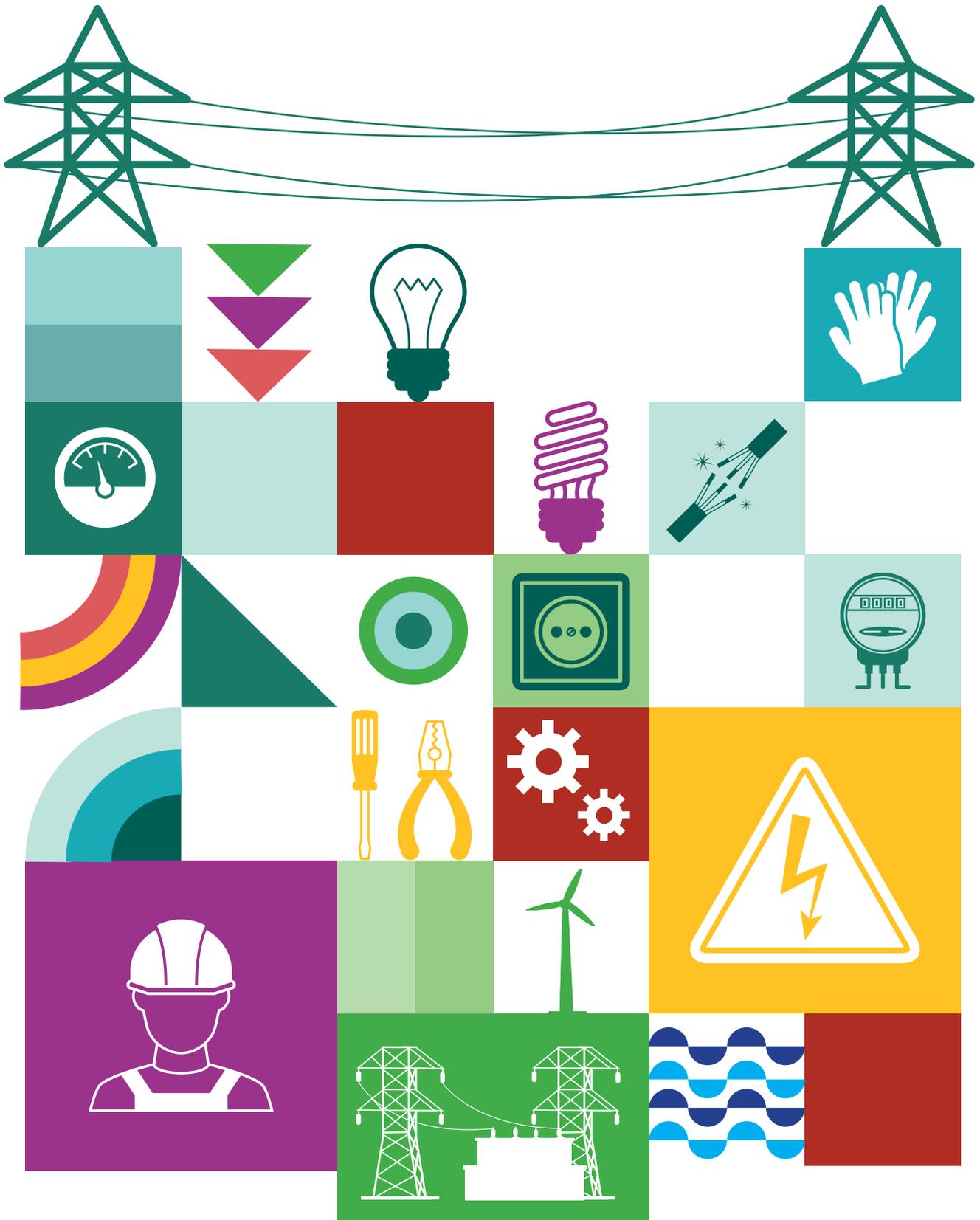


CESC ESG REPORT FY 2020-21





About the Report



CESC Ltd. (from here on referred to as “CESC” or “The Company”) is glad to present its inaugural ESG report for the financial year 2020-21. This report is intended to communicate transparently the non-financial performances to internal and external stakeholders.

Sustainability is integral to the business strategy of CESC and its subsidiaries. The Company intends to publish the report on annual basis and showcase its responsible business practices.

