MW renewables • 37,486 Total circuit kilometers in licensed area (Overhead and Underground) • 308 Substations	• 17,495 MUs of electricity distributed • ~100% Collection efficiency in distribution areas • 15,725 MUs power generated from thermal power plants	
Intellectual Capital	• Continuous digital upgradation • Generating stations certificated with ISO 27001 • Implementation of CESC Metaverse	• Zero incidents of data losses, breaches of thefts • 79.84% Digital payments[1] • 16+ Patents field • 5 Patents granted	
Human Capital	• 7,452 Employee strength • INR 274 Lakhs spent on employee training and development • 1.4 Lakhs+ training hours	• 7.8% Women representation in total workforce • 7.7% Female hiring rate • 7.9% Employees received health and safety trainings • ~19 Hours of trainings per employee • Among India's Top 100 "Great place to work" Companies for fifth year in a row • Zero fatalities and high consequence injuries	
Social and Relationship Capital	• INR 19.07 Crore incurred on community initiatives • User friendly platforms for efficient resolution of consumer complaints • Associations with 1,500+ Suppliers • 44.38 Lakhs+ customers served	• ~3.42 Lakh beneficiaries positively impacted • 90% Complaints adhered to TAT[1] • ~30.58% Suppliers achieved Gold ratings during the due diligence process	
Natural Capital	• 588 MT Total waste generated • 5,94,164 GJ energy savings • 18 MW Renewable capacity • Rainwater harvesting systems • Solar rooftop installations across distribution and generating stations	• 100% Fly ash utilization • 2.11 m^3/MWh Water intensity[2] • 0.89 tCO_2eq/MWh Overall GHG Intensity • Zero Liquid Discharge at BBGS, DIL and CPL • Upgraded and enhanced waste management practices • ~5 mn sq.ft. green buildings • Platinum category Global Sustainability Award, 2023 for HEL	

OUR VISION

We will be a profitable consumer-oriented power utility consistent with global standards meeting the expectations of consumers, employees, and other stake holders.

OUR MISSION

We will meet consumer's expectations continuously by providing safe, reliable and economic electricity through optimization of available resources.

OUR CORE VALUES

- Execution Excellences
- Agility
- Risk-Taking
- Customer First
- Credibility
- Humaneness
- Sustainability

FOUR DRIVERS of re-shaping the energy landscape

Energy Transformation

4D's

- Digitalization
- Disaster Management
- Decarbonization
- Decentralization

[1] *For CESC Kolkata only*
[2] *Based on water consumption in generation sites*

ENVIRONMENT

2030 TARGETS	Progress FY 2023-24
Maintain PM emissions below normative levels of 50 mg/Nm^3	Complied with all applicable regulations
Maintaining NOx emissions below normative levels of 600 mg/Nm^3 for all thermal plants commissioned before 2003 and 450 mg/Nm^3 for all thermal plants commissioned in 2004 onwards until 2017	Complied with all applicable regulations
Maintaining SOx emissions below normative levels of 600 mg/Nm^3	Complied with all applicable regulations
100% thermal power plants with freshwater source have implemented zero liquid discharge systems	On track
Reduce water intensity of thermal power plants below 2.25 Kl/MWh	2.11 Kl/MWh
Zero waste to landfill (waste reused/recycled)	~100%
100% of operational fleet will be replaced by green technology such as Electric Vehicles	On track
10,000 commercial/industrial/residential canteens and roadside eateries in adopting e-cooking to replace conventional fuel	On track
100% of the new substations/offices will be certified as green buildings	21 green buildings out of 399 establishments
100% plant administration buildings will be certified as green buildings	60%

SOCIAL

2030 TARGETS	Progress FY 2023-24
12% Women Participation in workforce	8%
100% Employees receiving career performance reviews and appraisal	100%
95% TAT adherence to consumer complaints[3]	90%
>80% Procurement spent from local suppliers (state)	55%
100% suppliers screened for ESG Criteria (coverage by number of suppliers)[3]	4.7%
Maintain Average Response time below 1 hr for large area outages[3]	0.94 hours overall by value
100% new connection (LOOP Connection) requests are fulfilled for consumers within 24 hours subjected to compliance[3]	97.56%

[3] *Includes only CESC Kolkata*

SOCIAL

2030 TARGETS	Progress FY 2023-24
Improving the online payment penetration further to 90%[4]	79.84%
Upskill 100% employees with digital skills	On track
Zero Incident in workspace	30 incidents
Women represent 30% of the Board of Directors	9%
Zero Incident resulting from logistics and transportation and installation/repair of equipment	Zero incidents
Providing at least 15,000 children access to quality pre-primary, primary and secondary education with effective learning outcomes in CESC	~21,000
Facilitate healthcare and nutrition support to 4,000 mothers and 6,000 children in CESC	4,980 mothers and 858 children have benefited
Provide 7,500 underprivileged youth with skill development training and employment opportunities in CESC	~2,200

Governance

2030 TARGETS	Progress FY 2023-24
Strive to improve out anti-corruption and anti-bribery management through the ISO 37001 guidelines	We have made significant advancement in improving our existing management systems against anti-corruption and anti-bribery in line with the requirements of ISO 37001
Implementation of ISO 27001 across generation and distribution utilities and leading to unified compliance management programme while complying with Ministry of Power / CERT-IN guidelines as well as the readiness to comply with the personal Data Protection Bill whenever enacted	Implementation of ISO 27001 in all generation and distribution facilities completed and corresponding certificate received
At least one cybersecurity assessment / validation on each year	Cybersecurity assessment has been completed across all generation and distribution facilities

[4] *Includes only CESC Kolkata*

03

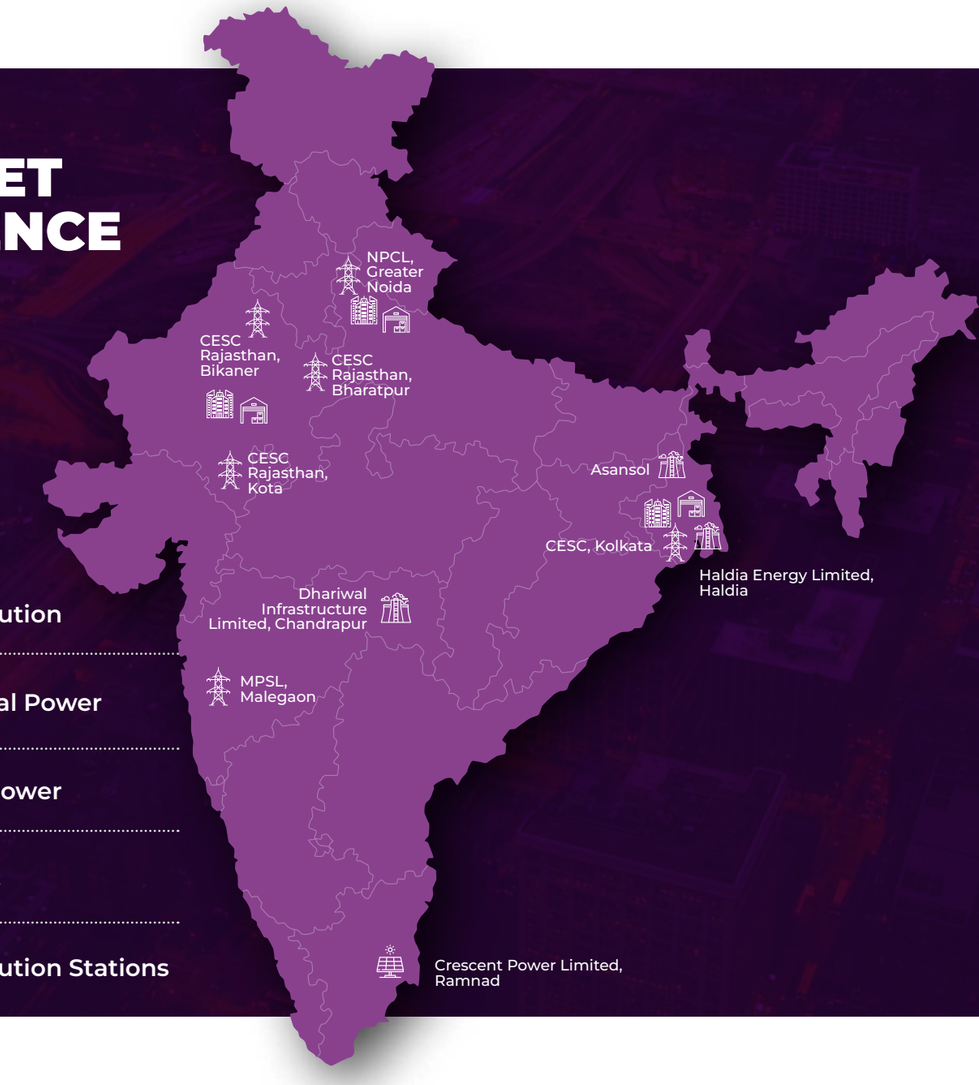
MANUFACTURING CAPITAL

As one of India's leading integrated power utilities, our commitment to sustainable growth is built upon a foundation of reliable power generation and distribution infrastructure.

Technological interventions, automations, and robust governance systems have been key enablers to our efficiency and enhanced capacities across all business segments, empowering us to meet the high-quality power needs of 4.4 million consumers.

This holistic approach not only strengthens our resilience in a dynamic operating environment, but also enhances our competitiveness within the industry.

OUR MARKET PRESENCE



Operational generation capacity	Collection efficiency in distribution areas	Total licensed area
2,143 MW	**~100%**	**1,335 Sq.Km**
Total no. of consumers	Total no. of offices	Total no. of distribution stations
4.4 Million	**101**	**308**

Fuel Source	Generation Unit	Location	Installed Capacity (MW)	Units Generated (MU)	Power Loaded Factor (PLF)%
Coal-based	Budge Budge Generating Station (BBGS)	Pujali, West Bengal	750	5,735	88.37%
	Southern Generating Station (SGS)	Kolkata, West Bengal	135	641	56.03%
	Haldia Energy Limited (HEL)	Haldia, West Bengal	600	4,564	88.01%
	Dhariwal Infrastructure Limited (DIL)	Chandrapur, Maharashtra	600	4,422	83.89%
	Crescent Power Limited (CPL)	Asansol, West Bengal	40	336	99.15%
Renewables	Crescent Power Limited (CPL)	Ramnad, Tamil Nadu	18	27	20.68%
Total			2,143	15,725	

Note: Currently CESC's thermal power asset at Titagarh is not operational and hence the reporting parameters are excluded from the coverage.

OUR POWER FOOTPRINT

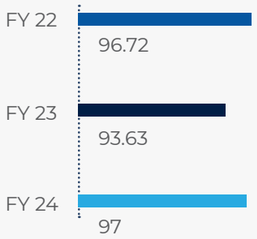
At CESC, ensuring a consistent and reliable power supply is of paramount importance to meet the rising demands of our customers'. To achieve this, we closely monitor several key performance indicators, including Plant Availability Factor (PAF), Plant Load Factor (PLF), Auxiliary Power Consumption (APC), and overall operational efficiency. These indicators provide us with valuable insights into our generation efficiency, operational reliability, and economic viability, enabling us to identify areas for process optimization and improvement.

Among these metrics, the PAF holds particular significance. PAF serves as a crucial tool for assessing the performance and reliability of our power generation systems, encompassing both renewable energy sources, as well as conventional power plants. This comprehensive metric offers valuable insights into various aspects of our operations, allowing us to make informed decisions to enhance the efficiency and reliability of our power infrastructure.

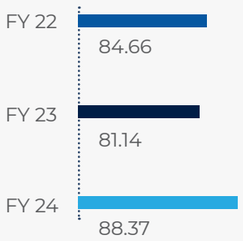
Performance of thermal power plants with respect to PAF and PLF:

BBGS

PAF (%)

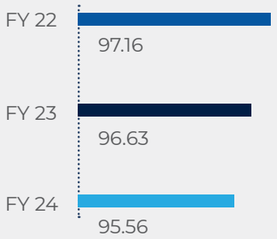


PLF (%)

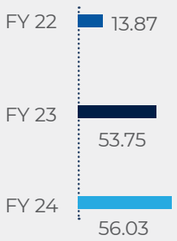


SGS

PAF (%)

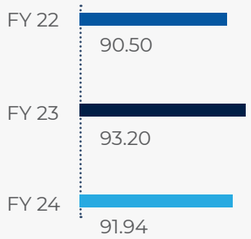


PLF (%)

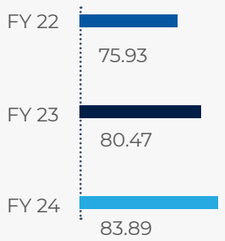


DIL

PAF (%)

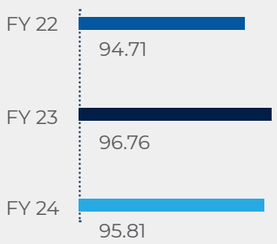


PLF (%)

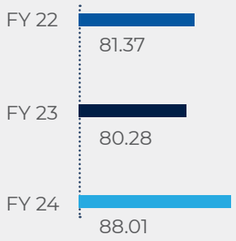


HEL

PAF (%)

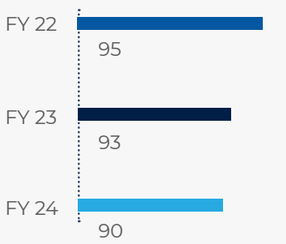


PLF (%)

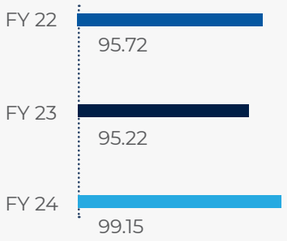


CPL

PAF (%)



PLF (%)



POWER DISTRIBUTION

Our commitment to service excellence is evident through our consistent efforts to supply quality power, achieved by strategic planning and allocation tailored to local load characteristics.

At present, CESC and its subsidiaries supply electricity to 4.4 million consumers through an extensive network of High Tension (HT) and Low-Tension (LT) lines spanning 23,313 circuit km and 14,173 circuit km respectively. Looking ahead, we eagerly anticipate expanding our reach and seizing new opportunities to better serve our growing customer base. Substantial capacity has been unlocked at existing substations by relocation of underloaded transformers and augmentation of under-rated cables. Furthermore, Value engineering techniques were used to modify specification of equipment as well as introducing equipment of new capacities across voltage levels. The table below shows the Units distributed by distribution licenses and franchise.

Across our licensed/ franchised distribution operations in West Bengal, Uttar Pradesh, Maharashtra, and Rajasthan, we have achieved fair returns and sustainable growth. Our distribution losses in these areas are notably on the lower side, underscoring our commitment to operational excellence. Recognizing the importance of robust infrastructure in ensuring continuous power supply, reducing distribution losses, ensuring reliable and quality power supply are our top priorities.

Licensed and Franchised Distribution

Location	Units delivered (in MU)	Licensed / Franchise Area (in Sq. Km)	Underground (in CKM)		Overhead (in CKM)	
			LT	HT	LT	HT
Kolkata, West Bengal	10,932	567	8,395	9,207	5,843	481
Greater Noida, Uttar Pradesh	2,800	335	114	122	84	0
Bikaner, Kota and Bharatpur in Rajasthan	2,399	376	553	1,107	7,834	2,268
Malegaon, Maharashtra	1,364	57	4.50	13.31	485	975
Total	**17,495**	**1,335**	**9,067**	**10,449**	**14,246**	**3,724**

RENEWABLE POWER GENERATION AND DISTRIBUTION

The pressing need to combat climate change and reduce greenhouse gas emissions has driven the shift towards cleaner and more sustainable energy alternatives. India has set ambitious targets to increase its non-fossil energy capacity to 500 Gigawatts (GW), with a staggering 280 GW to be derived from solar energy alone. The country aims to fulfil 50 percent of its energy requirements through renewable sources. This bold vision aligns with the global imperative to diversify energy sources and transition towards cleaner alternatives. The depletion of finite fossil fuel resources and the volatility of their prices have underscored the importance of embracing renewable energy technologies. Fortunately, significant advancements in the efficiency, scalability, and cost-effectiveness of solar panels, wind turbines, and other renewable energy systems have accelerated their nationwide adoption.

UPCOMING RENEWABLE VENTURES

CESC's role towards the Nation's goal of "Decarbonisation"

We have also entered into a binding framework agreement with Inox Wind Limited for setting up a capacity accounting to 1500 MW of wind turbines which is to be commissioned over the next 3-4 years.

We are making significant progress in upscaling our renewable energy portfolio as part of our bigger sustainability goals. In addition to our existing 18 MW solar plant in Ramnad, Tamil Nadu, we are further expanding our foray in renewable energy generation.

We plan to make substantial investment in the renewable energy generation space. We aim to add 3 GW hybrid renewable projects over the next 4-5 years. A new Special Purpose Vehicle (SPV)- Purvah Green Power Private Limited ("Purvah"), has been created to undertake and expand our renewable power generation business.

We have also entered into a binding framework agreement with Inox Wind Limited for setting up a capacity accounting to 1500 MW of wind turbines which is to be commissioned over the next 3-4 years.

Further, we have also strategically entered into a Share Purchase Agreement (SPA) for acquisition of 100% stake in M/s Bhadla Three SKP Green Ventures Private Limited, a SPV for developing a solar park of 300 MW capacity with Central Transmission Utility (CTU) connectivity in Rajasthan. We are in the advanced stages of acquisition of further land capable of holding 300 MW solar park along with the required CTU connectivity. In parallel we have applied for CTU connectivity relevant for 400 MW renewable energy.

We have also submitted an Expression of Interest (EOI) to Government of Gujarat, requesting an allocation of nearly 20,000 hectares of government land for setting up a solar-wind hybrid plant in Gujarat.

Ongoing work for 3 GW solar power plant in Rajasthan

DECENTRALIZED POWER

Decentralized power options and microgrids are gaining importance as they offer resilience, efficiency, and sustainability in energy distribution. Microgrids, which are localized energy M-grids with distributed energy resources, can operate autonomously or in coordination with the main grid, providing reliable power supply even during disruptions.

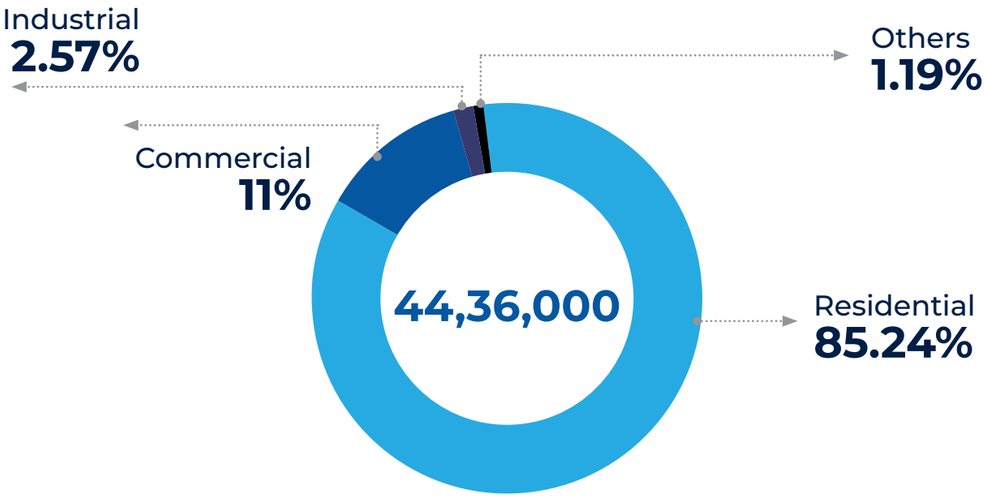
At CESC, we recognize the significance of decentralized and sustainable power solutions. We have been successfully operating our commissioned microgrid at the Chakmir substation, featuring a 100 kWp floating solar plant supported by a 218 kWh Battery Energy Storage System (BESS), enabling decentralized and sustainable power sourcing for crisis management. Additionally, our earlier installed 315 kWh BESS has been fully operational at the East Calcutta substation substation demonstrating our commitment to embracing innovative technologies that enhance energy security, reduce carbon footprint, and ensure uninterrupted power supply during emergencies or grid instabilities. The Company has engaged International Finance Corporation (IFC) to conduct a techno-commercial feasibility study for deploying grid-connected BESS at different voltage levels for better network management.

GREEN POWER OPTION

CESC's foray into green power offerings represents a strategic move towards sustainable energy solutions, aligning with global trends and the increasing demand for renewable energy sources. By providing green power, CESC is contributing to the broader objective of reducing reliance on fossil fuels and minimizing the environmental impact of energy consumption. As on date, we are proud to have a total of 11 exclusive consumers with a consumption of 87 Million Units (MU) of green power during FY 2023-24. There are 10 high tension customers and 1 low tension customers benefitting from our green electricity distribution. Our high-tension customers typically include large-scale industrial operations, commercial complexes, and institutions that require electricity at higher voltages due to their extensive energy needs. This is a testament to CESC's commitment in empowering its customers with green power.

Through this, we are not only reducing the carbon footprint of our customers but also setting a benchmark in the power utility sector. Our green power offering is a significant development in the energy sector, especially in a densely populated and industrially active region. This demonstrates a proactive approach to our environmental stewardship and reflects a growing corporate responsibility towards sustainable practices.

CONSUMER PROFILE



Total customers (in lacs)					
Consumer type	**CESC Kolkata**	**NPCL**	**CESC Rajasthan**	**MPSL**	**Consolidated**
Residential	31,00,000	1,48,000	4,34,000	99,000	37,81,000
Commercial	4,00,000	6,000	73,000	9,000	4,88,000
Industrial	1,00,000	5,000	8,000	1,000	1,14,000
Others	30,000	3,000	4,000	16,000	53,000
Total	36,30,000	1,62,000	5,19,000	1,25,000	44,36,000

LOSS CONTROL

Distribution losses can be technical as well as nontechnical in nature.

Distribution loss is one of the key performance parameters for CESC and its distribution subsidiaries. Distribution losses can be technical as well as nontechnical in nature. Non-technical losses are a result of electricity theft while technical losses are a result of system losses due to energy dissipated in the conductors, equipment used for transmission line, transformer, sub- transmission line and distribution line and magnetic losses in transformers.

Both technical and non-technical losses impact the health of the utility economically and operationally. Our strategic Loss Control Cell (LCC) ensures minimal distribution losses by scheduling periodic energy audits, identifying loss prone areas, undertaking consumer indexing to pin-pointed sales gap areas and applying different conventional and innovative methods.

CASE STUDY

Innovation in overcoming space constraints in network re-organization in pilfer prone areas: A Case study of Garden Reach and Metiabruz

Garden Reach and Metiabruz, two areas within CESC's licensed jurisdiction, have long struggled with rampant electricity pilferage. Despite having authorized connections, many households resort to illegal abstraction of electricity by tampering with meters and accessing distribution cables. Traditional measures such as robust cables failed to deter criminals, leading to the exploration of innovative solutions by the Loss Control Cell.