This report is based on the principles and reporting framework of the Global Reporting Initiative (‘GRI’) Standards and in adherence to the ‘In Accordance – Core’ option. The report provides a consistent, balanced and accurate representation of the key material issues, actions undertaken and achievements

over the reporting period. The report is also aligned to international reporting and rating standards of SASB and the United Nations Sustainable Development Goals.

The material issues are identified through internal stakeholder consultation and inclusive of the perceptions of external stakeholders which are based on interactions with the various functions of CESC on periodic basis.

The content of the report covers distribution function with respect to CESC at Kolkata and Howrah (hereafter referred to as ‘CESC Kolkata’), Malegaon Power Supply Limited (hereafter referred to as ‘MPSL’), Noida Power Company Limited (hereafter referred to as ‘NPCL’), CESC Rajasthan (inclusive of Bharatpur Electricity Services Limited, Bikaner Electricity

Supply Limited and Kota Electricity Distribution Limited) and generation stations across its operations (which is inclusive of Budge Budge Generating Station (hereafter referred to as ‘BBGS’) and Southern Generating Station(hereafter referred to as ‘SGS’)), and subsidiary businesses namely Dhariwal Infrastructure Limited (hereafter referred to as ‘DIL’), Haldia Energy Limited (hereafter referred to as ‘HEL’), Crescent Power Limited (hereafter referred to as ‘CPL’) and Surya Vidyut Limited (‘SVL’). MPSL, NPCL, CESC Rajasthan, SVL, DIL, HEL and CPL together are referred to as ‘CESC Subsidiaries’.

Keeping in line with business activities, the theme of the report is interlinked to reliable and responsible power supply to the community.

Messages from the Leadership




 Key Contact

Contact point for clarification and additional information

Mr. Jagdish Patra
 Company Secretary & Compliance officer
 CESC Limited
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 T: 033-24870366





Message from the Chairman



Dear Stakeholders,

CESC is a 122 years old Company and is India's first fully integrated electrical utility. CESC commenced with supplying power to the households and industries in Kolkata. Later, we expanded our distribution capability in Greater Noida in Uttar Pradesh, Bikaner, Kota and Bharatpur in Rajasthan and Malegaon in Maharashtra.

Electricity plays a pivotal role in our society and it supports economic growth and human development. The long-term value of which is dependent on our sustainable vision towards supplying reliable, safe, low carbon and cost-effective power. This report "CESC ESG Report 2020-21", highlights our employees' decades of dedication and effort to make CESC a responsible, resilient and a sustainable company. We aim to become a responsible and best in class power distribution company. We have been focusing on formulating our plans and approach in alignment with the broader ESG agendas of the Nation. Our relentless efforts in continuously monitoring, measuring, analyzing and disclosing our performance across the triple bottom line will definitely enrich

our long term stakeholder values in this sustainability journey.

We actively support ambitious political programs such as the National Solar Mission, the National Mission for Enhanced Energy Efficiency, the National Mission on Sustainable Habitat and the National Water Mission. All businesses of CESC and its subsidiaries believe in the shared vision of creating 1. Responsible and Reliable business, 2. Sustainable infrastructure 3. Strong communities.

Responsible and Reliable Business

CESC has been a torchbearer of responsible business practices, always ensuring its decisions balance social and environmental considerations with financial factors. We have always believed that being responsible and reliable also means being sustainable. These principles have always been an integral part of our strategic planning both to manage risk as well as to enable long-term sustainable growth and value creation. The strategic pillars of the Company are strong and resilient because they are built on the strength of the relationship with its stakeholders. Our consumers and employees are the most

We aim to become a responsible and best in class power distribution company. We have been focusing on formulating our plans and approach in alignment with the broader ESG agendas of the Nation. Our relentless efforts in continuously monitoring, measuring, analyzing and disclosing our performance across the triple bottom line will definitely enrich our long term stakeholder values in this sustainability journey.

vital assets of our Company. Along with providing reliable quality power to our consumers, enhancing safety awareness and providing training to our consumers and employees respectively takes precedence over any other aspects. Our “Zero Incident’ target summarizes our approach to maintain the best in the industry safety standards and parameters throughout our value chain. Similarly, during COVID-19 pandemic, we have been guided by our Core Values to place highest priority on the safety and well-being of our employees, consumers, suppliers, and communities.