The Loss Control Cell initiated a project to reorganize the distribution network in pilfer-prone areas using coaxial cables with concentric design. However, the project encountered a major challenge in finding suitable space for installing theft-proof pillar boxes due to the congested nature of the areas. After numerous failed attempts, a breakthrough came when a foreign company introduced the Piranha connector, enabling the installation of tee-joints on coaxial cables underground without occupying additional space.

Piranha Connector- tee-joints on coaxial cables

Implementation:
Upon receiving samples, rigorous testing confirmed the efficacy of the Piranha connectors in underground conditions. The connectors were subsequently utilized in the LV distribution network of Meher Manzil (W) P/T to provide new supply connections to consumers. The completion of the network reorganization project using coaxial cables and Piranha connectors resulted in a substantial reduction in transformer losses.

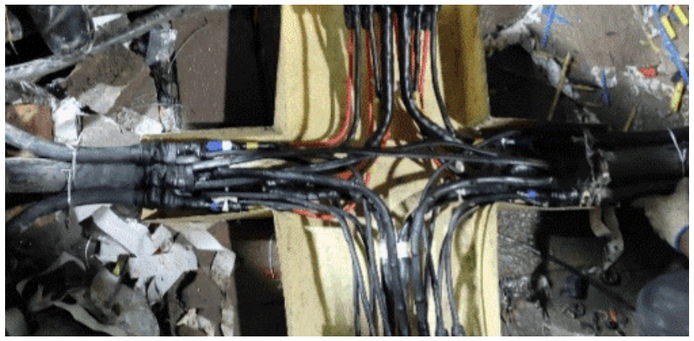
Impact created:
Significant Loss Reduction: More than one lakh ten thousand lost units were saved within three months of completing the project at Meher Manzil (W) P/T.

Technological Advancement: The Piranha connector revolutionized the design of distribution networks in congested, pilfer-prone areas, marking a significant advancement in combating electricity theft.

Improved Service Quality: The decline in electricity pilferage led to enhanced quality of supply, evidenced by reduced duration and frequency of interruptions, resulting in increased customer satisfaction.

Operational Cost Reduction: As the number of faults and fusing decreased, the operational cost of maintaining supply in the area steadily declined.

Enhanced Safety: With fewer instances of hooking connections and frayed insulation, the risk of electrical accidents decreased, contributing to overall safety improvement in the area.



Piranha connector

Piranha Connector Features

- Fully waterproof, fully insulated, no exposed live components (IP67).
- UV Stabilized.
- Torque controlling shear head bolts for correct contact pressure.
- No resins or heat shrink required.
- Flexible sealing cable ports, not affected by the angle of cable entry.
- Fitted with push - on protective bolt caps.

CASE STUDY

Kamarhati Loss Reduction Journey: Implementation of Anti-Theft Meter Pillar Boxes at Kamarhati

Kamarhati, a region in the northern suburbs of CESC's licensed area, was plagued by rampant unauthorized abstraction of electricity, leading to significant Transmission and Distribution (T&D) losses.

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Challenges Identified:
Routine surveillance revealed losses from conventional meter pillar boxes installed outside consumers' premises, which were vulnerable to theft due to poor design and positioning.

Routine surveillance revealed losses from conventional meter pillar boxes installed outside consumers' premises, which were vulnerable to theft due to poor design and positioning.

Initiatives Implemented:
LT Coaxial Cable Replacement: The existing LT overhead network was replaced with LT coaxial cables to deter theft by hooking from overhead main lines.

Anti-Theft Pillar Boxes: Modified distribution pillar boxes were replaced with anti-theft pillar boxes to prevent theft by hooking from modified boxes.

Meter Board Renovation: Meter boards were renovated and sealed to prevent theft from service apparatus.

Impact created:
14 anti-theft pillar boxes were installed across 5 Distribution Zones (DZs) in Kamarhati.

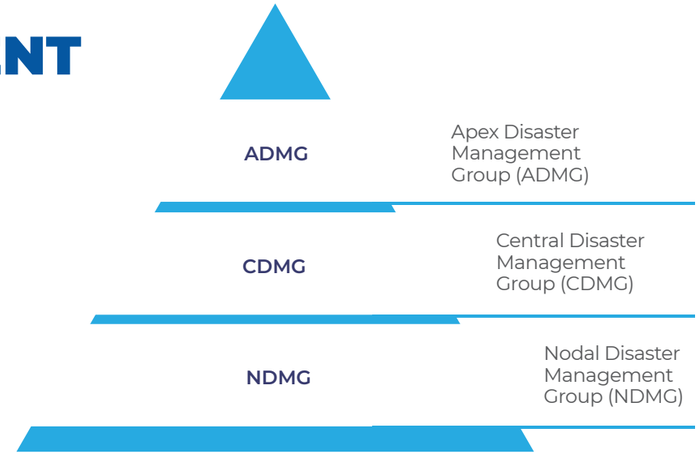
T&D loss calculation for 5 DZs containing these boxes revealed a decline in loss from 19% to 10%.

Overall T&D loss figures decreased significantly from 24% to 14%.

The implementation of anti-theft meter pillar boxes at Kamarhati has been instrumental in reducing theft and improving overall loss reduction efforts. By addressing vulnerabilities in conventional meter pillar boxes, CESC has further fortified its commitment to combating electricity theft and enhancing operational efficiency.

DISASTER MANAGEMENT

In the evolving global climate scenario, we are witnessing an increasing frequency of natural or anthropogenic disasters. Hence, the need for an effective disaster management is imperative. In the Indian context, climate change-related disasters have become more prevalent and the resulting damage to life and property has been devastating. To enhance our preparedness and resilience, we at CESC have developed standard operating procedures for pre, during, and post-disaster activities, overseen by a three-tier governance structure as depicted below.



This plan ensures communication, coordination, resource augmentation, and redundancy enhancement for disaster preparedness.

Our proactive approach to disaster management ensures minimal disruptions to power supply and swift recovery efforts in affected areas. In the face of evolving challenges, our performance this year underscores our commitment to safeguarding communities and maintaining operational resilience in the wake of disasters.

CASE STUDY

Drone based surveillance of overhead LT network for reduction in overhead faults

For a distribution utility like CESC that caters to a metropolitan city through a considerable length of overhead LT network spanning approximately 5,800 circuit km, is highly vulnerable to natural disasters like Nor'westers and cyclones. Effective monitoring and vegetation management are vital for consumer safety and minimizing outages. Utilizing Unmanned Aerial Vehicle (UAVs) or drones equipped with advanced sensors and geospatial image processing techniques has emerged as a cost-effective and reliable method for remote sensing, enabling precise identification of weak points and proactive maintenance strategies.

The UAV surveillance is conducted annually as part of our fixed maintenance program. It is useful for identifying and addressing critical aspects such as vegetation cover and local temperatures. Therefore, drone-based surveillance is of supreme importance for proactive need-based maintenance in fault prone LT overhead network where manual inspection from ground level is unreliable or ineffective.

Impact created:
The exception reports generated through the remote surveillance provide an action plan to the utility to attend the vulnerable areas of the overhead network on a priority basis.

The surveillance videos give an essence of real time physical monitoring.

Pre-emptive action in the form of attending vulnerable conductor joints, hotspots and vegetation management leading to nearly 40% reduction in overhead faults in the reporting period as compared to last year.

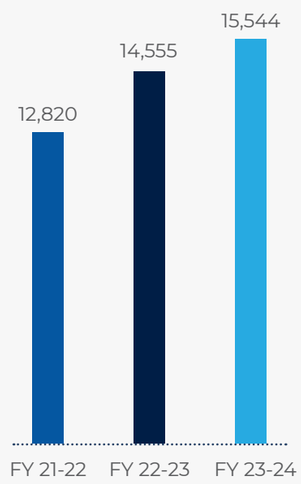
04

FINANCIAL CAPITAL

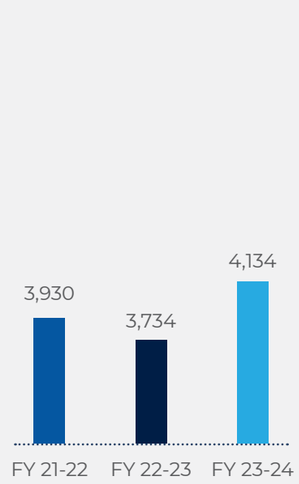
At CESC, we are committed to generating value and sustaining growth. We strive to elevate our operational and financial performance, aiming for a holistic growth to benefit all our shareholders. This commitment is highlighted by the increase in our consolidated revenue in FY 2023-24 by 6.8% against FY 2022-23.

Our primary focus remains on maintaining a prudent financial management system and ensuring efficient capital allocation. India's economy grew by 7.6% in 2023-24, outpacing the global average of 3.2% and recording the highest growth among major economies. In such healthy economic circumstances, electricity demand has been strong throughout the year. Consolidated EBITDA has increased by 10.7% as compared to last financial year. This success can be attributed to a strong operational performance and reinforced balance sheet positioning. These achievements underscore the efficacy of our capital management strategies, striking a fine balance between fostering growth and delivering returns for our stakeholders.

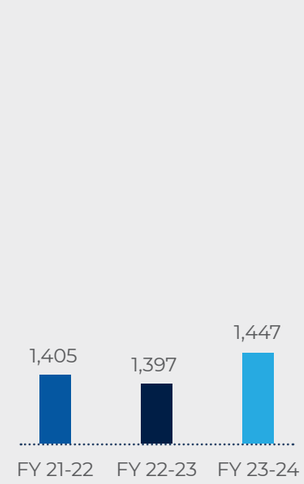
Revenue (INR Cr.)



EBITDA (INR Cr.)



PAT (INR Cr.)



DIRECT ECONOMIC VALUE CREATION

At CESC, we leverage financial capital to invest in infrastructure and technology upgradations, enhancing operational efficiency and profitability. We focused on reducing costs through better resource management and adopting innovative Digital services. These efforts in turn contribute towards reliable and cost-effective electricity to our consumers, whose trust and unwavering support aids to our business continuity.

FINANCIAL STABILITY AND MARKET VALUE

CESC aims to generate positive returns to its shareholders and benefit other stakeholders, including protecting and strengthening the balance sheet. CESC continues its focus on long-term shareholder's value creation, without compromising integrity, social obligations and regulatory compliances. Our operations generated strong cash flows, giving us a solid financial base. We managed our financial ratios carefully, keeping leverage at ideal levels, reducing risks, and boosting our financial resilience. Moving forward, we are committed to maintaining this progress and further improving our financial position.

05

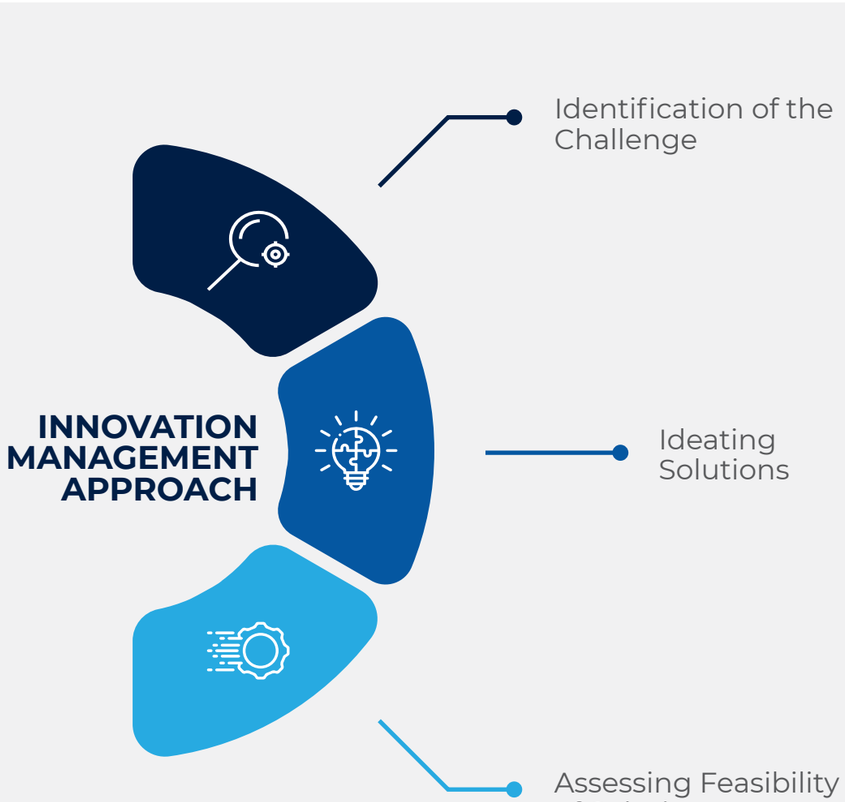
INTELLECTUAL CAPITAL

In CESC, the drive for innovation is led by the Executive Director (Distribution technical) and further managed by a top-tier panel of mentors specializing in knowledge and innovation management.

To harness the full advantages of digitalisation and innovation, it's paramount for organisations to continuously adapt and evolve.

Over the years, CESC has been developing its intellectual capital by fostering a culture of innovation, continually upskilling its workforce, and investing in digital infrastructure.

With a strong intellectual base, CESC is adept at better understanding and implementing new technologies.



INNOVATIONS THROUGH PATENTS

Our intellectual capital is represented through our expertise and skills in the power utility sector, along with our copyrights, patents, software, rights, and licenses. CESC had previously applied for 16 patents, and we are pleased to announce that during the reporting period we were granted 5 patents by the Government of India. This provides us a competitive edge in the markets we serve.

The five patents are briefly discussed below:

Automated remote surveillance-cum-theft prevention system for low-tension power distribution

Persistent problem of unauthorized connections and stealing electricity by dishonest customers in regions prone to power losses, led us to integrate automated remote surveillance-cum-theft prevention system with existing smart metering technology.

This system is installed in places like Pilkhana to prevent theft and better control over power losses. CESC's solution cut losses significantly for over 5,244 high risk consumers.

Remote controlled grounding assembly

The need for a safe method to find ground live wires from afar resulted in a new safety system. The operator can ground the telescopic arm upon contact with the conductor using a button on the remote controller. It can safely connect to wires when a button is pressed.

It also has a sensor that warns with sounds and lights if there's dangerous electricity nearby and stops moving to keep the user safe from shocks when attaching it to wires that should be off.

Devices for online remote monitoring of a grounding system

Grounding systems at power plants often fail because of stolen copper and rusty or dirty connections.

This system employes basic and inexpensive tools to constantly observe the status of the grounding system at power stations.

In the event of irregularities or disconnections, it promptly sends both audio and visual alerts to the control center, thereby assuring immediate response.

Remote communicable magnetic oil gauge with analogy output

This device monitors oil levels in transformers across various voltage levels. It uses a potentiometer paired with a camshaft to deliver precise oil level readings as analog values.

It is versatile for use in different liquid-filled equipment, improving asset management and minimizing supply disruption, thus ensuring a safer and more reliable supply to customers.

Smart Health Monitoring system in Electric power Distribution Network

This was the first patent obtained by CESC on 1st August 2023, providing a comprehensive health monitoring solution for transformers in the Distribution system.

DIGITALIZATION

With an increasing focus on digitalization in India's power sector, utility companies are leveraging digital technologies such as artificial intelligence, big data analytics, and blockchain. These technologies are employed to enhance operational efficiency, energy management, and customer experience.

Improving efficiency through Digitalization

At CESC, digitalization plays a key role by boosting efficiency, optimizing grid management, reducing environmental impact, improving consumer engagement, and preparing us for the future market trends.

1. Preventive to Predictive Maintenance

To further improve operational efficiency, we have embraced several ground-breaking technologies for predictive maintenance, aiming for 'Zero Downtime'.

These technologies include remote IoT-based monitoring of critical assets, drone-based inspection of distribution infrastructure including thermographic scanning, Punctured Insulator Detection (PID) test on all insulator strings linked to the 220/132 kV lines to check each disc's magnetic flux distribution, pan-tilt motor-mounted thermal cameras for monitoring assets within substations, monitoring through Tower Footing Resistance (TFR) meters and use of Extended Reality (Augmented Reality (AR), Virtual Reality and Mixed Reality) at New Cossipore and Park Circus substations in Kolkata for speeding up network repairs without physical interventions.

Besides, process optimization and Automation have led to consistent reduction in complaints.

2. Enhancing Customer experience through digitalization

At CESC, we prioritize customer satisfaction as a central element of our strategic approach. We are committed to consistently improving the customer experience by implementing ongoing feedback mechanisms. We leverage technology to enhance customer interactions and minimize response times for queries and complaints. We have introduced innovative solutions like our AI/ML-powered ChatBot- E-Buddy and Voice Bot- Aastha, which support multiple local languages, to address these issues effectively.

During the year, CESC has worked consistently on Corrective Action and Preventive Action (CAPA), a well-known quality framework, for proactive mitigation of consumer-related issues. Besides, process optimization and automation have led to consistent reduction in complaints.

Implementation of process automation is currently in progress for complaint handling at regional offices and repeat complaints as well as email complaint management system. Robotic Process Automation (RPA) has been successfully implemented in handling emails sent by customers in the corporate email IDs.

Such efforts and intent have quickly yielded us our maiden progress on Net Promoter Score and one of our most significant achievements has been the remarkable turnaround in our Net Promoter Score (NPS), soaring from a -12 to +12. This seismic shift underscores our unwavering dedication to customer satisfaction and underscores the effectiveness of our digital initiatives and timely service delivery. The efforts are a testament to our commitment to excellence.

Our focus on technology extends to the improvements in customer communication and the reduction of wait times for complaints and inquiries. In FY 2023-24, over 85% customer interactions were serviced by our digital channels including IVR, voice bot (Aastha), web chat bot (e-BUDDY) and WhatsApp bot, some of them are equipped with AI/ML & NLL/NLP capabilities that have further enriched customer service delivery.

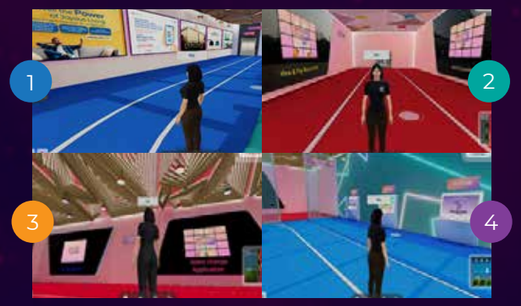
A power utility company can significantly enhance its operations by moving to the Metaverse. Utilizing virtual 3D spaces and technologies such as extended reality, blockchain, and digital twins, the company can boost efficiency in customer engagement, workforce management, and asset optimization. To enhance customer experiences and foster loyalty, we have launched Metaverse.

Customer Friendly Net Metering Application

To make it easier for customers to apply for net-metering or net-billing with solar PV systems, a consumer-friendly interface has been introduced on the CESC corporate website.

This feature is designed to help the consumers wanting to connect their current solar panels to the power grid.

METAVERSE BY CESC



The "Metaverse" is a blended reality space where individuals connect using avatars, created by merging real and virtual worlds.

We have introduced Metaverse, which functions through and integration of virtual Reality, Augmented Reality and Block chain technology. Virtual Reality offers users and all-encompassing immersive experience, whereas Augmented Reality enriches the real world with virtual enhancements. Blockchain technology guarantees the security and openness of transactions within the Metaverse, as well as providing confirmed ownership of digital properties

CESC Metaverse consists of four main areas

Metaverse Lounge

1

Customers can craft personalized avatars to visit Metaverse office, where "Alo Di," the CESC mascot, greets them. Inside, screens showcase the Chairman's image, core values, an d posters on CESC's online services and sustainability efforts.

Service Zone - I

2

This area includes two main functions: "Bill view / Payment" and "New Connection". Customers can easily check and pay their electricity bills using CESC's various online payment options and apply for new service connections seamlessly

Service Zone - II

3

Customers need to take the elevator to reach the service zone II. In this zone, Customers can avail two other services i.e. "AC Load application", Name change Application"

Gaming Zone

4

This zone has been designed to provide customers with some entertainment. The Gaming zone features a quarter of engaging games: Fishing world, stacking, Candy Rush, and Endless Runner while visiting the CESC.

BENEFITS OF METAVERSE

Enhanced Accessibility

Customers can reach out for support anytime with the Metaverse's always-on digital platform, offering continuous customer service availability.

Personalized interactions

The use of avatars and virtual spaces in the Metaverse allows for more engaging and customized customer service experiences.

Real-Time Support

The Metaverse facilitates immediate communication and help between clients and customer care representatives.

Efficient Issue resolution

Virtual settings in the Metaverse accelerate issue resolution, as agents can visually guide and educate customers on solutions.

Cost Savings

Employing the Metaverse for customer support slashes expenses tied to traditional methods, cutting down on physical space and personnel costs.

2.1 Multi channel online payment

Aligned with the Digital India initiatives, CESC is committed to offering exceptional services to customers by leveraging cutting-edge technology and digital procedures. As part of this commitment, we have implemented user-friendly digital payment systems. Customers have access to a variety of secure online bill payment options such as mobile wallets, debit/credit cards, net banking, Electronic Clearing Services (ECS), NEFT/ RTGS, auto pay, Bharat QR, and UPI for completing their payments. Our continuous adaptation has enabled us to consistently provide excellent user experiences in billing and online consumer services for over a decade.

We have also introduced: 'Dial and Pay' Services (first time ever in Indian Utility entailing payment of electricity bills through just a call) which can be used even by feature phone users and is not dependent on internet access, apps or e-wallets and additional 'BQR' payment channel from alternate banking partner. E-nach has also been developed as an option for consumers. Consumers can also walk-in to 'Bangla Sahayata Kendra' centres to pay their dues.

In FY 2023-24, our concerted efforts to enhance digital payment penetration have yielded impressive results, with a remarkable uptick to almost 80% of consumers (91.57% of total revenue) in March 2024. This not only streamlines transactions but also reinforces our commitment to leveraging technology for greater efficiency and convenience. Achieving such a digital payment penetration from 74.5% in March 2023 underscores our dedication to convenience and accessibility.

The rate of online payment for NPCL and CESC Rajasthan is 93% and 69.34% respectively. To incentivize the GoGreen initiative, a lucky draw was conducted for local NPCL customers who consistently pay online.

Our goal is to increase online payment penetration to 90% by expanding options within our digital ecosystem. We leverage digitalization not only as a tool for sustainability but also to provide a consistent and reliable power supply.

Digital Service Excellence

NPCL has achieved a remarkable milestone by attaining the highest digital payment ratio among 70 DISCOMs in the consumer service rating of DISCOMs (CSRD) for 2023, as recognised by the Ministry of Power, Government of India. With an impressive digital payment ratio of 93%, NPCL demonstrates its commitment to embracing digital innovations and enhancing customer convenience.