Sustainable Infrastructure

We believe that integrating sustainability within our business includes both mitigating risks and identifying seamless opportunities. Keeping in mind our belief, we identify future risks and constantly endeavour to capture the seamless opportunities the risks bring forward. In doing so we have set an example by taking cognizance of climate change at a very early stage by launching globally recognized United Nations approved small scale CDM projects offsetting 7,887 tCO₂e annually. Similarly, future proofing natural resources through cutting edge technologies like BESS, Electric Vehicle Charging Stations (ECVS) will prevail a path for growth of our renewable energy story and ensure access to clean energy. During the financial year we were recognized as a leader in green building infrastructures in South East Asia by the “2021

United States Green Building Council (USGBC) Leadership Award”.

Moreover, our strategic decision to reduce carbon footprint with no plans to add thermal generation stations is another such example to develop infrastructures that are sustainable and long lasting. As the Government launched the National Solar Mission, we responded by entering the space of renewable energy in 2010. Currently we have a cumulative wind and solar energy generation capacity of 174 MW spanning over 5 locations in Tamil Nadu, Gujarat, Madhya Pradesh and Rajasthan. We continuously strive to increase sourcing of renewable energy in our operations through installation of Rooftop Solar PV modules. We also conduct several awareness campaigns to encourage our consumers to install Rooftop Solar PV modules and influence behavioural changes to conserve electricity. Our transformation to become a responsible corporate citizen also required decades of effort in uplifting the living standards of the community near our operation socially and economically.

Strengthening Communities

CESC believes that generating shared values with society at large will create wealth, whose benefits are far more holistic than only generating profits. In line with our beliefs, we conduct regular stakeholder consultations with local opinion makers / local administrators,

local youth to assess the societal needs of the community. Through thorough assessment of the baseline scenario, we identify the needs of the community and subsequently plan and implement initiatives to economically and socially uplift them. One such initiative was consultation with local leaders and youth in high distribution loss prone areas. Our CSR programs such as ‘Roshni’ and ‘Hamari Awaz’ launched in identified distribution loss prone areas improved education and child protection and indirectly reduced distribution losses due to theft. Along with the mentioned projects, we also initiated several projects that target to improve community health and environment, provide skill development and create access to clean drinking water, sanitation and hygiene.

This Report “CESC ESG Report 2020-21” will provide you with insights on the Company’s ESG efforts in a more transparent and complete manner and we hope that it will serve as an insightful guide to understand our Company. I extend my sincere thanks to all our stakeholders for their support and faith.

Stay safe. Stay healthy.
Yours sincerely,

Dr. Sanjiv Goenka
(Chairman)

Message from the Managing Director (Distribution)



Dear Stakeholders,

I am delighted to present to you our ESG Report for FY 2020-21. The report comprises the advances we have made and reflects the values we have embraced as a sustainable and environmentally responsible company. All throughout the last year, we strived hard and could successfully adapt to the rapidly changing environment and overcome the constantly evolving business demands.

We are an integrated Power Utility serving 3.4 million Consumers across Kolkata, Howrah and adjoining areas. Consumers are always at the core of every decision that we make as an organization. Our relentless efforts have resulted in building a sustainable and inclusive work environment that amply reflects our stakeholder commitment. The report also demonstrates as to how our organizational goals and objectives are aligned to the universal framework of the Sustainable Development.

At CESC, we strongly believe in ‘Rising Responsibly’. As an organization, we have fostered a culture of sustainability to create lifetime value for our 3.4 million

consumers by providing them uninterrupted Power Supply even amidst all odds arising out of the ongoing pandemic and natural calamities. We uphold a Safety-first habit for all our employees and consumers.

Providing Uninterrupted Power Supply

Accelerating positive long-term growth in a holistic manner has been our core strategy to Rise Responsibly. To ensure uninterrupted power supply to our consumers, we have heavily invested over the years in devising a robust and resilient network backed up with creative strategies followed by a thoroughbred action-oriented approach. We have adopted several cutting-edge disruptive technologies, established effective governance structures and promoted a continuous improvement culture for constantly enhancing our operational efficiencies. We are powering all essential services, crucial to the life of our city and enabling their smooth functioning round the year.

Our consumer base includes commercial, industrial and residential users, who constitute a large part of our city’s population and we effectively contribute to their developments by powering their energy needs.