In addition to this significant, NPCL has made substantial progress in enhancing online service offerings, resulting in notable improvements across various metrics:

- The percentage of online new service connections has soared from 31% to an impressive 72% in the current FY, reflecting NPCL's dedication to streamlining processes and embracing digital channels for service delivery.
- The online name mutation request process has witnessed a substantial improvement, with the percentage rising from 26% to an outstanding 91%. This enhancement underscores NPCL's commitment to providing efficient and user-friendly digital solutions to its consumers.
- Leveraging digital services has led to a commendable reduction of 20% in consumer footfall

The reduction highlights the growing trend among consumers to opt for digital channels, further validating NPCL's efforts in enhancing digital accessibility and convenience.

Our goal is to increase online payment penetration to 90% by expanding options within our digital ecosystem. We leverage digitalization not only as a tool for sustainability but also to provide a consistent and reliable power supply.

3. Strategic Initiatives undertaken for Business Transformation

In-house Device Re-engineering
To optimize resources, we've initiated the in-house re-engineering and repair of Automation & Communication devices beyond their OEM support. This approach extends their useful life and defers CAPEX investment, resulting in significant savings of 10 Lacs achieved in FY 2023-24.

Cutting-Edge Communication Infrastructure
In alignment with global technological advancements, CESC has upgraded to a Multi-Protocol Label Switching – Transport Profile (MPLS-TP) communication backbone. This advanced infrastructure, the first of its kind in the country, is 10G ready and supports the upkeep of our power network, elevating the quality of service delivery to meet customer expectations.

Drone-based monitoring of distribution infrastructure
Utilizing UAVs (drones) for surveillance of overhead LT networks offers multifaceted benefits including health assessment of towers and conductors, distribution corridor mapping, thermographic scanning, and monitoring/ supervision of maintenance to enable proactive maintenance practices, ultimately enhancing consumer safety and minimizing outage durations.

Remote Protection Management System:
Our latest initiative involves the development of a cyber-secured Centralized Protection Management System. This system integrates remote communication with Numerical Relays, Disturbance Recorders, and Phasor Measurement Units to analyse post-system disturbances and facilitate faster load restoration, thereby enhancing operational efficiency and service quality.

LT Overhead Distribution Network Monitoring:
Embracing an innovative and consumer-centric approach, we've implemented an IoT-based Intelligent Monitoring System for our LT Overhead Distribution

Network. This fully in-house developed and vendor-agnostic system focuses on human safety and high-quality service delivery by remotely monitoring the health of the network.

IoT Sensor-based Condition Monitoring of transformers
IoT-based sensors on transformers enable real-time monitoring of critical parameters like temperature, humidity, oil level, and door status. This data is wirelessly transmitted to centralized software, facilitating predictive maintenance, prolonging asset lifespan, and preventing potential faults and outages.

Real-time Circuit Breaker Health Monitoring:
We're leveraging technology to centrally monitor and analyze the real-time health and parameters of Extra High Voltage (EHV) Circuit Breakers using existing IEDs. This initiative aims to minimize downtime and optimize resources through proactive maintenance.

DTR LT Automation System:
Our in-house developed Industrial Internet of Things (IIoT)-based DTR LT Automation System facilitates remote operation and motorized control of LT Combined Fuse & Switch (CFS) for Distribution Transformers. Strategically located in the South West District, this system enhances safety and minimizes wide area interruptions during water-logging events.

Condition Monitoring DREAMS Dashboard (Repetitive PD & Hotspot):
Introducing the DREAMS Dashboard for Repetitive PD & Hotspot analysis, we extract valuable technical insights to enhance system reliability and performance.

Automated SAIDI/SAIFI Figures Generation:
In collaboration with the Metering department, we're designing a dashboard for automated live viewing of SAIDI/ SAIFI figures. Utilizing DTR AMR data, this initiative enables real-time monitoring and enhances operational efficiency.

Hotspot Identification in Pillar Boxes:
We're conducting thorough inspections of theft-proof Pillar Boxes in specific areas to identify hotspots and strengthen security measures.

Initiatives in Generating Stations

BBGS:
- Installation of IoT sensors for asset health and process performance monitoring.
- Coal stockpile management with optimized stacker position.
- Asset / inventory tracking by radio frequency-based identification.

HEL:
- Benchmark monitoring of sub-plant/equipment wise auxiliary power consumption with day ahead prediction.
- Decision making model for intake of raw water & chemical dosing comparing previous patterns & present parameters.

DIL:
- AI powered behavioral safety monitoring.
- Development of integrated module /interface for early detection and analysis of faults related to ESP.

CYBERSECURITY

As a responsible organization, a cybersecurity policy is essential to protect against cyber threats, ensure compliance with regulations, manage risks, maintain business continuity, and safeguard public safety and confidence.

For ensuring the effective implementation of the cybersecurity policy, we have a dedicated Information Security team headed by the Head of Information Security, supported by CISOs from Distribution and Generation departments. Structured training programmes are designed to keep the team and users updated on the policy. We have also institutionalised a security champions program whereby a dedicated team of software developers and IT Infrastructure professionals work cohesively to secure all systems and applications by design. Additionally, the entire IT/OT systems and Infrastructure has been certified for Information Security Management System (ISMS) based on ISO 27001 standard.

At CESC, we have implemented 24*7 Security Operation Center (SOC) to help detect, prevent, and respond to potential cyber threats, thereby ensuring continuous and safe operation. To implement the SOC, we have installed a modern Security Information and Event Management (SIEM) solution along with Managed Detection and Response (MDR) services from reputed cyber security OEM suppliers

We deploy a risk-centred approach for managing vulnerabilities, aimed at proactively detecting potential security weaknesses in both operating systems and applications. The objective is to address these vulnerabilities promptly and efficiently. This comprehensive vulnerability management initiative covers the various levels of the tech stack, including hosting and cloud environments, as well as application software.

We regularly engage with CERT-IN-certified assessors for thorough assessments of our cybersecurity processes and frameworks. Our security systems, policies, and controls are critically evaluated to ensure compliance with CEA guidelines and relevant regulations.

We have also continuously improvised our workstation and server security systems with custom Endpoint Detection and Response (EDR) and Managed Detection and Response (MDR) implementations. Additionally, at the network level we have implemented the Next General Firewall (NGFW) and Web Application Firewall (WAF) with capabilities to detect and stop cyber-attacks.

Cloud backup solutions are also in place for essential workstations. Our secure email system now has added anti-phishing and enhanced email security being phased in. At the enterprise level

Threat Modelling Strategy

CESC has initiated measures to fortify its business applications by establishing a threat modelling strategy. This strategy is applied to the integration process of both new and current applications and involves thorough security evaluations (including Static Application Security Testing and Dynamic Application Security Testing.

These evaluations are performed through a mix of human skill and automated tools to ensure that the highest standards of both manual and automated scrutiny are incorporated into the process.

Critical Information Infrastructures (CII's) for distribution business have been identified and subsequently approved by National Critical Information Infrastructure Protection Centre (NCIIPC) Ministry of Power affiliates. Our generation business infrastructures are also identified and pending for NCIIPC approval.

Moreover, we have developed a Cyber Crisis Management Plan and SOPs for both generation and distribution operations.

The cyber security programme is done in accordance with the five functions included in the NIST (National Institute of Standards & Technology, USA) Framework as given below.

BUSINESS CONTINUITY PLAN

As a commitment for operational resilience, we have established a state-of-the-art Network Operation Centre (NOC) & Security Operation Centre (SOC), responsible for implementing best practices and ensuring strong governance in evaluating risks and performing preventive actions. We have also developed our Data Centre (DC) and Disaster Recovery (DR) infrastructure with hyper-converged technology aligned with industry-standard databases.

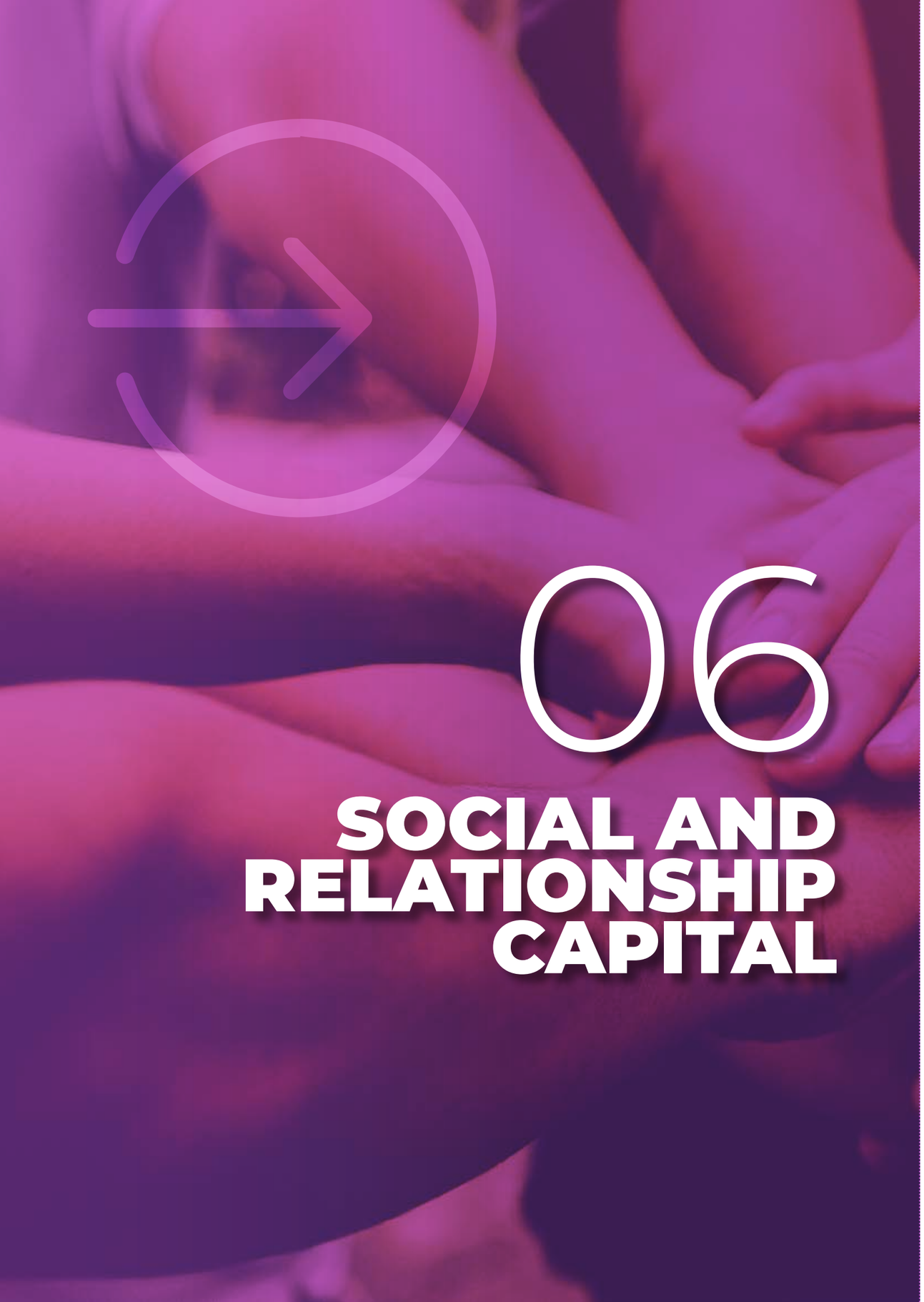
In the last three years, we have experienced zero breaches or incidents related to information security and cybersecurity.

Protecting customer privacy is crucial for safeguarding personal data, maintaining customer trust, ensuring regulatory compliance, preventing cyber threats, and preserving commercial sensitivity.

At CESC, the IT Security and Customer Relations team proactively ensure robust privacy management in line with current and forthcoming regulations like the Data Protection Bill. Our privacy policy details our data handling, storage, and security protocols to prevent unauthorized access and protect user data within our online platform.

As prescribed under our policy (http://www.cesc.co.in), we request permission from customers before gathering identifiable personal data like names, email addresses, ages, and gender, unless the customer voluntarily offers this information on our website.

At CESC, the IT Security and Customer Relations team proactively ensure robust privacy management in line with current and forthcoming regulations like the Data Protection Bill.



06

SOCIAL AND RELATIONSHIP CAPITAL

MEMBERSHIPS AND ASSOCIATIONS

CESC enhances its operations by focusing on building strong community ties and maintaining good relationships with stakeholders like government bodies and suppliers. These intangible assets ensure community support, and lead to collaborative opportunities, contributing to the company's sustainability and competitiveness in the energy sector.We engage proactively with diverse trade and industry groups to extend our market presence, build network, and exchange knowledge on industry best practices.

Our memberships and associations across various industry and trade associations are listed below:

- Confederation of Indian Industries (CII)
- The Associated Chambers of Commerce & Industry of India (ASSOCHAM)
- The Committee of International Council on Large Electric Systems India (CIGRE)
- India Smart Grid Forum (ISGF)
- National Safety Council (NSC)
- Central Board of Irrigation & Power (CBIP)
- All India Management Association (AIMA)
- National HRD Network (NHRDN)
- Employers' Federation of India (EFI)
- Administrative Staff College of India (ASCI)
- Quality Circle Forum of India (QCF)
- Council of Power Utility Bureau of Indian Standards (BIS)
- Institute of Electrical and Electronics Engineers (IEEE)
- Calcutta Management Association (CMA)
- British Council Limited (BCL) State Productivity Council
- State Productivity Council

This strategic engagement aims to open new business opportunities, foster partnerships, and drive growth and innovation by learning from others in the industry. Further, we are firmly committed to upholding a supply chain process that is characterized by sustainability and resilience.

RESPONSIBLE SUPPLY CHAIN

CESC is dedicated to enhancing and cultivating sustainable partnerships with suppliers and contractors. Our procurement approach is rooted in trust, openness, and teamwork, demanding not only quality but also compliance with environmental and labor regulations. Upholding our principle of "We Source Responsibly," we have implemented guidelines to ensure our suppliers meet legal, environmental, and social criteria.

All suppliers must follow our Supplier, Quality, and Responsible Sourcing policies. Suppliers selected for the ESG assessment are assessed for criterion including environment stewardship, social well-being, human rights, and corporate governance.

We also oversee compliance, through a comprehensive assessment process as represented below:

1

Document Verification

All the documents such as authorization, licenses, certificates, and other relevant regulatory and statutory documents, will be checked.

2

Physical Inspection of Site

A Physical Inspection of site will be undertaken to check the status of waste management, air emission management, fire safety, health and safety, electrical safety etc.

3

Assessment of supplier

Assessment of the supplier will be done based on 'ESG Supplier Performance & Evaluation Questionnaire' and progress against the previous score should be checked.

4

Monitor and review

CESC team will assess the performance as per the audit protocol and depending upon the supplier rating, frequency of assessment should be checked

CONNECTING WITH CUSTOMERS

We continuously endeavor towards undertaking client-oriented initiatives, which results in building customer loyalty and improving customer satisfaction. This customer-first strategy promotes innovation and adaptability to meet evolving expectations and tech progress. It results in more dependable services and smarter demand control, essential for a stable grid. Focusing on customers, supports sustainable development by motivating them to engage in energy conservation and embrace new technology. The key development of our digital presence is presented alongside.

CESC'S DIGITAL PRESENCE

CESC Metaverse

CESC has pioneered Metaverse customer services. By offering services in this immersive digital realm, we are meeting our customers where they are, ushering in a new era of convenience and accessibility. The CESC Metaverse is hosted on the company website.

CESC Website Promotion

In FY 2022-23, CECS website was completely revamped featuring a new design, faster performance, a multi - layered framework, and a mobile - first strategy, in FY 2023 - 24, Search engine optimization enhancements resulted in a 182% increase in traffic. Additionally, a blog section was introduced with several post published.

Social Media

CESC has a strong presence in Facebook, Twitter, Instagram, LinkedIn, YouTube and WhatsApp. In FY 2023-24 by delivering professional content and timely responses, leading to a notable increase in interactions and a swift 5-minute average response time. CESC ranks as the third most popular Indian utility on Facebook with a 4.3 User rating.

Brand Campaigns

CESC launched impactful campaigns aligned with its values in FY 2023-24, including #smartChoicesWithCESC for online services, #LiveFreeBreatheFree for sustainability, #LightsCameraKolkata for city connection, #HeroesofCESC for workmen recognition, #CESCcaresforCSR, #CustomerFirstforsafety, #LeadingWithLight for employee stories, and #PoweredByCESC for customer experiences. The Puja film 'Bhalobasha Nio Kolkata and the digital mascot 'AloDi' promoted digital services, safety, and events on social media.

E-VOC

Central to our digital transformation has been the implementation of robust digital voice of customer program that enables us access to consumer's voice and insights round the clock. Through advanced analytics and real-time feedback mechanisms, we have gained invaluable insights into customer preferences and pain points, enabling us to streamline our services to meet their evolving needs.

ENHANCING CUSTOMER SATISFACTION

Our focus on technology extends to the improvements in customer communication and the reduction of wait times for complaints and inquiries.

In FY 2023-24, over 85% customer interactions were serviced by our digital channels including IVR, voice bot (Aastha), web chat bot (e-BUDDY) and WhatsApp bot, most of all equipped with AI/ML & NLL/NLP capabilities that have further enriched Customer Service delivery.

The Company's centralised 24x7 call interaction centre acts as the primary touch point for all complaints and queries. The Key Account Management (KAM) programme for personalised support to large consumers was revamped during last year for better support, including an increase in its coverage. CESC's voice bot 'Aastha' was upgraded to process complaints regarding distribution transformer outage as well as notifying customers. In a first-of- a-kind service, the Company introduced a Video Call Centre (VID-U) for its customers to interact with agents on video call. This has now been extended for new connection applicants' too.

This ensures faster customer service delivery with almost no delay time for calls. Our range of communications channels is showcased below.

Aastha: a multilingual voice bot

Aastha is a digital voice assistant initiative that enhances customer service by using AI, ML, and NLP. Integrated with CRM and Outage Management Systems, it provides immediate, reliable support in multiple languages, including regional dialects. As the country's first, it helps with outage issues and complaint registration, reducing wait times by handling calls during peak periods.

Video Call Centre (VID-U)

The Video Call Centre (VCC) is a pioneering service by an Indian utility offering real-time video interactions with live agents for supply-related support to customers.

Saathi: AI chatbot at NPCL

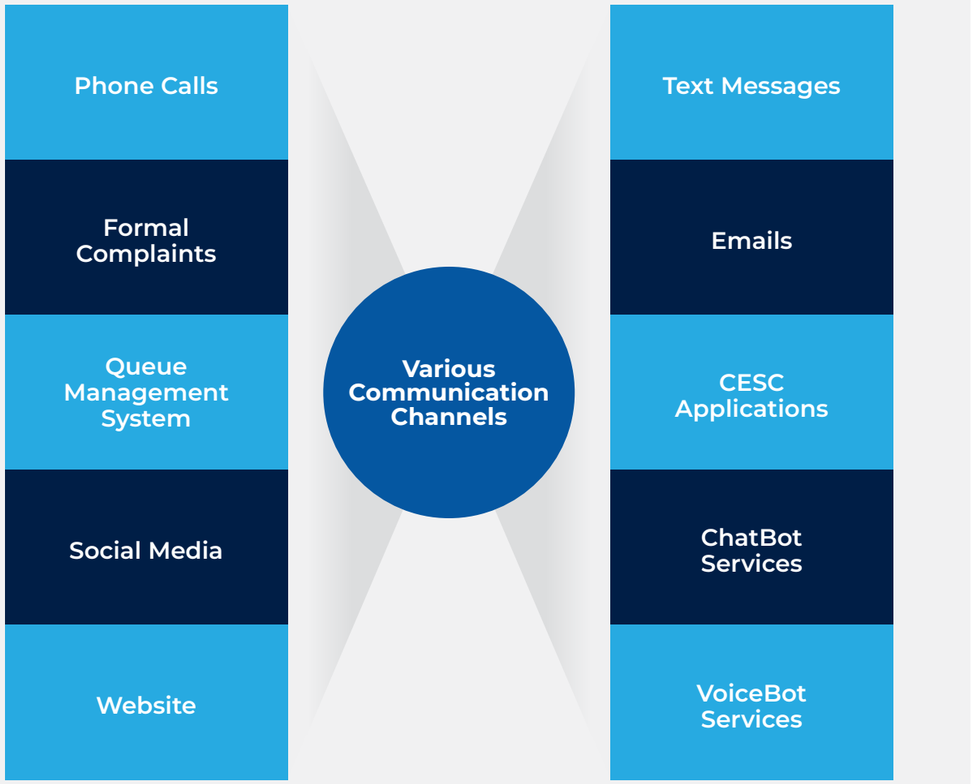
"Saathi" is an AI chatbot by NPCL designed to improve digital consumer services. It enables users to file complaints, download bills, and pay online. Integrated with an IVRS call center, it facilitates easy home-based complaint and query registration. NPCL aims to enhance the chatbot with menu-driven options for precise support and direct agent communication.

Project Maitri at NPCL

'Project Maitri' by NPCL aims to enhance the service experience for valued customers by providing a dedicated Key Account Manager (KAM) to each high-value consumer. The KAM oversees and proactively addresses all complaints, requests, and queries.

In addition to our above-mentioned channels of communication, for premium consumers, a range of tailored services are offered as presented below.

In FY 2023-24, over 85% customer interactions were serviced by our digital channels including IVR, voice bot (Aastha), web chat bot (e-BUDDY) and WhatsApp bot, most of all equipped with AI/ML & NLL/NLP capabilities that have further enriched Customer Service delivery.



RELIABLE AND CONTINUOUS POWER SUPPLY

At CESC, reliable and continuous power supply forms the cornerstone of our operations, ensuring seamless functioning across various sectors and contributing significantly to the economic development of the communities we serve. In FY 2023-24, our focus on delivering uninterrupted power has been pivotal. Our performance reflects our steadfast commitment to excellence in power distribution and our unwavering dedication to meeting the needs of our customers 24x7.
We understand that it is our responsibility to provide continuous power and detect any unexpected cases of outages and restore power at the earliest. To maintain our commitment to the customers, we have introduced intelligent outage management systems to manage outages through a three-step process:

Step 1:

Outage detection- Smart meters are not installed at all consumer locations, hindering the ability to detect outages remotely. Currently, outages are primarily identified through customer reports, leading to restoration delays. To address this, a novel outage detection system utilizing AMR technology has been introduced, the utility is now equipped with modems to transmit alerts about outages and restorations.

Step 2:

Customer Relationship Management System- Complaints are logged into the CRM system and forwarded to LT control room engineers for action. Customers are updated via SMS about faults and restoration timelines. The Outage Management System app, integrated with SCADA, offers live outage updates. LT Control Room Engineers keep a 24/7 watch on the CRM dashboard to speed up power restoration.

Step 3:

Crew Mobilization and Outage Restoration- The HT & LT command centers use GIS for rapid deployment of repair crews and GPS to track restoration efforts. Motorized RMUs with communication capabilities offer various connection options for quicker power recovery. High Voltage Automation is in place at critical facilities like pumping stations, hospitals, and government buildings to maintain continuous electricity supply.

OMS Implementation: Streamlining Operational Efficiency

At NPCL, we have initiated the deployment of an Outage Management System (OMS) to improve operational efficiency and customer experience. The tailor-made OMS for NPCL began its rollout in July 2023 and was successfully completed by February 2024.

The Key Stages are:

- Feeder Connectivity and outage Alerts
- RMU-Level Outage Management
- Streamlining Complaint Management
- Automated Complaint Assignment and Crew Management
- Real-Time Visualization of Outage and Complaints

CASE STUDY

Remote Surveillance System Using Body-Worn Cameras

This innovative approach allows live video streaming from job sites and enables two-way audio communication for real-time instruction and feedback. Field contractors, engineers, and vendors are equipped with body-worn cameras, transmitting video to supervisors at the Quality Control Centre.

For urban utilities like CESC, cable faults pose significant challenges, leading to power outages and consumer interruptions. Repairing underground cable faults, particularly at cable joints, is essential for network reliability. To ensure quality assurance and safety adherence during fault repairs, vigilant monitoring of job sites is essential. However, supervising numerous job sites daily with skilled personnel presents logistical challenges.

To address these challenges, CESC implemented a Remote Supervision System using Body-Worn Cameras. This innovative approach allows live video streaming from job sites and enables two-way audio communication for real-time instruction and feedback. Field contractors, engineers, and vendors are equipped with body-worn cameras, transmitting video to supervisors at the Quality Control Centre. Features include secured authentication-based login, a user-friendly dashboard, two-way audio communication, and supervisory report preparation.

Impact created :

The introduction of remote surveillance using body-worn cameras in LT distribution networks has proven highly beneficial. Real-time monitoring has improved safety compliance and reduced the auditor's workload. Archiving critical documents provide guidance to future network optimization efforts, ensuring sustainable distribution system management. This state-of-the-art approach exemplifies CESC's commitment to innovation and operational excellence.

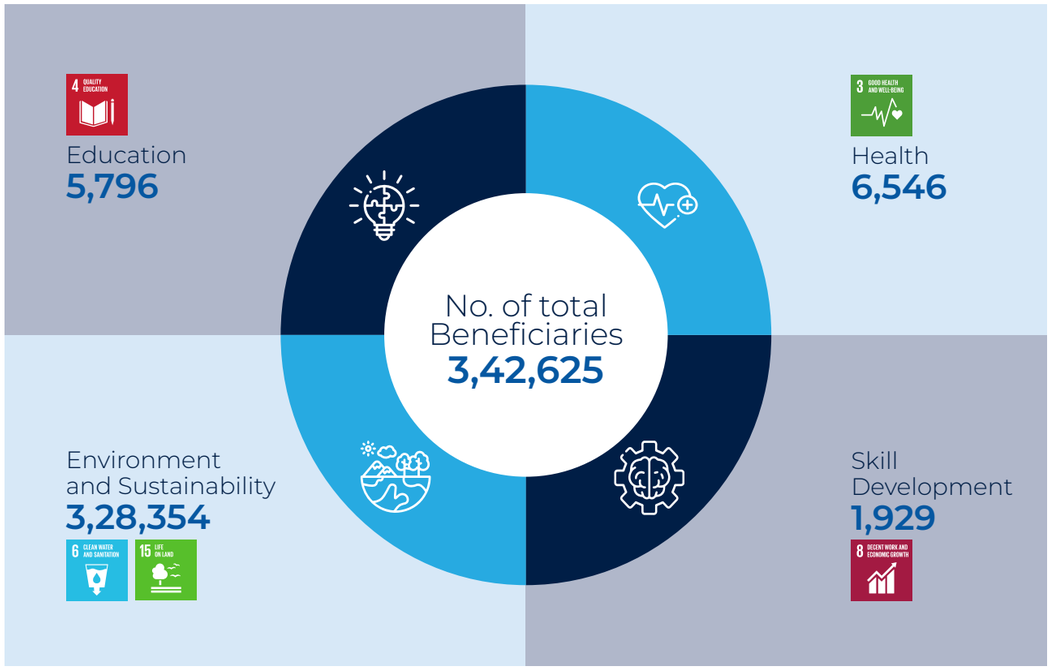
PROVIDING ACCESS TO ELECTRICITY

The World Bank's 'Ease of Doing Business' initiative gauges countries on ten key parameters. Among these is the 'Getting Electricity' metric, which assesses the simplicity, cost-effectiveness, speed, and clarity involved in securing new electricity connections. The provision of safe and dependable electricity, which falls under Ease of Doing Business (EODB) parameters, are essential for the uninterrupted functioning of businesses in the licensed area covered by CESC.

As such, we are committed to expediting new connection requests, with a goal of fulfilling them within 24 hours, using a defined procedure. Robotic Process Automation (RPA) was added to the process for setting up new connections. It was successfully tested to optimise accuracy & reduce cycle times.

CORPORATE CITIZENSHIP

Mitigating the pressing concerns of inequalities and hardships within our communities are essential for carried out business activities harmoniously. In line with our CSR policy, we have identified four key thematic areas by prioritizing understanding the social necessities and identifying the community's impact on our business. Our thematic area is depicted below.



Theme 1
EDUCATION

We believe education is a basic right of every child and is a steppingstone for their bright future. It is a primary driver for reducing the gap in youth unemployment in India. To support young and talented students we have taken an integrated approach towards strengthening the government schools and enhancing the quality of education.

Children attending class

Children at the ECED centre

Akshar

At Tiljala's Ward No. 66 through Akshar programme, we aim to promote education for the underprivileged. Through our support centres, 'Early Child Education and Development' and 'Community based Academic Centres', we bridge the learning gaps by covering the entire spectrum of schooling from pre-primary to higher secondary school. The intervention has helped in impacting 493 children (between age group 3-18 years).

Muktangan

'Muktangan' initiative extends quality education support to underprivileged students in South 24 Parganas' Pujali area, with a focus on grades VI to X. This program promises quality education through continuous monitoring of each student's progress based on effective evaluation processes and targeted support in specific subjects, facilitating a learning space where language isn't an obstacle. For the current reporting period, we have successfully impacted 304 children (between age group 10-16 years).

Indradhanush

The Indradhanush project was launched to enhance the lives of underprivileged urban children in Kamarhati by keeping them in school through educational support. Support is provided to 6 to 10-year-olds with learning gaps, while students up to the 10th grade receive assistance to ensure their continuation in the school system. We have successfully benefited 531 children (between age group 6-16 years).

Impact Stories

Soumita Das, a 12 year old girl resides along with her widowed mother in Pujali. Her life has remained desolate, filled with loneliness since she inhabited at her maternal home. Having been the subject of neglect and domestic violence, her academic scores went on the decline.

On enrolling into the education centre under project Muktangan, Soumita and her caregivers went through several counselling sessions. Encouraged to engage with her peers, she gradually began to concentrate on her education. A positive change was evident as she started attending school regularly and scored good marks in her examinations with support from the project. The project team helped her to get her identification documents for the Social Security Scheme.

This initiative helped her to overcome challenges and aim for brighter future by providing opportunities for personal development.

EDUCATION RELATED COMMUNITY OUTREACH ACROSS SUBSIDIARIES

RAJASTHAN

Bhoomi Poojan

Promoting education through construction of classrooms in government schools in municipal area

Bharatpur Electricity Services Limited (BESL) promotes quality education by building classrooms in municipal government schools, with a focus on serving children from underserved communities. On October 8th, 2023, a Land Warming (Bhoomi Poojan) ceremony marked the start of a new building for Bawariya Basti's Primary School in Ranjeet Nagar. This initiative promises to improve educational access for the Bawariya Community's children, offering a suitable learning space and contributing to community empowerment via education and skill building.

Government School Infrastructure Upgrade

Construction of 4 fully furnished new classrooms in 3 schools. The classrooms are equipped with smart interactive boards and Building as Learning Aid (BaLA) Paintings along with recycled plastic benches and tables

Building as Learning Aid(BalA)

This concept involves creating educational murals and images that facilitate faster comprehension of subjects through visual representation. With the endorsement of the Block Resource Coordinator (BRC), Bala artwork has been completed in 15 government schools to improve knowledge uptake through visual stimuli.

Smart Classes

We promote the concept of smart classes at schools by providing smart boards that are both theft protected and have convertible cover shelves. In 10 schools equipped with smart boards since FY 2022-23, quarterly teacher training programmes were provided with Uttar Pradesh syllabus uploaded. This reporting year we equipped and additional 6 schools, increasing the reach to 16 schools.

Felicitation of Meritorious Students

23 LIG category students from 13 government schools, were recognized for academic and sports excellence, received cheques, certificates, gifts, and NPCL jute bags

Medical Health Campus - Conducted

"Mega Health Drive" in 6 government schools, via Sharda Welfare Foundation, screened 1,263 students with a medical team comprising of pediatricians, dentists, and ophthalmologists. Post-Camp, 190 children were referred for free OPD consultations.

Self-Reliant Workshops

Self-defense workshops were held in 6 government schools, training 651 girls and 47 female teachers in Self-defenses, Situational awareness. and Communication for safety. Post the completion of 5 day program, participants received certificates.

Project Pehal

Project Pehal, a collaboration between NPCL and C3: Collaborate to Create Change was launched to aid slow learners in 9 government schools by enhancing Foundational Numeracy & Literacy (FLN) through innovative teaching, Co-curricular activities, and parent involvement, benefiting 191 students this year

DELHI NCR

Samarth - Education

School infrastructure upgrade

BaLA initiative implementation

CHANDRAPUR, MAHARASHTRA

Education

Dhariwal Infrastructure Limited along with NGO Partner- PAHEL Multipurpose Society Chandrapur and the Gram Panchayat, Block Education Officer (BEO) & Block Development Officer (BDO) & Local Political leaders contributed towards free and quality education for 933 children in 10 villages of Chandrapur Tehsil.

Computer classes at Zila Parishad School, Shengaon

L2R class

Theme 2
HEALTH

Good health and wellbeing are fundamental to a country's economic growth and prosperity. Recognizing the challenges in health systems, CESC's programmes focus on ensuring mothers and children of the society have access to good nutrition and healthcare services; and through preventive and curative healthcare that caters to community requirements.

Growth monitoring camp

Eye camp

Sustainable Nutrition and Health Education (SNEH)

The integration of safe motherhood and child survival programs is essential for reducing infant, child, and maternal mortality rates. Our Sustainable Nutrition and Health Education (SNEH) Programme prioritizes intensive support for mothers and new-borns during the first 1,000 days post-delivery, during which we conduct educational campaigns on early childhood health and non-communicable diseases to improve health, hygiene, and well-being among our target groups.

Additionally, the programme implements a cohort tracking system to monitor "At-Risk" mothers, who are often front-line workers, and their children. Over the reporting period, SNEH has served 5,838 beneficiaries, including young children, expectant and nursing mothers, and locals in community roles. In total, the programme has reached 28,876 individuals from approximately 5,354 households in vulnerable urban areas.

Eye Camp

We organize eye camps to identify individuals with cataracts and provide them with complimentary cataract surgeries within disadvantaged populations. We offer free eye screenings and give away glasses at no cost. Our initiatives have aided 708 residents of Pujali, Budge Budge.

Impact Stories

Ruby Khatoon, a beneficiary under the SNEH Project, is expecting her second child. She lives in Topsia Road, burdened with the responsibilities of her malnourished daughter. Ignorant to the prenatal guidance due to family taboo. Ruby's perspective shifted dramatically after engaging with the SNEH project.

She embraced hospital and Anganwadi Centre registration early in her pregnancy, attended essential check-ups and followed nutritional advice Her adherence to the program led to the birth of a healthy 3 kg baby and continued support ensured postnatal care and immunizations for her infant.

Further benefiting from the programme, her elder child has shown significant improvement in nutrition thanks to the project team's guidance.

HEALTH RELATED COMMUNITY OUTREACH ACROSS SUBSIDIARIES

RAJASTHAN

Healthcare: Vital contribution to healthcare- supply of x-ray machine and peripherals

Bikaner Electricity Supply Limited (BkESL) contributed towards enhancing healthcare systems in Bikaner City through provision of an industrial X-ray machine for the local hospital to cater to the requirements of Conducting 500 X-rays per day

DELHI NCR

Menstrual Health & Hygiene (MHH) Program

Project Sankalp, targeting better 'Menstrual Health & Hygiene' impacted 5,006 women in 7 villages and 1,284 school girls across 11 government schools. With Pinkishe Foundation, it conducted 100 workshops, distributed 6,136 sanitary pad packets, and installed 11 school incinerators for eco-friendly disposal

HALDIA, WEST BENGAL

Project Sakhi: Adolescent Girls Program

A total of 52 District Industrial Center (DIC) meetings were organized across ten Drop-In-Centers, providing a platform for discussions and activities. Various initiatives and programs were organized to promote health and hygiene. They are as follows:

- To promote menstrual hygiene, more than 2,000 sanitary napkins were distributed among adolescent girls on a cost-sharing basis.
- To promote nutrition and self-sustainability, 192 selected adolescent girls received vegetable seeds to start their own nutrition gardens.
- Hemoglobin (Hb) level tests were conducted for 135 adolescent girls to monitor and address their nutritional health. Approximately 300 adolescent girls of nearby project villages were benefited.

CHANDRAPUR, MAHARASHTRA

Health & Sanitation Program

This project aims at promoting awareness on three cardinal principles of hygiene i.e., washing hands, wearing mask. Through this program 1,987 villagers received free medical treatment (general, ortho, eye, dermatology, and dental camps). We also provided visual aids to 475 people with low vision. The overall illness ratio has been decreased in villages due to series of awareness in health and very few cases of illness were detected in target areas.

Distribution of spectacles

Dental check-up camp

Theme 3

SKILL DEVELOPMENT

We focus on enhancing the vocational abilities and employability of individuals, particularly in underserved communities. The goal is to provide training and education that align with market demands, enabling participants to secure better jobs and improve their economic status. Effective skill development programs include technical training, soft skills education, digital literacy, and entrepreneurship support, all tailored to bridge the gap between existing workforce skills and industry needs.

Electrical training

Eklavya- CESC Skill Academy-

Through 'Eklavya – CESC Skill Academy', we aim to equip underprivileged youth with essential skills, focusing on core employability. Our program offers diverse technical training, such as advanced computer skills, tailoring, beauty, appliance repair, and various management courses. Operated across 14 training centres in Kolkata, we have trained over 1,929 individuals and achieved a successful placement rate of 71.54% during the reporting period.

Impact Stories

Taniya Mukherjee and her mother encountered significant financial difficulties after the untimely passing of her father during her early years. Her mother became the sole breadwinner of the family, their financial situation worsened, forcing Taniya to give up her education.

Taniya's life took a positive turn when she met one of our mobilisers. She was introduced to the opportunities available at Eklavya - CESC Skill Academy. Taniya embraced the opportunity, enrolling in the Basic IT with Advanced Excel Couse at the Khardah Centre.

Her dedication led to successful training completion and a job offer from ASG Eye Hospital as a Front Desk Manger. Now earning Rs.13,059 monthly, Taniya significantly contributes to her family's income, marking a new chapter in her life of empowerment and career progress.

SKILL DEVELOPMENT RELATED COMMUNITY OUTREACH ACROSS SUBSIDIARIES

RAJASTHAN

Establishment of skill development centres

Bikaner Electricity Supply Limited (BkESL) in collaboration with STARK Foundation established a Vocational Training Centre, which includes a "Digital Efficiency Centre" for comprehensive computer education and a centre for stitching and fashion design. Both centres are well-equipped and provide three-month certified training programs to equip participants with marketable skills.

DELHI NCR

Skilling & Livelihood Program

The 'Skilling & Livelihood Program', in partnership with National Skill Development Corporation (NSDC) aims to train 300 youths in NPCL - licensed areas as Assistant Electricians, Retail Trainee Associates, and Domestic Data Entry Operators, with at least 70% of the target beneficiaries will be placed in jobs through job fairs.

Training program

HALDIA, WEST BENGAL

Project Aajivika: Livelihood Development Program

- Participatory margin money supports were provided to 10 individuals to help them start new enterprises such as grocery shops, poultry sheds, goat rearing activities, and more.
- 45 members received training and were given chicks to engage in backyard poultry farming. In collaboration with MSIT Haldia, 48 Self-Help Group (SHG) members participated in tailoring training.
- The project also hosted 5 animal husbandry training sessions and 5 capacity-building training sessions for SHG members.
- Overall, these initiatives have positively impacted 350 women across 37 SHGs.

Grocery shop setup

CHANDRAPUR, MAHARASHTRA

SHG Program

- 23 SHG members started LED bulb services making business.
- 6 SHG members are operating beauty parlour from their homes.
- 8 SHG members have established business of making paper plate, scrub and toothbrush.
- 9 SHG members have advanced with stitching business.

Advance LED bulb certificate distribution

Donation of stitching machine

Agriculture Program

Continuous engagement with government agencies through meetings with the District Collector, Agriculture Officer, and NABARD has benefited 350 farmers from 9 villages through promotion of agronomy, pisciculture and cotton farming.

Saplings distribution

Theme 4
ENVIRONMENT AND SUSTAINABILITY

The Company focuses on harnessing natural resources effectively to ensure energy availability and to promote economic progress and affluence for numerous individuals. We are mindful of the ecological footprint of our activities. As a responsible corporate entity, we recognize our duty to protect natural resources through programs that promote, effective waste management and environmental education.

Recycling of organic waste

Urja Chetana

Through this programme, CESC undertakes environmental education for government schools in Kolkata. Launched in 10 schools, the program aims to boost awareness and action on energy conservation, waste management, water conservation, and biodiversity as part of a broader climate change education strategy. It focuses on enhancing the environmental skills of teachers and students, integrating these themes into existing curricula, fostering sustainable practices within schools, and supporting educators to incorporate this learning into their regular teaching methods. The programme has benefited 7,522 students and 350 teachers.

Kiran

The decomposition of organic waste in landfills releases methane, a potent greenhouse gas contributing to climate change. To address this concern, 'Kiran', a community-driven waste management program was initiated in the Metro colony area near Dakshineswar. Through Kiran we educate residents on vermicomposting, enhance local hygiene, and generate job opportunities. The project has impacted 1,000 community members living in Metro Colony.

Aparajita

A pioneering project on scientific flower waste management has been launched by CESC in North Dum Dum Municipality. Central to this initiative is the strategic formation and engagement of Self-Help Group (SHG) members, predominantly women, who undergo comprehensive training in waste management processes. With meticulous sorting techniques, they segregate flower components and other organic waste, laying the groundwork for the production of value-added products like organic powder and biofertilizers. The project caters to a population of 3,19,482 comprising 67,480 families.

Impact Stories

Baidyapara High School embraced environmentalism through the Urja Chetna Project, initiating composting of 5 kgs of organic waste and harvesting 7,500 litres of rainwater in 2023. The school celebrated Tiger Day with wall art, planted 30 Devdaru trees, and gained recognition for its vertical garden and Seed Rakhi initiative. Students promoted green practices on Social media and won 3rd prize in Bal Urja Day 2023-24, fostering a culture of sustainability.

ENVIRONMENT AND SUSTAINABILITY RELATED COMMUNITY OUTREACH ACROSS SUBSIDIARIES

DELHI NCR

Reverse vending machine

Plantation drive in school

Reverse Vending Machines (RVMs)

Installed 4 Reverse Vending Machines (RVMs) at key locations in Greater Noida, including courts, a mall and medical facilities to promote recycling of plastic bottles and aluminum cans. This initiative recycled 20,000 bottles (1,200kg).

Nukkad Natak

Awareness campaigns on 'Say no to plastic' with 6,850 jute bags distribution energy efficiency via LED handouts, developing mindfulness on 'Power theft a social evil' and 'Benefits of timely bill payments' through Nukkad Natak at 55 rural locations.

Donations & Plantation of tree saplings

In alignment with the Green India Mission driven by India's Prime Minister the Prime Minister of India. NPCL has contributed to enhancing environmental sustainability by planting 280 saplings in government schools located in its operational zone. thereby aiding efforts to transform Greater Noida into a more verdant urban area.

07 HUMAN CAPITAL

APPROACH AND STRATEGY

Our employees are one the key pillars driving our ambition to provide reliable power to customers. We believe that their passion, dedication, and hard work is the fundamental essence contributing to our business success.Our HR strategy is centred on cultivating a diverse, engaged, and skilled workforce.

We firmly believe that an inclusive and collaborative work culture is essential for unlocking the full potential of our workforce. By promoting open communication, encouraging cross-functional collaboration, and recognizing outstanding contributions, we strive to create an environment where every employee feels valued and empowered to contribute to our shared vision. As we look into the future, we are confident that our focus on developing and engaging our people will continue to be a key differentiator, enabling us to navigate the evolving energy landscape and maintain our position as one of the leading integrated power utilities in India.

CESC's unwavering commitment to building a people-centric organization has been widely recognized. For the past five consecutive years, we have been certified as a Great Place to Work® (GPTW) and ranked among India's 100 best companies to work for, as well as one of the best in the energy, oil, and gas sector.

This prestigious accolade is a testament to our relentless efforts in creating a work environment that empowers our employees and fosters their professional growth.

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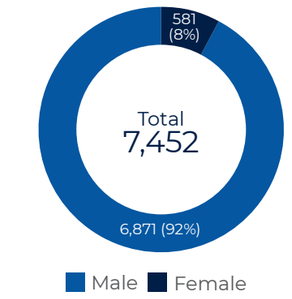
CELEBRATING INCLUSIVITY ACROSS CESC

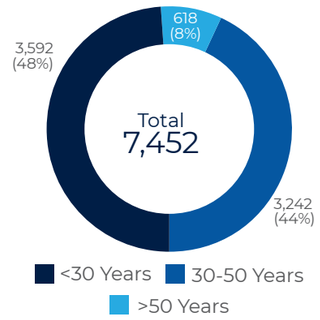
At CESC, we acknowledge the immense benefits of fostering an inclusive and diverse work environment to drive innovation and sustainable growth. As an equal opportunity employer, we do not discriminate based on gender, age, caste, creed, colour, ethnicity, religion, marital status, political opinions, sexual orientation, or union membership. We firmly believe in the principle of meritocracy, evaluating and employing individuals solely based on their calibre and competence.

Our employee strength at CESC and its subsidiaries as on 31st March 2024 is 7,450.

Consolidated workforce diversity by gender in FY 2023-24



Consolidated workforce diversity by age in FY 2023-24



CESC's workforce currently comprises 8% female employees, representing a marginal increase from the previous year. We are steadfast in our goal of achieving a target of 12% female employees by 2030. To nurture leadership qualities among our female talent.

In order to achieve this goal, we inspire women in the society to take up suitable opportunities within the organization and continue to promote a culture that empowers women. During the reporting period we undertook several interventions to drive our diversity led agenda:

Key initiatives in FY 2024

FOCUS ON INCLUSIVITY WHILE HIRING

We have focused on hiring of women, without compromising on merit, to improve gender diversity within our workforce. In FY 2023-24, we welcomed 45 female individuals into our CESC Family. Our hiring rate for women have increased from 5% in FY 2022-23 to 8% in FY 2023-24.

POSH AWARENESS AND E-LEARNING

We conducted regular POSH (Prevention of Sexual Harassment) awareness programs and deployed e-learning modules to foster a safe and inclusive work environment.

COLLABORATIVE PROGRAMS FOR ENHANCED REPRESENTATION

We partner with prestigious institutes like IIM Ahmedabad, Administrative Staff College of India, Confederation of Indian Industry, and Amity Institute to conduct specialized women's leadership programs.

CELEBRATING OUR "WOMEN WARRIORS" IN SOCIAL MEDIA

As part of our social media branding strategy, we highlight the testimonials of our women employees on platforms like LinkedIn and Facebook, under the title of 'Power Women.'

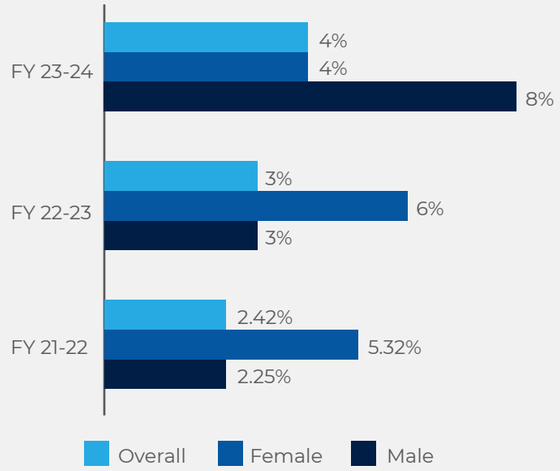
As we navigate the evolving landscape, we are confident that our dedicated, talented, and engaged workforce will continue to be the driving force behind our ongoing success and ability to deliver exceptional service to our customers.

TALENT ATTRACTION AND RETENTION

At CESC, we believe that attracting the right talent at an early stage has a pivotal role in providing us the competitive edge in the market. We strive to attract the next generation of talent and actively reach out to young minds on university campuses as part of our recruitment strategy. We are committed towards cultivating a future-ready talent-pipeline that can navigate the evolving energy landscape with agility and innovation.

Our hiring rate by gender is represented below:

Hiring Rate in last three years



ONBOARDING THE RIGHT TALENT

We strive towards developing a sustainable talent pipeline by creating future-ready professionals.

All our new hires through a thorough 6-week induction and orientation program to help them gain a comprehensive understanding of our operational structure, business conduct, and value systems.

This includes classroom training, outbound programs, senior leader mentorship, departmental visits, and interactions with different teams through our programs called "Annwesan" for management trainees and "Unmilon" for trainee assistant officers.
To ensure that we attract the best talents in the industry, we have established a Cross Functional Team (CFT) comprising of current employees and alumni of prestigious institutes. This team arranges technical seminars and campus events to establish connections with potential candidates and provides support throughout the onboarding process.

NPCL ONBOARDING PROGRAMME

Our subsidiaries also have their respective induction programs with a similar objective of seamlessly integrating new hires within our organization like NPCL has a pre-placement program called Aarambh to attract fresh graduates. It includes a 3-day Classroom Induction Program to help new hires acquire business acumen and familiarize themselves with NPCL's culture and values.

Additionally, NPCL offers a 20-day "Campus to Corporate" program for fresh graduates, which includes theory sessions conducted by internal trainers to help them assimilate knowledge. This program also includes soft skills training to facilitate a smooth transition into corporate life and equip them with tools for personal and professional growth.

EMPLOYEE SATISFACTION

At CESC, fostering an inclusive culture where every employee feels valued, included, and able to perform at their peak is a core part of our people strategy. We empower employees to share their views, feelings, emotions, and ideas through structured opinion surveys, communication meetings, and informal discussions throughout the year.

To understand the needs and perceptions of employees across all cadres, we have conducted surveys in collaboration with the Great Place to Work (GPTW) Institute since 2014. The annual survey conducted by GPTW is based on five major dimensions as presented alongside.

In the reporting year, the overall employee satisfaction score is 80% with a solid 98% overall employee participation in the satisfaction survey.

The increase in employee satisfaction score is demonstrated by the improvements in our turnover rate. The turnover rate has decreased from 9.86% to 8.31% from last year.

Credibility,
Communication,
Competence,
Integrity

Pride,
Support,
Collaboration,
Caring.

Fairness,
Equity,
Impartiality,
Justice.

Respect,
Personal Job,
Team,
Corporate Image.

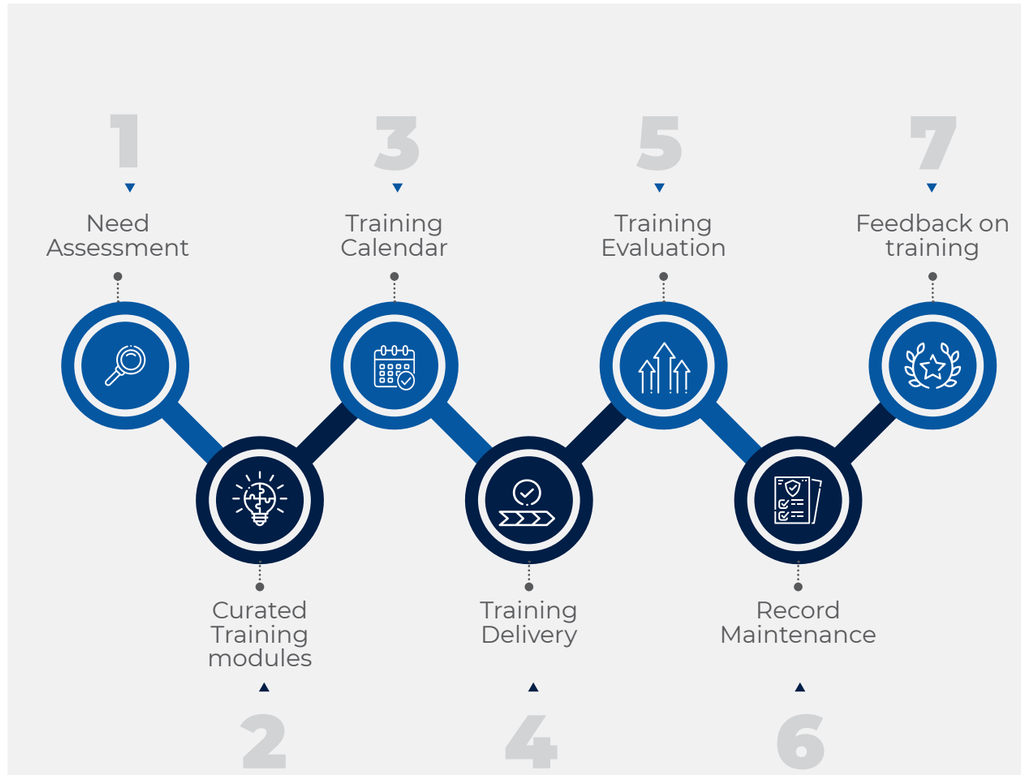
Camaraderie,
Intimacy,
Hospitality,
Community.

LEARNING AND DEVELOPMENT

We believe that retaining our talent by providing unique and fulfilling career opportunities is essential for business continuity and unlocking new business opportunities. At CESC, our efforts are focused at creating a conducive work environment with stable and fulfilling career opportunities. We provide multiple avenues for growth and development of our employees to realize their potential and contribute to the advancement of the business.

The integrated appraisal system deployed vide the Balanced Business Score Card manages and assesses our employee's performance against individual targets and their competencies in alignment with the Core Values for increments, performance bonuses and career progression. The annual appraisal process also helps in identifying development needs of our employees based on which organization provides specific trainings from an extensive bouquet of training programmes designed to develop behavioural and functional competencies derived from job descriptions. Training needs identified through the process are mapped into an annual training plan and imparted accordingly. The identified training programmes are enabled through state-of-the art training facilities equipped with training simulators, models, films, and handbooks with the help of inhouse trainers and experts as well as external faculty members.

Our approach to learning and development is as follows:



Our training programmes are classified across four categories:

NEED-BASED TRAINING

We aim at enhancing the behavioural attributes of our employees

CURRICULUM BASED TRAINING

We strive to uplift the knowledge and skills, required in specific areas

SPECIFIC INTERVENTION PROGRAMMES

Our key focus areas of the training are the cost of training and many more

LEADERSHIP DEVELOPMENT PROGRAMMES

We believe in improving leadership capability

100%
Employees received Performance career review in FY 2023-24

19
average training hours per employee in FY 2023-24

2,73,78,431
INR spent on employee training and development in FY 2023-24

1,41,607
Total hours of training in FY 2023-24

CONTINUOUS IMPROVEMENT AND DIGITAL TRANSFORMATION OF TRAINING

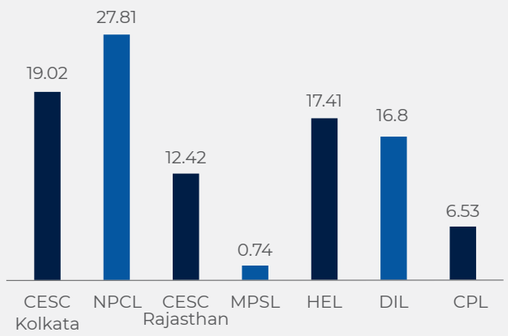
At CESC, we are committed to the continuous review and enhancement of our training programs to ensure they remain aligned with the evolving needs of our organization and our employees.

To achieve our target of achieving 100% 'Digital Skilling' of all employees by 2030, we have introduced an e-learning platform, Oracle Learning Management System and collaborated with Udemy, which provides our employees with access to a wide range of online courses and resources. Additionally, we have conducted targeted training programs on critical and emerging topics such as cybersecurity, digital skills, digitization processes, AIML, IoT, and big data analytics. Some of the other noteworthy training programs on technology and innovations are presented alongside.

- HT Network Operations
- Familiarization with BBGS plant and equipment
- Advanced condition monitoring of power cables
- Technical course on power distribution technology
- Condition monitoring of transformers using robots
- Emerging technologies covering big data analytics, IoT, and AI/ ML applications
- Customer-centricity
- Behaviour based programs for officers
- Disaster management in power utilities

Our training performance at CESC and its subsidiaries are as below:

Average training hours per employee across CESC and its subsidiaries



FY	Total Training and Development Expenses (INR)	Training Hours/ Employee
FY 2023-24	2,73,78,431	19
FY 2022-23	4,34,00,000	8
FY 2021-22	2,30,00,000	9

SUCCESSION PLANNING

At CESC, we have structured succession planning approach to groom future leaders and ensure the right talent is prepared for critical roles.

We incorporate the "3 G's" approach in our succession planning programme:

GROOMING

The Young Executive Board (YEB), comprising high-performing young executives who undertake strategic projects under top leadership's mentorship to develop broad business acumen.

GUIDANCE

Special Management Development Programs (MDPs) at premier institutes like IIMs, along with coaching, experiential learning, and benchmarking visits to build leadership capabilities.

GROWTH

Development Centres for selected talents across managerial levels, where individual development plans are created to address specific areas for improvement.

EMPLOYEE REWARD AND RECOGNITION

We are committed to fostering a culture that is driven by performance, where employees are recognized and rewarded for their contributions. We firmly believe that creating a work environment that values and respects individual talents and achievements is crucial for driving organizational success.

Beyond these formal recognition programs, we also actively work towards cultivating a happy and satisfying work environment for our employees. We believe that job satisfaction and a positive work culture are essential for unlocking the full potential of our workforce and driving sustained organizational growth.

Other company level awards are:

- **Udaan - for Senior level executives**
- **Surya - Supervisor of the Year**
- **Saptarshi - for team performance of workmen**
- **Kaizen and 5S - Innovative approach towards better ways of doing things**
- **Abhay - for team performance of workmen**
- **Kudos Spot Award for officers in the ranks of Executive to Deputy Manager**
- **Nakshatra - for Mid and Junior level executives**
- **Eklavya Workman of the Year**
- **Sabash- Spot award for non-covenant workers**

EMPLOYEE WELLBEING AND BENEFITS

Beyond awards and recognitions to morally uplift our workforce, we at CESC, prioritize the welfare and well-being of our employees by creating an “employee centric” workspace where everyone feels included.

For our permanent employees, we extend a comprehensive range of benefits. These includes provident fund, gratuity, accident compensation, insurance, family medical benefit scheme, hospitalization benefit, post-retirement medical insurance, job-based attendance based incentives and Employee’s Deposit Linked Insurance (EDLI). In the reporting year, 100% of the permanent workforce received PF and Gratuity.

At CESC, we uphold, and respect human rights standards followed globally, including the Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights. We have built our organizational culture in accordance with these principles to operate in an ethical manner and safeguard the interests of all our stakeholders. Our Labour Relations Policy is a testament to our human rights commitment.

UPHOLDING HUMAN RIGHTS

"We uphold ethical employment practices and strictly prohibit the engagement of child labour or forced labour across all our operations. Our organization adopts a zero-tolerance approach towards any form of abuse or exploitation, ensuring a safe and dignified work environment for all stakeholders."

Promoting Accessible Leadership and Open Dialogue

We have a systematic grievance redressal mechanism grounded in the principle of 'prevention is better than cure' to address and resolve human rights concerns. We embrace an 'open door' policy where anyone can approach CESC executives, including the Managing Director. We facilitate Leadership Connect, a web-based platform enabling all Executives, including MDs, to directly share their concerns, ideas, and questions with members of the Top Leadership team.

At CESC, we are deeply rooted to our values and uphold human rights principles. In this endeavour, we have established a comprehensive three-tier grievance redressal mechanism, structured as follows.

TIER 1
Grievances are initially handled by supervisors or line officers at the shop floor level, promoting immediate resolution whenever possible.

TIER 2
If grievances persist, they are escalated to the line manager of the respective department, in collaboration with the departmental Industrial Relations (IR) officer or Engineer.

TIER 3
If grievances persist, they are escalated to the line manager of the respective department, in collaboration with the departmental Industrial Relations (IR) officer or Engineer.

We are pleased to announce that during the reporting period, there were zero incidents of human rights violations, reflecting our ongoing efforts to maintain an environment where all employees are safeguarded and valued.

OCCUPATIONAL HEALTH AND SAFETY

Committed to ‘Zero Incidents’, we guarantee a workspace that is free from health and safety hazards by implementing safe work procedures, promoting a robust safety culture and monitoring and controlling unsafe work conditions.

At CESC, we ensure the highest standards of health and safety at our workspace through the development and dissemination of the Corporate Safety Manual and the Corporate Safety Policy along with the seven sets of Internal Safety Standards namely ‘Confined Space Entry’, ‘Working at Height’, ‘Electrical Safety’, ‘Permit to Work’, ‘Safety Observation’ and ‘Incident Investigation’, which are aligned with the requirements of ISO 45001.

A dedicated Apex Safety Committee reviews the safety performance and oversees the effective implementation of the policies/ standards by the Safety Cell, Divisional Safety Monitoring Committees and Unit Safety Committees on a periodic basis.

At unit level, ‘Unit Safety Committees” comprising of departmental officers, employees, and workers, who are responsible for proactively monitoring safety incidents, identify hazards, conduct training sessions, and propose safety procedure enhancements. These committees consist of various sub-committees focused on capability building, safety observations, and incident investigations.

For effective implementation of safety procedures and corrective/ preventive actions, we employ the following measures:

SAFETY PERCEPTION
Conducted every three years to gauge the organization's safety culture and identify areas for improvement.

SAFETY TRAININGS AND JOB SAFETY WORKSHOPS
Regular sessions organized to educate employees on safety

MONTHLY REPORTS TO MDS
Regular updates provided to the Managing Directors regarding safety

SITE SAFETY OBSERVATIONS
Conducted by departmental officers to identify and address safety concerns on-site promptly

BI-MONTHLY MANAGEMENT COMMITTEE MEETINGS
Scheduled meetings to review safety measures, discuss any issues, and strategize for improvement.

SITE SAFETY AUDITS
Undertaken by both the safety cell and third-party auditors to assess compliance with safety protocols and identify potential hazards.

HEALTHCARE SERVICES FOR WORKFORCE

Provision of quality healthcare services to all our employees are essential for their well-being and prosperity. We engage with leading medical institutions including major super-speciality hospitals, nursing homes, and diagnostic clinics. We operate 27 dispensaries across CESC Kolkata staffed by qualified medical professionals, ensuring round-the-clock care.

Additionally, our generating stations are equipped with state-of-the-art ambulance facilities with support services available 24/7. As part of our occupational health initiative, we conduct regular health check-ups and offer specialized services such as vertigo testing, cardiovascular risk monitoring, and bone mineral density testing. We also organize eye and dental check-up camps, orthopaedic sessions, diabetic and cardiac camps.

Few initiatives undertaken by the subsidiaries include-

At NPCL:

- Annual health check-ups (categorized by age: below 40 and above 40)
- Collaborations with healthcare partners for improved healthcare access for employees and families
- Gym facility, online health talks, and health camps (e.g., World Heart Day)
- First-Aid certification program

At DIL:

- Cancer screening awareness and orthopaedic/diabetic awareness sessions
- Stress management programs and parenting awareness sessions

At HEL:

- Annual health check-up of contractor's workmen
- Session done on stress management and lifestyle amongst contractor's workmen

RISK MITIGATION

At CESC, identification and mitigation of health hazards is of paramount importance. In line with our commitment to achieve 'Zero Incidents', we conduct Hazard Identification and Risk Assessments (HIRA) and Job Safety Analyses (JSA) for both routine and non-routine tasks. Through these assessments, risks are identified, evaluated, and categorized as high, moderate, or acceptable. Subsequently, we implement measures to control and minimize these risks, ensuring the risks remain within acceptable limits. Our approach incorporates root cause analysis, drawing insights from incident investigations, safety audits, observations, and external expert recommendations.

The risk identification process at our company involves a thorough assessment of various work activities and environments to pinpoint potential hazards and vulnerabilities. Through this process, we've identified key risks across different areas.

Key Safety Risks	Risk Mitigation strategies	Implementation Tools
Electrical Job Safety	Implementing the Electrical Safety Standard	Permit to Work Standard and relevant Safe Work Procedures (SWPs)
Confined Space Entry	Adhered to the Confined Space Entry Standard in conjunction	Permit to Work Standard and relevant Safe Work Procedures (SWPs)
Working at Height	Adhered to working at Height Standard	Relevant Safe Work Procedures (SWPs) for elevated work
Material Handling	Adhered to Material Handling Standard	Relevant SWPs to minimize hazards associated with handling materials
Job Procedure Safety	Implemented the Safety Observation Standard and Contractor Safety Management Standard	Site Safety Observations and Periodic Audits
Hot Job	PPE Policy	Relevant SWPs to ensure safety during tasks classified as "hot jobs."

The seamless integration of precautions and safety procedures into our standard operations has led to the development of Safe Work Procedures (SWPs). The effective implementation of SWPs and corresponding Work Instructions (WIs) through training initiatives has resulted in reduced risks and safer workplaces.

ADVANCING HAZARD PREVENTION WITH DIGITAL TOOLS

At CESC, we leverage digitalization and technology as vital tools to enhance safety, reduce operational costs, and improve client services. By incorporating modern technology alongside traditional methods like process enhancements, safer materials, and personal protective equipment, we're reshaping our approaches through immersive integration. Our workforce undergoes training to adeptly manage diverse scenarios by engaging in virtually simulated environments using Virtual Reality (VR) technology.

This immersive training environment prepares our employees for real-world dangers, skill development, and reduces the risk of injuries by providing opportunities to inspect equipment thoroughly. CESC is dedicated to numerous safety initiatives aimed at enhancing health and safety across our generation and distribution operations. Some of these initiatives include:

SAFETY INITIATIVES AT CESC

- Safety park inaugurated inside some of the premises to create awareness regarding use of PPE and other safety equipment's.
- Installed automatic fire detection and suppression system using Clean Agent Grenoz 1230 for server rooms, minimizing potential fire risks.
- Safety communication to promote awareness through communication channels.
- Introduced new design safety shoes to provide enhanced protection and comfort during operations.
- Implemented high durability wheel chockers for all goods vehicles entering the plant to prevent unintended movement and ensure safety.
- Increased reporting of near miss incidents, unsafe acts, and conditions by improved monitoring.
- Implemented water balloon load test for turbine EOT cranes to ensure structural integrity and safe lifting operations.
- Conducted stress reduction programs to cater mental wellbeing besides physical wellbeing.
- Upgraded from ELCB to RCCB in all welding machines and electrical distribution systems to enhance personnel and equipment safety.
- Conducted dietary programs for workforce to cater to their nutritional needs and promote healthy eating habits.

KEY SAFETY INITIATIVES UNDERTAKEN BY CESC'S SUBSIDIARIES

A Key safety initiatives at DIL

- Implementing cup-lock type scaffolding for safer and more efficient boiler furnace maintenance during unit-1 annual overhaul.
- Erecting a structure to facilitate safe and efficient removal of tarpaulins from coal trucks, enhancing operational efficiency.
- Installing a dry fog dust suppression system to replace water type DSS in WT & RBF floor, enhancing fire safety and operational reliability.
- Reinforcing cable tray support at various locations to ensure structural integrity and prevent hazards.
- Thermal insulation paint done at LT & HT switchgear panel rooms.
- Use of insulation mats installed in electrical MCC rooms.
- Flameproof illumination system installed in all battery rooms.
- New fire alarm system installed and commissioned at some important areas of the plant.
- Exhaustive use of warning signs, new signage boards, auto glow signage at hazardous workplaces.
- Sprinkling system and hydrant posts were added to the firefighting system at Ammonia storage shed.
- Behavioural based safety training was conducted covering all employees of DIL.

Key safety initiatives at HEL

- **Standardized Procedures for Electrical Energy Isolation:** Ensuring proper isolation procedures are followed to prevent electrical accidents and ensure worker safety.
- **Enhanced Safety for Online 400 KV Maintenance:** Implementing rigorous safety protocols for maintenance operations to mitigate risks during live electrical work.
- **Improved Illumination in Coal Unloading Areas:** Enhancing visibility in Track Hopper, Wagon Tippler, and underground conveyors to bolster safety and efficiency.
- **Utilization of Non-Sparking Tools and Uniform Single-Phase Sockets:** Minimizing hazards in hydrogen admission and storage areas while maintaining electrical safety standards across the facility.
- **Safety Equipment Upgrades:** Invest in upgrading fire suppression systems, emergency lighting, and first aid stations.
- **Community Outreach:** Engage with local communities to raise awareness and promote safety practices.
- **Temporary Folding Scaffolding:** Implemented Temporary FRP folding scaffolding for height work in the 400 KV Switchyard, ensuring safe access and work execution.

Key Safety initiatives at NPCL

- **Safety Week Celebration:** Promoting safety awareness among employees and contractors through awareness programs and activities during Safety Week.
- **Circulation of Safety Awareness Mailers:** Distributing safety awareness mailers to all employees during Safety Week to reinforce safety protocols and practices across the organization.
- **Mock Drills for Fire Hazard Awareness:** Conducting mock drills at various NPCL office sites to raise awareness and preparedness for fire hazards among employees.
- **CJP Portal:** Contractor Job Portal app launched by NPCL helps the operational team oversee planning and allows engineers to monitor work progress remotely.
- **Training Center:** New Skill Development Centre established by NPCL offers hands-on training on overhead networks and equipment, showcasing safe practices and PPE demonstrations for employees and associates. The Classroom Training Centre provides theoretical and visual education on underground and overhead networks for up to 25 participants. Both facilities aim to enhance the skills and safety knowledge of NPCL's workforce.
- **Earthing Process:** Advanced Earthing Compound improves the earth resistance of equipment. This compound requires less maintenance and delivers better results, helping to minimize incidents during the monsoon season.

Key safety initiatives at CESC Rajasthan

- **Introduction of Online Record Maintenance:** Introduced an online system for efficient maintenance and upkeep of records, enhancing accessibility and organization.
- **Distribution of Safety Handbook:** Prepared and circulated a pocket handbook outlining safety rules to field technicians, ensuring widespread awareness and adherence.
- **Identification and Communication of PPE Requirements:** Identified necessary PPEs, tools, and equipment for different categories, and effectively communicated these to engineers and vendors.
- **Compliance with CEA Regulation:** Issued Rule 3 Authorization as per CEA regulation to all operating engineers, ensuring regulatory compliance and safety standards.

Key Safety initiatives at CPL

- **Regular Safety Equipment Inspection:** Conducting frequent inspections of safety equipment to ensure proper functioning and compliance with safety standards.
- **Remote Equipment Handling:** Implementing remote handling procedures for improved safety and efficiency in equipment operation.

Contractor Job Portal app launched by NPCL helps the operational team oversee planning and allows engineers to monitor work progress remotely.

SAFE WORK CULTURE

At CESC, we strive towards instilling a safe working culture among our employees. We go beyond formal training by conducting various health and safety communication campaigns, engaging our workforce in proactive participation, aligning- them to our safety vision. Our approach involves undertaking yearlong behaviour-based safety programs.

We go beyond formal training by conducting various health and safety communication campaigns, engaging our workforce in proactive participation, aligning- them to our safety vision.

Empowering Employees:

We have established a safety management system that enables employees to report unsafe acts and conditions through an android based application and the 'Click to Safety' portal. Reported cases undergo thorough analysis and investigation to implement corrective or preventive measures.

Positive Reinforcement:

We reinforce safe actions among employees through monthly awards and recognition programs, fostering a culture of continuous improvement and zero incidents. Contract workers at HEL and DIL are also acknowledged with 'Spot Award' and Employee of the Month' accolades for their contributions to a safe workplace.

Safety Week Celebration:

We prioritize safety by celebrating safety week, emphasizing its importance and promoting a safe work environment. This dedicated week serves as a platform for raising awareness, educating employees and fostering a strong safety culture. By engaging in various activities, safety week enhances employee well-being, reduces risks, and boosts productivity while bolstering our company's reputation.

CASE STUDY

Truck Mounted Aerial Working Platforms (TAWP) for enhanced safety

Conventional ladders replaced with TAWP

A sizeable portion of the CESC licensed area is catered to by Low Tension Overhead (LT OH) network, of which ~ 40% supply related calls docketed at our supply call centre are from OH areas. All these supply related calls from OH area is attended to by Emergency Depot Groups. Our Emergency Depot Groups have historically used conventional bamboo ladders, for accessing pole appurtenances and overhead mainline while attending to supply related calls in LT overhead distribution network. Such practice of using conventional ladder is prone to safety related risks of our workmen and in the past.

To address safety risks associated with conventional ladders used in LT OH network maintenance, we undertook a proactive approach by implementing Truck Mounted Aerial Working Platforms (TAWP) across operational districts and have till date introduced 18 nos. TAWPs across our 10 Mains LT districts. This strategic decision helped us mitigate the potential hazards faced by technicians while performing essential tasks on overhead infrastructure.

HEALTH AND SAFETY TRAININGS

While technological interventions play a crucial role, raising awareness about safety risks and preventive measures is equally vital in mitigating health and safety hazards.

Our training programs encompass:

- General safety measures
- SWP and work training
- Behavioural-based safety sessions
- Job-specific video-based safety training

In FY 2023-24, we have provided 1,41,607 hours of training with an average 19 hours of training per employee.

HEALTH AND SAFETY PERFORMANCE

Through relentless dedication to technological innovation, comprehensive training initiatives, and various safety programs, CESC has established a safe and healthy workplace. Our commitment to safety is evident in the timely reporting of all workplace incidents, including lost time incidents and fatalities, through our advanced safety incident reporting system.
Our health and safety performance are as below:

PUBLIC SAFETY

Building upon our unwavering commitment to safety within our workplace, CESC extends its dedication to ensuring public safety. Just as we prioritize the well-being of our employees through advanced safety protocols and incident reporting systems, we recognize the critical importance of safeguarding the communities we serve. In times of crisis, such as the COVID-19 pandemic and severe weather events like Cyclones Amphan and Yaas, public safety remains paramount. In alignment with our corporate ethos, CESC employs a comprehensive three-pronged approach to address potential risks to public safety. This approach integrates the expertise of our Safety Cell with the collaborative efforts of our Corporate Communication and Customer Relations departments. By synergizing these functions, we aim to mitigate any risks arising from logistical operations, transportation activities, and equipment installation or repair. This multifaceted strategy encompasses a range of proactive measures designed to ensure zero incidents at public locations. Through effective communication, diligent planning, and responsive customer engagement, we strive to uphold the highest standards of safety for all members of the public.

Aspects covered in our public safety initiatives

- Ensuring Safety during Installation and Maintenance activities
- Ensuring Safety and Access Control of Plants and Equipment in Public places
- Safe Handling of Electricity

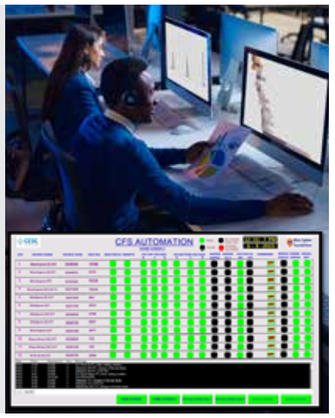
CFS Automation for Enhanced Safety and Efficiency for elevated public safety

In pursuit of our ESG commitments, we've integrated a Remote Operation System for LT side combined switch fuse units across strategic locations, elevating safety and efficiency in our electrical infrastructure.

The Remote Operation System enables secure control of LT side CFS units through ON and OFF commands, ensuring real-time execution and detailed monitoring for proactive management.

Impact Created

This advancement facilitates rapid response during emergencies, enhances operational control, minimizes downtime, ensures safety compliance, promotes energy efficiency, and aligns with our ESG goals.



08

NATURAL CAPITAL

With the growing emphasis on environmental stewardship and the transition to a low-carbon economy, CESC is increasingly focused on optimizing the use of natural capital. This involves not only minimizing negative impacts on ecosystems and biodiversity but also leveraging innovative technologies to improve operational efficiency and embrace renewable energy sources.

ENERGY AND CARBON

We recognize the urgency of decarbonization for a sustainable future and focus on enhancing energy efficiency as a long-term benefit. Modernizing the grid to integrate renewable sources, coupled with supportive policies, regulations, and investments in research and development, are key components. Our ESG Policy outlines our approach, which includes adopting renewable energy, transitioning our value chain to low-carbon processes, implementing demand-side management, and reducing distribution losses, all as key drivers of our decarbonization efforts. Our efforts towards decarbonization are discussed below:

GREEN BUILDINGS

CESC prioritizes energy optimization and renewable use through green building practices, focusing on eco-friendly methods from construction to maintenance. This approach is integral to our offices and facilities, aiding in energy efficiency and carbon reduction efforts.

In the FY 2023-24, six of the Company's substations have become LEED (v 4.1 O+M) certified green along with one at DIL. The substations alongside have received LEED certification from United States Green Building Council (USGBC):

1. Dum Dum Substation - LEED (v 4.1) O+M Platinum
2. East Calcutta Substation - LEED (v 4.1) O+M Platinum
3. New Cossipore Substation - LEED (v 4.1) O+M Platinum
4. Mulajore Substation - LEED (v 4.1) O+M Platinum
5. Jadavpur Substation - LEED (v 4.1) O+M Platinum
6. Majerhat Substation - LEED (v 4.1) O+M Platinum

The Company embraces the principles of Green Building to enhance resource optimization and efficiency. The Company till date has a portfolio of 21 certified green buildings establishments.

We are proud to disclose that we have green certified operating area comprising of more than 5 million square feet.

INTEGRATION OF RENEWABLE ENERGY

CESC acknowledges that renewable energy is crucial for cutting costs and carbon emissions. Embracing renewables leads to material efficiency and mitigates environmental effects. With a commitment to sustainable development and reducing carbon emissions, CESC has ventured into various solar and hybrid energy projects. This helps us to diversify our energy mix and promote environmental stewardship.

Some of our operational projects are mentioned alongside:

At Budge Budge Generating Station, 18 KW solar cells have been installed over the car garage

We have installed solar rooftops to the tune of 228 kWp at our substations and generating stations

At Prinsep Street Substation, a roof top wind turbine of 5.1 kWp has been installed with grid connection

At Southern Generating Station, the company installed a 3x15 KW[5] micro hydel project for its auxiliary power consumption

CESC has commissioned its first microgrid at Chakmir substation, having a floating solar plant of 100kWp capacity supported with 218 kWh Battery Energy Storage System (BESS)

Haldia Energy Limited has installed a 30 kWp roof top solar plant a battery-operated vehicle and 500W solar garden lights to reduce 27 tCO_2eq during the reporting period

Crescent Power Limited operates a 18 MW solar power plant in Ramnad, Tamil Nadu and a 30 KWp solar panel module and 2 KW solar wind hybrid system in Asansol, West Bengal. These Systems contribute to the renewable energy mix in Chennai city

In addition to integrating renewable energy into our operations, we have extended our commitment to sustainability by including green power in our renewable energy mix.

[5] In FY 2023-24, no power was generated

GREEN POWER

Green power refers to electricity produced from environmentally friendly and renewable resources. As a responsible organisation, CESC has been actively contributing to the green power by incorporating renewable energy sources into its portfolio.

The Company's foray into green power is not only a strategic business move but also aligns with the global shift towards cleaner energy alternatives. By investing in renewable energy, CESC Limited is helping to mitigate the impact of climate change, providing its consumers with more eco-friendly electricity options. Through these initiatives, CESC is demonstrating its dedication to a greener future and the overall well-being of the planet.

GREEN HYDROGEN

We have planned and processed the implementation of 10,500 MT/annum of green hydrogen production facility in India under the Strategic Interventions for Green Hydrogen under the transition scheme, issued by the Solar Energy Corporation of India Limited.

The Green Hydrogen project is expected to be commissioned within 3 years. This would be a pilot project and further capacity addition would be planned later. We have completed registration of the project with Govt. of Odisha for approval of incentives under Industrial policy 2022.

LOW CARBON TRANSFORMATION OF VALUE CHAIN

We focus on electrifying our value chain to facilitate a low-carbon shift. We promote the adoption of green technologies and appliances, like electric vehicles and e-cooking, among the public and our customers.

Adoption of electric vehicles

CESC is actively transitioning to electric vehicles, targeting a fully electric distribution fleet by 2030 and using electric two-wheelers in-house. We have installed public and private EV charging stations, including partnerships with Kolkata Municipal Corporation. Furthermore, CESC has already provided supply at 11 nos. WBTC bus depots and is in the process to extend supplies to more. CESC also supports EV charging infrastructure at fuel stations of major Oil Marketing Companies.

Adoption of electric cooking

Beyond promoting electric vehicles, CESC advocates for the use of electronic kitchen appliances, as demonstrated at the Kolkata International Book Fair. We aim to assist 25,000 entities, including commercial, industrial, residential, canteens, and roadside eateries, to switch to e-cooking by 2030 for a cleaner environment. Our efforts in demand-side management have led to 500 canteens, restaurants, and eateries adopting electric cooking, fostering energy-efficient practices among consumers.

DEMAND SIDE MANAGEMENT

CESC is committed to the judicious and responsible use of energy, actively educating consumers on mindful energy consumption. Our electricity bills offer insights into usage and costs, fostering transparency and providing energy-saving advice. Additionally, our "Be Smart Save Smart" e-booklet and digital platforms offer tips and information on the latest energy-conserving technologies. CESC has made significant strides in monitoring and reducing its carbon footprint through a robust decarbonization strategy.

Demand Response Initiatives - NPCL

NPCL has partnered with Smart Innovation Norway (SIN), Research and Innovation Circle of Hyderabad (RICH), and the Indian Institute of Management Ahmedabad (IIM-A) to execute the Demand Response driven Energy Advancements and Moderation of Services (DREAMS) Project. The DREAMS project aims to empower consumers, promote energy efficiency and facilitate decarbonization through the widespread deployment of data - driven automated demand response technology, developed using a societal co-creation approach.

Benefits for consumers

- Potential cost savings through peak reduction.
- Reduction in outages and enhancement of energy reliability
- Opportunity to earn incentives by participating in demand response campaigns.

Our electricity bills offer insights into usage and costs, fostering transparency and providing energy-saving advice. Additionally, our "Be Smart Save Smart" e-booklet and digital platforms offer tips and information on the latest energy-conserving technologies

MANAGING OUR AUXILIARY POWER CONSUMPTION

At CESC, we stress on effective handling of auxiliary power consumption for improving efficiency. Under the 'Perform, Achieve and Trade' Programme of the Bureau of Energy Efficiency, we strive to enhance our energy efficiency by improving process parameters and incorporating the use of cutting-edge, energy-efficient equipment and technologies.

These initiatives are meticulously designed to successfully reduce our Auxiliary Power Consumption (APC), which in turn, yields substantial energy savings. These measures extend beyond mere energy conservation; they also lead to a noticeable reduction in operating costs and a positive environmental impact.

Some of the initiatives are given below:

- Replacing existing lights with LED lights
- Rationalization of ESP operations
- Replacement of cooling tower parts
- Reduction in lighting load through sensor based technology and voltage optimization
- Installation of variable frequency drives
- Maintenance of air preheaters
- Modification of pump and fan rotating elements
- Replacement and refurbishment of pumps
- Rationalization of pumping operations

Under the 'Perform, Achieve and Trade' Programme of the Bureau of Energy Efficiency, we strive to enhance our energy efficiency by improving process parameters and incorporating the use of cutting-edge, energy-efficient equipment and technologies.

5,94,164 GJ
Annual energy savings across generating stations in FY 2023-24

The auxiliary power consumption of BBGS, HEL and DIL have significantly improved.

FUEL DIVERSIFICATION

In response to India's agricultural economy and air pollution from stubble burning, the Central Electricity Authority (CEA) has identified that agricultural waste biomass can be converted into biomass pellets with a calorific value comparable to Indian coal. CESC has initiated trials to co-fire these biomass pellets, derived from agro-residues like rice husk, groundnut shells, and paddy straw, in coal-based thermal power plants. Guided by senior management, various firing methods and their impacts are being tested. The aim is to partially replace coal consumption in power generation with these pellets. With ongoing modifications and upgrades, the viability of this eco-friendly alternative is being enhanced.

AIR EMISSIONS

1,38,618 tonnes
The total emissions for all generating stations in FY 2023-24

To address these emissions, we have installed equipment designed to curb their release at the origin and manage them effectively before they enter the environment.

At CESC, we are aware of the various air pollutants such as sulphur oxides, nitrogen oxides, and particulate matter that are emitted alongside greenhouse gases from our operations. To address these emissions, we have installed equipment designed to curb their release at the origin and manage them effectively before they enter the environment. We are committed to decrease air emissions and improve overall air quality.

The initiatives implemented for reducing air emissions is mentioned below:

Emission reduction initiatives

- Installation of dry fog dust suppression system
- Telescopic chutes installed in fly ash unloading spout
- Installation of high-efficiency Electrostatic Precipitators (ESPs)
- Development of green belt in coal stock
- Ammonia injection for better ESP
- All coal conveyors equipped with dust extraction systems
- Installation of rain guns and water sprinklers automated ammonia dosing system to control the PM emission
- NOx Control technologies like low NOx burners and over-fire air dampers in the boilers are in place at all generating stations.
- Installed De-NOx system in HEL & DIL boilers

We maintain optimal operation of Electrostatic Precipitators (ESPs) through routine monitoring and maintenance, use the ammonia dosing system, and regularly monitor the emissions from our Corporate Environment Cell and also by laboratory accredited by WBPCB and NABL.

WATER STEWARDSHIP

CESC recognizes the vital importance of water as a resource and is committed to responsible water stewardship across its operations. Our approach to water management is centered on conservation, efficiency and sustainability.

WRI Aqueduct is a sophisticated tool created by the World Resources Institute that we employ to identify and evaluate water-related risks in areas experiencing water stress, such as DIL. It utilizes a range of data and indicators to provide a detailed picture of water scarcity, quality issues and potential environmental impacts. By using Aqueduct, we can better understand the specific challenges faced in DIL, enabling more effective water resource management and strategic planning to mitigate these risks.

We engage in regular monitoring and assessment of our water usage to identify areas for improvement and invest in state-of-the-art technologies for monitoring water withdrawal and consumption. Initiatives such as rainwater harvesting, wastewater treatment, Zero Liquid Discharge, identifying alternative water sources and recycling are integral parts of our strategy to reduce water consumption and mitigate the impact on local water resources. Moving forward, we will delve into a detailed exploration of each initiative.

WATER WITHDRAWAL

At our generation stations, we draw raw water from neighbouring rivers for operational use. This water undergoes initial treatment to eliminate suspended particles, resulting in clear water that is then directed to a demineralization facility. Here, through a combination of filtration and chemical treatments, dissolved contaminants are removed. The purified water is then suitable for boiler use, where it is converted into steam. Specifically, at the Budge Budge and Haldia sites, we have implemented Ultra Filtration Reverse Osmosis (UF-RO) systems to lower the high chloride levels in the water, ensuring it does not cause any complications.

WATER CONSERVATION

Thermal power plants play a critical role in the power sector, utilizing heat energy to generate electricity through the conversion of water into steam, which drives turbine generators.

We recognize the potential for increased water demand following the installation of Flue Gas Desulphurization (FGD) units. In response, we have devised an all-encompassing plan to curtail our water consumption to less than 2.25 Kl/MWh by 2030, mitigating the effects of this rise.

Our strategy is three-pronged, with the goal of accomplishing the following objectives as outlined below:

- Improve Water Efficiency
- Identify alternative water sources
- Implement zero liquid discharge

Water conservation measures undertaken by DIL

To sustain plant operations during the summer months, mitigate water consumption, and address the water crisis in the surrounding areas, we have implemented a comprehensive water management strategy. This includes the construction of rain water harvesting systems, which involve building reservoirs to collect and store rainwater. Additionally, we have constructed Bandhaara, a traditional method of water conservation, to help preserve river water. These initiatives not only support our plant's water needs but also contribute to the conservation of vital water resources in the region.

Within the operations of power plant, we utilize cooling tower water for dust impression system makeup and fire fighting system we conduct internal audits at periodic intervals to identify opportunities for water savings. DIL which is located in a water-stressed area, achieved its water intensity target in FY 2023-24 by reducing the specific water consumption to 2.15 KL/MWh against the target of 2.25 KL/MWh.

IMPROVING WATER EFFICIENCY

We are committed to enhancing the efficiency of our operations by minimizing water wastage. Our focus is on reducing system losses and maximizing water use efficiency through the adoption of cutting-edge technologies. Proactively addressing water and steam leakages is crucial for conserving water and preventing damage. The introduction of All Volatile Treatment (AVT) at HEL, DIL, and BBGS has successfully managed boiler water chemistry and substantially decreased the need for boiler blowdown.
At BBGS, the integration of an RO plant into the demineralization process has led to less frequent resin regeneration, thereby lowering water usage. Similarly, at CPL, an RO plant recycles cooling tower blowdown into makeup water, further reducing water needs. Additionally, Sewage Treatment Plants at BBGS and HEL allow for the recycling of sewage water.

IMPLEMENTING ZERO LIQUID DISCHARGE

Attaining Zero Liquid Discharge (ZLD) at BBGS, SGS, DIL and CPL thermal power plants ensures that no wastewater is discharged into the environment. This achievement underscores our commitment to efficient water management.

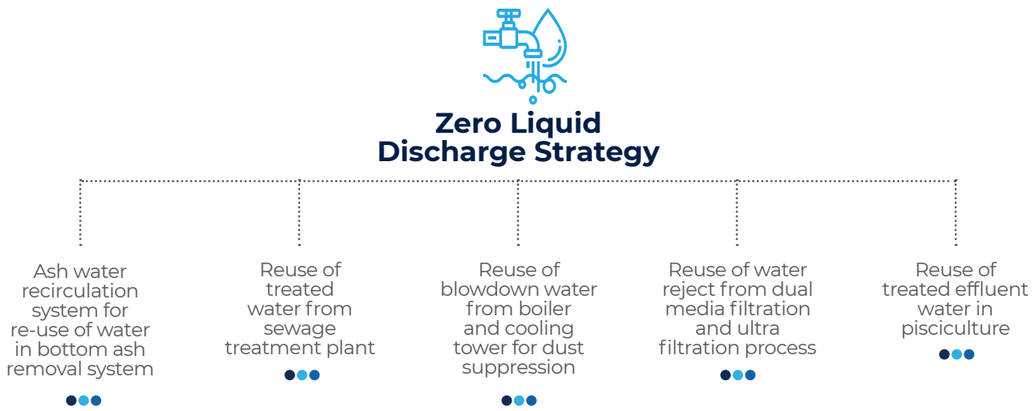
We ensure that effluent water is stripped of oil, grease, and chemical particulate matter before it is recycled. The treated water is then redirected to the raw water treatment facility for further use in cooling towers, plant service water, and fire suppression systems.

BBGS, SGS & DIL has Zero Discharge System. HEL operates on brackish water and the effluent is discharged after appropriate treatment in compliance with PCB standards. All offices from the distribution business use water for domestic purpose and do not discharge directly into the environment.

Additionally, water from sewage treatment is repurposed for various needs.

The methods that have allowed us to fully recycle our operational water and effectively establish ZLD is depicted below.

CESC takes pride in maintaining specific water consumption well below the national benchmark of 3.5 cubic meters per MWh.



IDENTIFYING ALTERNATIVE WATER SOURCES

Rainwater consumption in **BBGS is 7,025m³ & HEL is 9,32,112 m³** in FY 2023-24

We have extended our water conservation efforts by installing rainwater harvesting systems to alleviate water scarcity. These systems capture and store rainwater, with significant capacities at HEL (100,000 cubic meters across two ponds), CPL (8,200 cubic meters in one pond), and through a natural channel at DIL that collects 2.53 million cubic meters of rainwater.

Rooftop collection capacity of BBGS and HEL further decreases our reliance on external water sources, with annual capacities of 7,025 and 16,000 cubic meters, respectively. The harvested rainwater can support various needs, including demineralized water production, cooling, ash handling, landscaping, and dust control.

Specific Water consumption(m³/MWh)

PROTECTING WATER QUALITY

We, at CESC, are aware of the detrimental effects that improperly managed industrial effluents can have on ecosystems, including the potential for toxins to accumulate in food chains and cause human diseases. In compliance with SPCB regulations, we employ a comprehensive effluent treatment system that utilizes physical, chemical, and biological methods to ensure water quality meets strict standards.

At SGS, the open circuit condenser cooling system returns water to the Hooghly River, our source river. This water is rigorously tested in our in-house labs to adhere to all relevant norms. In FY 2023-24, we have had no instances of non-compliance regarding water quantity and quality, permits, standards, or local regulations.
Details on our management practices and efforts to enhance our waste disposal methods will be discussed in the following section.

CIRCULAR ECONOMY

At CESC, our dedication to eliminate landfill waste underpins our efforts to foster a circular economy. We are actively engaged in transitioning to a sustainable, low-carbon future, and we are driving this shift with effective and conscientious waste management practices. We carefully manage the hazardous waste from our operations, ensuring it is disposed of or recycled by certified entities in line with SPCB (State Pollution Control Board) guidelines for all categories of waste such E-waste, battery waste, used oil, biomedical, construction and demolition waste, and plastic waste. Our commitment to responsible waste handling is rooted in our understanding of the severe environmental risks, posed by hazardous materials.

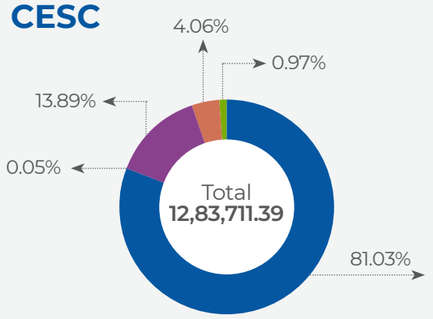
36.51%
Transformer oil reused at CESC Kolkata

ASH MANAGEMENT

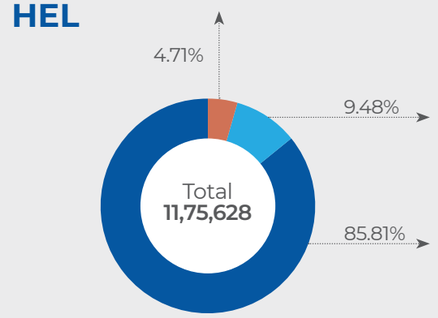
Ash, resulting from coal burning, can lead to health problems when released into the air and water bodies. Our operations produce two types of ash: fly ash, which is a fine particulate captured by devices like Electrostatic Precipitators (ESP) before gases exit the chimneys, and bottom ash, which is heavier and collected in a hopper at the boiler's base.

Our ash utilization(%) across all generation plants for various activities is represented below:

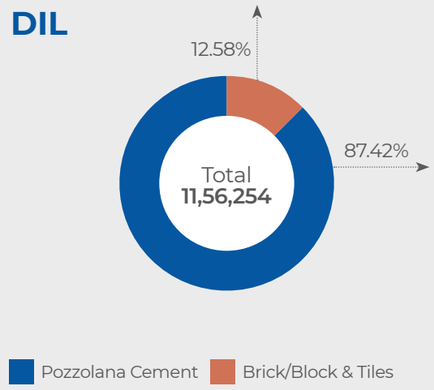
CESC



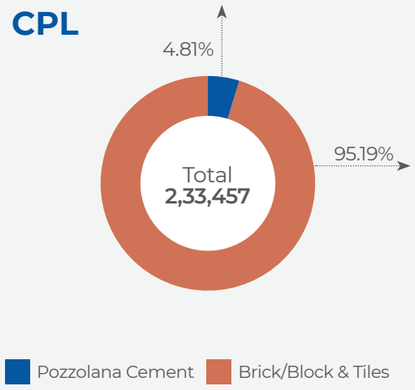
HEL



DIL



CPL



BIODIVERSITY MANAGEMENT

Our commitment to biodiversity conservation encompasses protecting wildlife and plant life, along with educating our employees and local communities about their environment-relate responsibility. We focus on maintaining biodiversity-rich areas, including natural habitats, diverse species, and woodlands, to foster a beneficial ecological footprint. We proactively assess and mitigate biodiversity risks associated with our business operations. Our efforts in safeguarding biodiversity include the following activities. Our activities aimed at preserving biodiversity encompass the following initiatives.

In the current reporting year, two new projects are being implemented at site - **"PANCHAVATI VATIKA" and "MIYAWAKI FOREST"**. This is a joint initiative with West Bengal Biodiversity Board, Government of West Bengal, and Haldia Energy Limited.

Urban forest in Southern Generation Station

The Miyawaki forest is a highly dense forest. It is a technique pioneered by Japanese botanist Akira Miyawaki, that helps create dense, native forests. The approach is supposed to ensure that plant growth is 10 times faster and the resulting plantation is 30 times denser than usual. The officials from the West Bengal Biodiversity Board proposed creating an urban forest at our power stations. These dense forests, involving plantation of around 3-5 plants per sq.metre on nutrient - rich soil, growing into a forest - like area in 5-7 years.

A 1,000 m^2 plot near the southern Receiving station switch yard was chosen. The process involved excavating the soil, removing debris and enriching it with organic material like cocopeat, cow dung, rice husk, jibamrit - a mix of cow dung, urine, gram flour, molasses and soil. The project launched on July 31, 2023 with similar initiatives started at BBGS, HEL, and DIL. The following data represents number of trees planted & area covered under this urban forest projects in different stations :

BBGS 1,600 sq meter / 5,500 trees.

SGS 1,000 sq meter / 3,500 trees

DIL 4,653 sq meter / 13,535 trees

HEL 3,600 sq meter / 5,600 trees

UNDP (United Nations Development Programme) and FICCI recognized Haldia Energy Limited Action for Biodiversity Conservation

HEL has been committed to biodiversity conservation since its inception, preserving native ecological diversity and enriching its green belt. The power plant encloses native habitats within its boundaries. Over the years, HEL launched several initiatives, leading to migratory birds visiting during winter.

The UNDP and FICCI recognized HEL's efforts in their 2024 report, highlighting them as a prime example of business-led conservation. HEL established a Biodiversity Conservation area, featuring a Butterfly Park, Medicinal Herb Garden, and Spice Garden, contributing to a rich variety of local flora and fauna. Collaborating with government bodies, HEL's conservation area now supports 50 tree species, 100 ayurvedic plants, 30 spice types, and 30 butterfly varieties. The campus is also a haven for 38 bird species, including migratory ones, and mammals like the golden jackal and jungle cat.

Unveiling of the Report by UNDP (United Nations Development Programme) & FICCI (Federation of Indian Chambers of Commerce & Industry) on 5th June, 2024

09 AWARDS AND RECOGNITION

CESC Kolkata

- Received prize for “Leadership in HR Excellence and Sustained Excellence” at the 16th Confederation of Indian Industries (CII) National HR Excellence Awards and certified as “Great Place to Work” for the fifth consecutive year.
- Winner at the 6th International Chamber of Commerce (ICC) Social Impact Summit and Awards for its contribution to employment generation through its project, ‘Eklavya – CESC Skill Academy’.
- Nationally recognized with the prestigious FAME National Award for Eklavya – CESC Skill Academy Project.
- BBGS received best ESG initiative award for water efficiency in eastern region by Council of Enviro Excellence.
- BBGS declared winner of Global Water Recycling Company of the Year 2023 by Energy and Environment Foundation Global Awards (EEF).
- BBGS received the Gold Award on Environment Improvement at the 14th Exceed Environment Awards.
- BBGS received Platinum award at the 17th International Chamber of Commerce (ICC) Environment Excellence Award.
- SGS received the prestigious 4.5 star rated certificate at the CII awards.
- SGS declared as the Gold award runner-up at 5th International Chamber of Commerce (ICC) at National Occupational Health and Safety Awards 2023.

NPCL

- Won Excellence in ‘Power Distribution’ at Renewable Energy Opportunity Conference.
- Received Technology Adoption Award in innovation with Impact Award.
- Received ‘CSR Project of The Year Award’, 2023 at 8th Corporate Social Responsibility summit and awards.
- Winner in technology adoption category at Greentech and Innovation awards 2023.
- Won the Social Impact award in Education Category from CSR Universe.
- Won Platinum award in Green Practices for industries from Confederation of Indian Industries (CII).

CPL

- Won "Platinum Award" under the "Apex India Green Leaf Award 2023 for ''Environment Excellence" in the thermal power sector.
- Won best overall excellence award in CSR under "10th Edition National Awards for Excellence”.
- Second runner-up energy conservation award under "16th Confederation of Indian Industries (CII) ENCON awards 2023 in general category group".

HEL

- Received award for Environmental Best Practices from CII.
- Received award for Health and Environment (SHE) Excellence by CII.

DIL

- Winner at Energy and Environment Foundation (EEF) Global Water Awards.
- Winner of the Power generation ESG and sustainability Awards 2023 for ‘Water Efficiency (Western region)’.
- Awarded “4 star” safety rating by National Safety Council (NSC) through its "NSCI star rating system”.
- Won 'Platinum Safety Award' from Green Maple Foundation.

10

PERFORMANCE DATA TABLE

(CONSOLIDATED BASIS)

SOCIAL PERFORMANCE INDICATORS

Activities and workers				
2-7 Employees				
Permanent employees				
Employee strength (Male)				
	Unit	FY 21-22	FY 22-23	FY 23-24
CESC Kolkata	No.	6,419	5,966	5,570
NPCL	No.	782	492	533
CESC Rajasthan	No.	250	296	335
MPSL	No.	614	640	59
HEL	No.	711	739	178
DIL	No.	913	839	150
CPL	No.	301	70	71
Total	**No.**	**9,990**	**9,042**	**6,896**
Employee strength (Female)				
CESC Kolkata	No.	501	503	517
NPCL	No.	39	39	54
CESC Rajasthan	No.	8	7	10
MPSL	No.	4	10	3
HEL	No.	3	3	3
DIL	No.	5	6	5
CPL	No.	4	2	2
Total	**No.**	**564**	**570**	**594**
Overall				
CESC Kolkata	No.	6,920	6,469	6,087
NPCL	No.	821	531	549
CESC Rajasthan	No.	258	303	345
MPSL	No.	618	650	62
HEL	No.	714	741	181
DIL	No.	918	845	155
CPL	No.	305	72	73
Total	**No.**	**10,554**	**9,611**	**7,452**

GRI 204: Procurement practices

GRI 204-1 Proportion of spending on local suppliers

Proportion of procurement from local suppliers by value (Within state)				
	Unit	FY 21-22	FY 22-23	FY 23-24
CESC Kolkata	%	68.72%	65.93%	47.76%
NPCL	%	13.35%	20.71%	60.98%
CESC Rajasthan	%	78.68%	63.01%	68.75%
MPSL	%	7.08%	9.09%	6.49%
DIL	%	63.25%	60.78%	79.18%
HEL	%	69.39%	75.44%	74.62%
CPL	%	96.72%	96.98%	39.11%
Total	**%**	**43.15%**	**45.35%**	**55.06%**
Proportion of procurement from MSME suppliers by value				
CESC Kolkata	%	3.26%	3.10%	3.36%
NPCL	%	32.21%	37.89%	39.36%
CESC Rajasthan	%	52.32%	52.00%	48.21%
MPSL	%	30.44%	31.00%	14.69%
DIL	%	8.17%	7.00%	6.36%
HEL	%	15.58%	18.00%	17.75%
CPL	%	2.84%	2.32%	22.28%
Total	**%**	**8.03%**	**7.83%**	**7.42%**

GRI 401: Employment

401-1 New employee hires and employee turnover

Hiring rate by gender (Male)				
CESC Kolkata	%	0.87%	1.04%	1.58%
NPCL	%	18.27%	15.63%	12.68%
CESC Rajasthan	%	20%	25.78%	23.74%
MPSL	%	34.92%	43.33%	12.60%
DIL	%	1.96%	1.06%	13.38%
HEL	%	4.44%	2.15%	5.57%
CPL	%	1.25%	0.00%	1.43%
Total	**%**	**2.25%**	**2.99%**	**3.78%**
Hiring rate by gender (Female)				
CESC Kolkata	%	4.17%	4.17%	5.29%
NPCL	%	12.12%	1.31%	25.32%
CESC Rajasthan	%	0.00%	0.70%	70.59%
MPSL	%	100.00%	100.00%	40.00%
DIL	%	20.00%	0.11%	18.18%
HEL	%	0.00%	0.00%	0.00%
CPL	%	0.00%	0.00%	0.00%
Total	**%**	**5.32%**	**5.61%**	**7.88%**
Overall hiring rate				
CESC Kolkata	%	1.00%	1.28%	1.88%
NPCL	%	11.00%	16.94%	13.61%
CESC Rajasthan	%	19.00%	26.48%	25.00%
MPSL	%	36.00%	44.26%	13.64%
DIL	%	2.00%	1.17%	13.55%
HEL	%	4.00%	2.15%	5.48%
CPL	%	1.00%	0.00%	1.39%
Total	**%**	**2.42%**	**3.14%**	**4.09%**
Turnover rate by gender (Male)				
CESC Kolkata	%	8.33%	8.64%	8.40%
NPCL	%	18.00%	11.00%	8.00%
CESC Rajasthan	%	20.00%	13.70%	7.00%
MPSL	%	35.00%	8.00%	24.00%
DIL	%	2.00%	9.00%	16.00%
HEL	%	4.00%	9.00%	7.00%
CPL	%	1.00%	0.00%	1.00%
Total	**%**	**8.56%**	**8.67%**	**8.61%**
Turnover rate by gender (Female)				
CESC Kolkata	%	3.79%	3.98%	4.09%
NPCL	%	30.00%	6.00%	18.00%
CESC Rajasthan	%	0.00%	1.08%	35.00%
MPSL	%	0.00%	43.00%	0.00%
DIL	%	0.00%	1.00%	18.00%
HEL	%	0.00%	2.00%	0.00%
CPL	%	0.00%	0.00%	0.00%
Total	**%**	**6.72%**	**6.14%**	**4.55%**
Overall turnover rate				
CESC Kolkata	%	8.01%	8.29%	8.01%
NPCL	%	13.85%	11.00%	8.95%
CESC Rajasthan	%	7.70%	14.80%	7.28%
MPSL	%	10.17%	8.00%	22.73%
DIL	%	3.80%	8.00%	16.13%
HEL	%	5.50%	8.00%	7.12%
CPL	%	0.00%	0.00%	1.39%
Total	**%**	**7.77%**	**7.59%**	**8.31%**

GRI 403: Occupational health and safety

403-9 Work-related injuries

	Unit	FY 21-22	FY 22-23	FY 23-24
Number of fatalities				
CESC Kolkata	No.	2	0	0
NPCL	No.	0	0	0
CESC Rajasthan	No.	0	0	0
MPSL	No.	0	0	0
HEL	No.	0	0	0
DIL	No.	0	0	0
CPL	No.	0	0	0
Total	**No.**	**2**	**0**	**0**
Number of lost work cases				
CESC Kolkata	No.	16	21	29
NPCL	No.	0	0	0
CESC Rajasthan	No.	0	0	0
MPSL	No.	0	0	0
HEL	No.	0	0	1
DIL	No.	0	0	0
CPL	No.	0	0	0
Total	**No.**	**16**	**21**	**30**
Number of first-aid cases				
CESC Kolkata	No.	33	6	27
NPCL	No.	5	0	0
CESC Rajasthan	No.	0	4	0
MPSL	No.	0	0	0
DIL	No.	0	0	1
HEL	No.	2	3	7
CPL	No.	0	6	4
Total	**No.**	**40**	**19**	**39**
Total Training and Development Expenses (Lakh INR)				
CESC Kolkata	INR Lakhs	202	381	211
NPCL	INR Lakhs	10	13	23
CESC Rajasthan	INR Lakhs	3	13	5
MPSL	INR Lakhs	0	0	0
DIL	INR Lakhs	9	11	18
HEL	INR Lakhs	6	12	16
CPL	INR Lakhs	0	4	0.28
Total	**INR Lakhs**	**230**	**434**	**274**
Loss Time Injury Frequency Rate (LTIFR)				
CESC Kolkata	Ratio	1.16	1.30	1.30
NPCL	Ratio	0.00	0.00	0.00
CESC Rajasthan	Ratio	0.00	0.00	0.00
MPSL	Ratio	0.00	0.00	0.00
DIL	Ratio	0.00	0.00	0.00
HEL	Ratio	0.00	0.00	0.05
CPL	Ratio	0.00	0.00	0.00
Total	**Ratio**	**0.61**	**0.91**	**1.36**
Total Recordable Injury Frequency Rate (TRIFR)				
CESC Kolkata	Ratio	3.29	13.65	1.30
NPCL	Ratio	5.70	0.00	0.00
CESC Rajasthan	Ratio	0.00	0.00	0.00
MPSL	Ratio	0.00	0.00	0.00
DIL	Ratio	0.00	0.00	0.00
HEL	Ratio	6	0	0.05
CPL	Ratio	0	0	0
Total	**Ratio**	**0.69**	**0.91**	**1.36**

GRI 404: Training and education

404-1 Average hours of training per year per employee

	Unit	FY 21-22	FY 22-23	FY 23-24
Overall average hours of training per employee				
CESC Kolkata	Hours	7	5	19
NPCL	Hours	37	10	28
CESC Rajasthan	Hours	2	13	12
MPSL	Hours	3	5	1
DIL	Hours	5	22	17
HEL	Hours	4	17	17
CPL	Hours	1	2	7
Total	**Hours**	**9**	**8**	**19**

404-3 Percentage of employees receiving regular performance and career development reviews				
Percentage of total employees by employee category who received a regular performance and career development review				
	Unit	FY 21-22	FY 22-23	FY 23-24
CESC Kolkata	%	100%	100%	100%
NPCL	%	100%	100%	100%
CESC Rajasthan	%	100%	100%	100%
MPSL	%	100%	100%	100%
DIL	%	100%	100%	100%
HEL	%	100%	100%	100%
CPL	%	100%	100%	100%
Total	**%**	**100%**	**100%**	**100%**

GRI 405: Diversity and equal opportunity				
405-1 Diversity of governance bodies and employees				
Percentage by gender (Male)				
CESC Kolkata	%	93%	92%	92%
NPCL	%	95%	93%	93%
CESC Rajasthan	%	50%	98%	97%
MPSL	%	99%	98%	95%
DIL	%	99%	99%	97%
HEL	%	100%	100%	98%
CPL	%	99%	97%	97%
Total	**%**	**93%**	**94%**	**92%**
Percentage by gender (Female)				
CESC Kolkata	%	7%	8%	8%
NPCL	%	5%	7%	7%
CESC Rajasthan	%	3%	2%	3%
MPSL	%	1%	2%	5%
DIL	%	1%	1%	3%
HEL	%	0.40%	0.40%	2%
CPL	%	1%	3%	3%
Total	**%**	**5%**	**6%**	**8%**

	Unit	FY 21-22	FY 22-23	FY 23-24
Percentage by age (<30 years)				
CESC Kolkata	%	4%	4%	4%
NPCL	%	24%	40%	38%
CESC Rajasthan	%	16%	32%	31%
MPSL	%	42%	38%	39%
DIL	%	14%	6%	12%
HEL	%	7%	7%	11%
CPL	%	1%	4%	3%
Total	**%**	**6%**	**6%**	**9%**

GRI 405: Diversity and equal opportunity				
405-1 Diversity of governance bodies and employees				
Percentage by age (30-50 years)				
CESC Kolkata	%	42%	42%	39%
NPCL	%	30%	50%	54%
CESC Rajasthan	%	32%	61%	63%
MPSL	%	48%	51%	52%
DIL	%	81%	86%	76%
HEL	%	71%	76%	70%
CPL	%	2%	72%	75%
Total	**%**	**33%**	**36%**	**43%**
Percentage by age (>50 years)				
CESC Kolkata	%	54%	55%	57%
NPCL	%	6%	9%	9%
CESC Rajasthan	%	3%	2%	7%
MPSL	%	9%	12%	11%
DIL	%	5%	8%	11%
HEL	%	22%	17%	19%
CPL	%	6%	17%	23%
Total	**%**	**36%**	**38%**	**48%**

TARGETS- SOCIAL

	Unit	FY 22-23	FY 23-24
Critical suppliers screened for ESG criteria by number			
CESC Kolkata	%	17%	4.7%
NPCL	%	4%	22.5%
CESC Rajasthan	%	0%	Screening to be initiated
MPSL	%	27%	83%
DIL	%	19%	1.17%
HEL	%	21%	1.18%
CPL	%	0%	Screening to be initiated
% TAT adherence to consumer complaints			
CESC Kolkata	%	93%	90%
NPCL	%	98%	99%
CESC Rajasthan	%	74%	100%
MPSL	%	74%	81%
% Payments from digital platforms			
CESC Kolkata	%	74.00%	79.84%
NPCL	%	87.00%	91.00%
CESC Rajasthan	%	67.44%	69.34%
MPSL	%	28.00%	66.00%
Average Response time for large area outages			
CESC Kolkata	Hour	1.05	0.94
NPCL	Hour	1.33	0.71
CESC Rajasthan	Hour	0.90	0.95
MPSL	Hour	0.90	0.90
100% new connection (LOOP Connection) requests are fulfilled for consumers within 24 hours subjected to compliance			
CESC Kolkata	%	97%	97.56%
NPCL	%	34%	60.56%
CESC Rajasthan	%	27%	75.20%
MPSL	%	0%	30.00%

ENVIRONMENT PERFORMANCE INDICATORS

	Unit	FY 21-22	FY 22-23	FY 23-24
GRI 301: Materials				
301-1 Materials used by weight or volume[6]				
CESC Kolkata	MT	33,96,506	36,12,293	39,80,504
BBGS	MT	32,63,108	32,27,864	35,23,192
SGS	MT	1,33,398	3,84,429	4,57,312
DIL	MT	27,22,889	27,99,665	29,70,396
HEL[7]	MT	29,41,212	30,37,014	31,36,563
CPL	MT	3,88,891	4,00,601	3,92,229
Total	**MT**	**94,23,321**	**98,51,115**	**1,04,62,084**
GRI 302: Energy				
302-1: Energy consumption within the organization				
Total Direct Energy Consumption (GJ)				
Generation				
CESC Kolkata[8]	GJ	5,55,33,479	5,81,04,997	6,28,16,234
DIL	GJ	3,94,68,903	4,19,84,938	4,36,86,234
HEL	GJ	4,06,74,784	4,06,90,912	4,36,50,330
CPL	GJ	43,58,037	44,80,820	43,38,371
Total 1	**GJ**	**14,00,35,203**	**14,52,61,667**	**15,44,91,169**
Distribution				
CESC Kolkata	GJ	1,965	2,651	124
NPCL	GJ	3,439	4,079	5,014
CESC Rajasthan[9]	GJ	0	0	0
MPSL[10]	GJ	0	0	2,741
Total 2	**GJ**	**5,404**	**6,730**	**7,879**
Grand total (Total 1+Total 2)	**GJ**	**14,00,40,607**	**14,52,68,397**	**15,44,99,048**

[6] Materials include - Coal, lubricant, light diesel oil, high speed diesel, liquefied petroleum gas, biomass, chemicals

[7] Materials include - Coal, lubricant, light diesel oil, high speed diesel, sulphuric acid, sodium hypochlorite, liquefied petroleum gas, biomass, chemicals

[8] Includes BBGS and SGS

[9] Data will be monitored going forward for DG sets

[10] Due to better data monitoring

	Unit	FY 21-22	FY 22-23	FY 23-24
Total Indirect Energy Consumption (GJ)				
Generation				
CESC Kolkata[11]	GJ	30,611	13,893	12,131
DIL	GJ	0	140	529
HEL	GJ	8,328	366	0
CPL	GJ	643	1,253	1,318
Total 1	**GJ**	**39,582**	**15,652**	**13,978**
Distribution				
CESC Kolkata	GJ	12,560	52,221	52,319
NPCL	GJ	8,893	6,578	7,332
CESC Rajasthan	GJ	4,797	1,447	5,664
MPSL	GJ	660	631	673
Total 2	**GJ**	**26,910**	**60,877**	**65,988**
Grand total (Total 1+Total 2)	**GJ**	**66,492**	**76,529**	**79,966**
Grand total (Direct+Indirect)	**GJ**	**14,01,07,099**	**14,53,44,926**	**15,45,79,014**
302-3 Energy intensity				
BBGS	GJ/MWh	9.56	9.49	9.5
SGS	GJ/MWh	14.37	11.82	12.6
DIL	GJ/MWh	9.89	9.92	9.88
HEL	GJ/MWh	9.51	9.64	9.59
CPL	GJ/MWh	11.65	13.38	12
Total	**GJ/MWh**	**9.77**	**9.85**	**9.84**
Energy intensity (consolidated)				
Energy intensity revenue	GJ/ INR Cr.	11,169.25	10,202.50	10,107.82
Auxiliary Power Consumption				
BBGS	%	7.73%	7.89%	7.65%
SGS	%	9.04%	8.54%	9.11%
HEL	%	7.68%	7.81%	7.43%
DIL	%	7.76%	7.71%	7.38%
CPL	%	9.44%	9.70%	9.71%

[11] *Includes BBGS and SGS*

	Unit	FY 21-22	FY 22-23	FY 23-24
GRI 303: Water and effluents				
303-3 Water withdrawal				
Surface water				
CESC Kolkata[12]	Kl	3,87,19,657	11,68,23,504	11,80,25,829
DIL	Kl	85,49,000	85,90,589	98,70,154
HEL	Kl	85,50,290	91,93,009	1,00,92,648
CPL	Kl	11,59,978	12,10,988	11,23,547
Total 1	**Kl**	**5,69,78,925**	**13,58,18,090**	**13,91,12,178**
Third party water[13]				
CESC Kolkata[14]	Kl	16,701	1,56,055	2,14,142
NPCL	Kl	0	11,683	20,253
CESC Rajasthan	Kl	0	3,698	26,416
MPSL	Kl	0	2,026	3,511
DIL	Kl	0	0	0
HEL	Kl	0	0	0
CPL	Kl	0	0	0
Total 2	**Kl**	**16,701**	**1,73,462**	**2,64,322**
Rainwater				
CESC Kolkata[12]	Kl	3,148	3,148	7,025
DIL	Kl	0	0	0
HEL	Kl	14,90,435	4,10,606	9,32,112
CPL	Kl	0	7,200	0
Total 3	**Kl**	**14,93,583**	**4,20,954**	**9,39,137**
Groundwater				
CESC Kolkata[15]	Kl	0	12,255	47,037
Overall water withdrawal[16]				
CESC Kolkata[14]	Kl	3,87,39,506	11,68,55,608	11,80,96,629
NPCL	Kl	0	11,683	20,253

[12] *Includes BBGS and SGS*

[13] *For all distribution businesses, including CESC Kolkata, NPCL, CESC Rajasthan and MPSL, the water data has been calculated using the built-up areas of their respective establishments. Data not monitored in FY 21-22*

[14] *Includes BBGS, SGS and distribution*

[15] *Includes BBGS, SGS and distribution. Data not monitored for distribution in FY 21-22*

[16] *Accurate water withdrawal for distribution stations across subsidiaries will be monitored going forward in a phased manner. At CESC Kolkata distribution, water consumption is monitored at selected sites basis the consumption is extrapolated for all other distribution businesses*

	Unit	FY 21-22	FY 22-23	FY 23-24
CESC Rajasthan	Kl	0	3,698	26,416
MPSL	Kl	0	2,026	3,511
DIL	Kl	85,49,000	85,90,589	98,70,154
HEL	Kl	1,00,40,725	96,03,615	1,10,24,760
CPL	Kl	11,62,928	12,18,188	11,23,547
Grand total (Total 1 + Total 2 + Total 3 + Groundwater)	**Kl**	**5,84,92,159**	**13,64,24,761**	**14,03,62,674**
Overall Water consumption in water stress area				
DIL	Kl	85,49,000	85,90,589	98,70,154
Water intensity across generating stations				
BBGS	m^3/MWh	2.05	2.04	1.96
SGS	m^3/MWh	1.78	1.67	1.66
DIL	m^3/MWh	2.14	2.13	2.14
HEL	m^3/MWh	2.28	2.18	2.21
CPL	m^3/MWh	3.3	3.62	3.34
Total	**m^3/MWh**	**2.16**	**2.12**	**2.11**
Water intensity across generating stations (consolidated)				
Water intensity by revenue	m^3/INR Cr.	2,480.04	2,203.29	2,178.04
303-4 Water discharge				
CESC Kolkata[17]	Kl	2,70,65,132	10,48,86,804	10,57,07,531
HEL	Kl	30,57,102	25,56,635	28,00,632
Total	**Kl**	**3,01,22,234**	**10,74,43,439**	**10,85,08,163**
GRI 303: Water and effluents				
303-5 Water consumption				
CESC Kolkata[18]	Kl	1,16,74,374	1,19,56,549	1,25,86,502
DIL	Kl	85,34,342	90,20,370	95,06,162
HEL	Kl	97,40,909	91,93,009	10,092,648
CPL	Kl	11,60,036	12,18,188	11,23,547
Total	**Kl**	**3,11,09,661**	**3,13,88,116**	**3,33,08,859**

[17] Includes SGS only. Condenser cooling water in SGS has open circuit cooling.
Note: Other generating stations are Zero Liquid Discharge
[18] Includes BBGS, SGS and distribution

	Unit	FY 21-22	FY 22-23	FY 23-24
GRI 305: Emissions				
305-1 Direct (Scope 1) GHG emissions				
Generation				
CESC Kolkata[19]	tCO_2eq	53,35,276	52,64,379	59,85,965
DIL	tCO_2eq	37,92,318	38,03,726	39,57,749
HEL	tCO_2eq	39,66,392	36,86,497	39,64,136
CPL	tCO_2eq	4,18,553	4,30,571	4,16,888
Total 1	**tCO_2eq**	**1,35,12,539**	**1,31,85,173**	**1,43,24,738**
Distribution				
CESC Kolkata[20]	tCO_2eq	251	696	88
NPCL[20]	tCO_2eq	274	295	347
CESC Rajasthan	tCO_2eq	0	0	0
MPSL[21]	tCO_2eq	0	0	2,287
Total 2	**tCO_2eq**	**525**	**991**	**2,722**
Grand total				
Grand total (Total 1+Total 2)	**tCO_2eq**	**1,35,13,064**	**1,31,86,164**	**1,43,27,460**
GRI 305: Emissions				
305-2 Energy indirect (Scope 2) GHG emissions				
Generation				
CESC Kolkata[22]	tCO_2eq	7,737	3,049	3,067
DIL	tCO_2eq	2,105	93	134
HEL	tCO_2eq	0	0	0
CPL	tCO_2eq	162	284	286
Total 1	**tCO_2eq**	**10,004**	**3,426**	**3,487**
Distribution				
CESC Kolkata	tCO_2eq	3,174	8,630	10,262
NPCL	tCO_2eq	2,248	2,567	2,259
CESC Rajasthan	tCO_2eq	1,212	328	133

[19] Includes BBGS and SGS
[20] Consumption of SF6 has not been taken into consideration
[21] Due to better data monitoring
[22] Includes BBGS and SGS

	Unit	FY 21-22	FY 22-23	FY 23-24
MPSL	tCO_2eq	149	143	1,117
Total 2	**tCO_2eq**	**6,783**	**11,668**	**13,771**
Grand total				
Grand total (Total 1+Total 2)	**tCO_2eq**	**16,787**	**15,094**	**17,249**
305-4 GHG Emissions intensity across generating stations				
BBGS	tCO_2eq/MWh	0.86	0.86	0.86
SGS	tCO_2eq/MWh	1.33	1.07	1.15
DIL	tCO_2eq/MWh	0.89	0.90	0.89
HEL	tCO_2eq/MWh	0.86	0.87	0.86
CPL	tCO_2eq/MWh	1.11	1.10	1.12
Total	**tCO_2eq/MWh**	**0.94**	**0.89**	**0.91**

	Unit	FY 21-22	FY 22-23	FY 23-24
GHG emission intensity-consolidated				
GHG intensity by revenue	tCO_2eq/ INR Cr.	1,078.59	926.66	937.93
Biogenic emissions[23]				
BBGS	tCO_2e	0	14.91	7.24
DIL	tCO_2e	0	4.43	2.21
HEL	tCO_2e	0	3.54	7.38
Total	**tCO_2e**	**0**	**22.88**	**16.83**
GRI 305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions				
PM emissions				
BBGS	mg/Nm^3	20-30	20-30	26-40
SGS	mg/Nm^3	40-50	30-35	35-45
DIL	mg/Nm^3	20-30	25-40	25-40
HEL	mg/Nm^3	15-25	15-25	15-25
CPL	mg/Nm^3	10-80	43	32
GRI 305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions				
SOx emissions				
BBGS	mg/Nm^3	850-1,000	850-1,000	900-1,050
SGS	mg/Nm^3	800-850	800-850	700-800
DIL	mg/Nm^3	1,300-1,400	1,800-2,000	1,800-2,250
HEL	mg/Nm^3	1,500-1,600	1,500-1,600	1,400-1,600
CPL	mg/Nm^3	479-596	562	564
NOx emissions				
BBGS	mg/Nm^3	440-600	400-550	400-475
SGS	mg/Nm^3	410-470	350-450	350-400
DIL	mg/Nm^3	380-460	500-580	300-550
HEL	mg/Nm^3	400-460	400-460	300-425
CPL	mg/Nm^3	211-325	293	283
PM				
CESC Kolkata[24]	Tonnes	634	684	889

[23] *Use of biomass in generating stations was introduced in FY 22-23*

[24] *Includes BBGS and SGS*

	Unit	FY 21-22	FY 22-23	FY 23-24
DIL	Tonnes	378	372	465
HEL	Tonnes	428	669	759
CPL	Tonnes	20	43	41
Total	**Tonnes**	**1,460**	**1,768**	**2,154**
Particulate Matter intensity by revenue	Tonnes/INR Cr.	0.11	0.12	0.14
SOx				
CESC Kolkata[25]	Tonnes	21,715	22,173	24,350
DIL	Tonnes	26,318	24,099	30,919
HEL	Tonnes	21,973	37,888	44,227
CPL	Tonnes	970	1,612	739
Total	**Tonnes**	**70,976**	**85,772**	**1,00,235**
SOx intensity by revenue	Tonnes/INR Cr.	5.65	6.02	6.55
NOx				
CESC Kolkata[25]	Tonnes	11,967	9,868	10,459
DIL	Tonnes	6,895	7,297	6,874
HEL	Tonnes	6,587	10,732	10,751
CPL	Tonnes	343	604	8,145
Total	**Tonnes**	**25,792**	**28,501**	**36,229**
NOx intensity by revenue	Tonnes/INR Cr.	2.05	2.00	2.36
GRI Waste: 306				
306-3 Waste Generated				
Total waste generated	Kg	1,21,000	5,61,000	5,88,000
Hazardous waste generated[26]				
CESC Kolkata[27]	Kg	17,010	1,43,880	1,41,060
NPCL	Kg	0	0	0
CESC Rajasthan	Kg	0.00	0.00	0

[25] Includes BBGS and SGS
[26] Hazardous waste includes used oil,waste oil, waste resin, oil soaked cotton and bio-medical waste
[27] Includes BBGS, SGS and distribution

	Unit	FY 21-22	FY 22-23	FY 23-24
HEL	Kg	43,530	1,486	53,010
DIL	Kg	48,400	11,561	37,380
MPSL	Kg	0	0	0
CPL	Kg	130	980	2,140
Total	**Kg**	**1,09,070**	**1,57,907**	**2,33,590**
Non-hazardous waste generated[28]				
CESC Kolkata[29]	Kg	0	1,37,970	2,20,980
NPCL	Kg	0	1,45,973	53,220
CESC Rajasthan	Kg	0	41,000	0

[28] Non-hazardous waste includes ferrous scrap, copper scrap, aluminium scrap, paper waste, plastic waste, scrap meter as well as construction and demolition
[29] Includes BBGS, SGS and distribution

	Unit	FY 21-22	FY 22-23	FY 23-24
HEL	Kg	0	0	0
DIL	Kg	0	0	300
MPSL	Kg	0	0	21,350
CPL	Kg	0	0	0
Total	**Kg**	**0**	**3,24,943**	**2,95,550**
Other waste generated				
Battery & E-waste generated				
CESC Kolkata[30]	Kg	5,130	0	47,410
NPCL[31]	Kg	0	0	0
CESC Rajasthan	Kg	0	500	0
HEL	Kg	1,280	503	1,740
DIL	Kg	0	5,960	5,450
MPSL[31]	Kg	0	0	0
CPL	Kg	6,010	0	4,130
Total	Kg	12,420	6,963	58,730
Waste diverted from landfill				
Ash utilization				
CESC Kolkata[32]	Lakh MT	11	12	13
DIL	Lakh MT	10	11	12
HEL	Lakh MT	11	12	12
CPL	Lakh MT	2	2	2
Total ash utilization	%	**100%**	**100%**	**100%**

[30] *Includes BBGS, SGS and distribution*
[31] *Not monitored*
[32] *Includes BBGS and SGS*

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Assurance statement on third-party verification of sustainability information

Unique identification number: 4153959705

TÜV SÜD South Asia Pvt Ltd. (hereinafter TÜV SÜD) has been engaged by CESC Limited to perform a limited assurance verification of sustainability information in the Sustainability Report by CESC Limited. (hereinafter "Company") for the period from 01.04.2023 to 31.03.2024. The verification was carried out according to the steps and methods described below.

Scope of the verification

The third-party verification was conducted to obtain limited assurance about whether the sustainability information is prepared "with reference to" the reporting criteria of the Sustainability Reporting Standards of the Global Reporting Initiative 2021 version (hereinafter "Reporting Criteria").

The following selected disclosures are included in the scope of the assurance engagement:

Option "partial report" for reporting year Apr 1, 2023 – Mar 31, 2024

- the disclosures of following sustainability indicators in the SUSTAINABILITY REPORT", published at cesc.co.in

- **GRI 2: General Disclosure**
- **GRI 3: Material Topics- 3-1, 3-2, 3-3**

- **GRI 301: Materials**
- 301-1 Materials used by weight or volume.

- **GRI 302: Energy**
- 302-1 Energy consumption within the organization
- 302-2 Energy consumption outside of the organization
- 302-3 Energy intensity
- 302-4 Reduction of energy consumption

- **GRI 303: Water**
- 303-1 Interactions with water as a shared resource
- 303-2 Management of water discharge-related impacts
- 303-3 Water withdrawal
- 303-4 Water discharge
- 303-5 Water consumption

- **GRI 304: Biodiversity**
- 304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
- 304-2 Significant impacts of activities, products and services on biodiversity
- 304-3 Habitats protected or restored.

- **GRI 305: Emissions**
- 305-1 Direct (Scope 1) GHG emissions
- 305-2 Energy indirect (Scope 2) GHG emissions
- 305-4 GHG emissions intensity
- 305-7 Nitrogen oxides (NOx), sulphur oxides (SOx), and other significant air emissions
- **GRI 306: Waste**
- 306-1 Waste generation and significant waste-related impacts
- 306-2 Management of significant waste-related impacts

- 306-3 Waste generated.

- **GRI 401: Employment**
- 401-1 New employee hires and employee Turnover
- 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees
- 401-3 Parental Leave.

- **GRI 403: Occupational Health and Safety**
- 403-1 Occupational health and safety management system
- 403-2 Hazard identification, risk assessment, and incident investigation
- 403-3 Occupational health services
- 403-4 Worker participation, consultation, and communication on occupational health and safety
- 403-5 Worker training on occupational health and safety
- 403-6 Promotion of worker health
- 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships.
- 403-8 Workers covered by an occupational health and safety management system
- 403-9 Work-related injuries
- 403-10 Work-related ill health

- **GRI 404: Training and Education**
- 404-1 Average hours of training per year per employee
- 404-2 Programs for upgrading employee skills and transition assistance programs.
- 404-3 Percentage of employees receiving regular performance and career development reviews

- **GRI 405: Diversity and Equal Opportunity**
- 405-1 Diversity of governance bodies and employees

- **GRI 406: Non-discrimination**
- 406-1 Incidents of discrimination and corrective actions taken

- **GRI 407: Freedom of Association and Collective Bargaining**
- 407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk

- **GRI 408: Child Labor**
- 408-1 Operations and suppliers at significant risk for incidents of child Labor

- **GRI 409: Forced or Compulsory Labor**
- 409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor

GRI 413: Local Communities

- 413-1 Operations with local community engagement, impact assessments, and development programs

- **GRI 414: Supplier Social Assessment**
- 414-1 New suppliers that were screened using social criteria.
- 414-2 Negative social impacts in the supply chain and actions taken.

- **GRI 416: Customer Health and Safety**
- 416-1 Assessment of the health and safety impacts of product and service categories
- 416-2 Incidents of non-compliance concerning the health and safety impacts of products and services

- **GRI 418: Customer Privacy**
- 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data.

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the integrated reporting, and accordingly, we do not express a conclusion on this information. It was not part of our engagement to review product- or service-related information, references to external information sources, expert opinions and future-related statements in the Report.

Responsibility of the Company

The legal representatives of the Company are responsible for the preparation of the sustainability information in accordance with the Reporting Criteria. This responsibility includes in particular the selection and use of appropriate methods for sustainability reporting, the collection and compilation of information and the making of appropriate assumptions or, where appropriate, the making of appropriate estimates. Furthermore, the legal representatives are responsible for necessary internal controls to enable the preparation of a sustainability report that is free of material - intentional or unintentional - erroneous information.

Verification methodology and procedures performed.

The verification engagement has been planned and performed in accordance with the verification methodology developed by the TÜV SÜD Group, which is based upon the ISAE 3000, and ISO 17029. The applied level of assurance was “limited assurance”. Because the level of assurance obtained in a limited assurance, the engagement is lower than in a reasonable assurance engagement, the procedures the verification team performs in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Sustainability information and applying analytical and other limited assurance procedures.

The verification was based on a systematic and evidence-based assurance process limited as stated above. The selection of assurance procedures is subject to the auditor’s own judgment.

The procedures included amongst others:

- Inquiries of personnel who are responsible for the stakeholder engagement und materiality analysis to understand the reporting boundaries.
- Evaluation of the design and implementation of the systems and processes for compiling, analysing, and aggregating sustainability information as well as for internal controls
- Inquiries of company’s representatives responsible for collecting, preparing and consolidating sustainability information and performing internal controls
- Analytical procedures and inspection of sustainability information as reported at group level by all locations.
- Assessment of local data collection and management procedures and control mechanisms through a survey at selected multiple sites.

Conclusion

On the basis of the assessment procedures carried out from 02.05.2024 to 07.07.2024, TÜV SÜD has not become aware of any facts that lead to the conclusion that the selected sustainability information has not been prepared, in all material aspects, in reference to the Reporting Criteria.

Limitations

The assurance process was subject to the following limitations:

- The subject matter information covered by the engagement are described in the “scope of the engagement”. Assurance of further information included in the integrated reporting was not performed. Accordingly, TÜV SÜD do not express a conclusion on this information.
- Financial data were only considered to the extent to check the compliance with the economic indicators provided by the GRI Standards and were drawn directly from independently audited financial accounts. TÜV SÜD did not perform any further assurance procedures on data, which were subject of the annual financial audit.
- The assurance scope excluded forward-looking statements, product- or service-related information, external information sources and expert opinions.

Use of this Statement

The Company must reproduce the TÜV SÜD statement and possible attachments in full and without omissions, changes, or additions.

This statement is by the scope of the engagement solely intended to inform the Company as to the results of the mandated assessment. TÜV SÜD has not considered the interest of any other party in the selected sustainability information, this assurance report or the conclusions TÜV SÜD has reached. Therefore, nothing in the engagement or this statement provides third parties with any rights or claims whatsoever.

Independence and competence of the verifier

TÜV SÜD South Asia Pvt Ltd. is an independent certification and testing organization and member of the international TÜV SÜD Group, with accreditations also in the areas of social responsibility and environmental protection. The assurance team was assembled based on the knowledge, experience and qualification of the auditors. TÜV SÜD South Asia Pvt Ltd hereby declares that there is no conflict of interest with the Company.

Place, Date

12-12-2024

Mumbai

Rahul Kale

General Manager - Certification

Ravi Chaubey

Project Leader

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