We pre-emptively analyse our network through adoption of Industry 4.0 based IoT Technologies with embedded sensors & drones for comprehensive online asset health monitoring and assessment. This enables our philosophy of predictive maintenance thereby ensuring our network assets are always in the best of health to deliver high quality power supply to our consumers.

Our pioneering network infrastructure space optimization initiatives has resulted in the deployment of indoor multi-tier substations. this transformation has played a pivotal role in resource footprint reduction, asset protection

and maintaining continuous power supply, even during the pandemic.

Combating Unprecedented Challenges

Resilience is the only way forward to combat unprecedented challenges even in the future. At CESC, we have dedicated years of focused approach and invested considerable resources to future proof our operations from any disruptions. This philosophy has aided us to effectively tackle multitude of extraordinary situations such as the ongoing global pandemic and one of the fiercest Super Cyclone ‘Amphan’ over the last century that made a landfall in our area of operation. The catastrophic effect of Amphan predominantly affected mainly our overhead network areas, where tens of thousands of trees were uprooted, leading to severe roadblocks. However, our Disaster Management Plan along with SOP, robust governance system and organized operational structure aided our resilient teams for successfully restoring Power supply to over 99% of the affected consumers within a record period of 7 days, thus creating a global benchmark. Essential services like hospitals & nursing homes, major drainage & drinking water pumping stations among others. wherever impacted, were promptly restored through Network Automation and using Self-healing technology. Large area outages were also restored promptly, post the Cyclone.

Rising to the challenges posed by pandemic, we as a responsible, resilient and robust organization have stayed focused on developing and providing High-Touch Customer experience for a No-Touch world in the new normal. Today our valued consumers can access our services digitally, which covers the domain of new connection, name change, air conditioner application, online payments, supply related issues among others through call center, website, mobile app, social media and email. We have been working

relentlessly and have been able to enhance our Customer Experiences (CX) by delivering services on digital platforms, where our consumers can easily access their desired services at their fingertips from the safety and comfort of their homes and offices. These digital service deliveries include Artificial Intelligence and Machine Learning enabled platforms like Chatbot(eBuddy) & WhatsApp Bot.

- Proactive communication is being provided to our consumers instantly during supply outages through automated out-bound calls with pre-recorded voice messages, system triggered SMS and live updates on social media.
- We have also implemented a pilot project leveraging futuristic technology of Battery Energy Storage System (BESS) for peak demand flattening, improving voltage profile, frequency management, agility to integrate intermittent solar energy sources and ensuring high quality power for consumers.
- Environment-friendly & sustainable mode of energy is essential for further economic growth. Hence, we are actively priming the eco-system for adoption of electric energy at the point of use, which is clean and safe. Therefore, CESC has embarked on a journey to create public awareness about the positive effects of conversion from other forms of fuels to electric energy for transportation, which will cut down the city pollution to a large extent and make the environment more friendly and safe for our citizens.
- Electric Vehicles are cleaner and greener alternative that eliminate harmful exhaust emissions. In this context, we have demonstrated our intentions by installing Electric Vehicle Charging Stations (EVCS) at different locations across Kolkata in collaboration with the municipal authorities. We have also deployed Electric Vehicles for our captive use, which we have planned to scale up in near future.
- We are also dedicated towards promotion of electric cooking as a clean, safe and affordable option compared to the conventional cooking fuels. Apart from being

a more efficient and healthier mode of cooking that improves home and overall environmental air quality, it also reduces the risk of any safety hazards. We have collaborated with multiple food related authorities like HRAEI, CREDAI and Copper Association in conducting campaigns in housing societies, educational institutions, clubs and malls to raise public awareness on this cooking mode. Our special focus has been conversion of roadside eateries to electric cooking and we have been working with the Kolkata Municipality Corporation in this regard. These planned efforts of ours have resulted in an effective transformation from conventional fuel usage to electric modes.

We have been also actively promoting usage of the recent series of Energy Efficient and Eco-friendly Air Conditioners to our consumers.

Safety is Our Topmost Priority: Synchronizing with our mission of **Rising Responsibly**, we have integrated safety into the fabric of our every single organizational activity. At CESC, we not only work to remove risks but walk the extra mile by trying and eliminating all potential safety hazards. The mainstay of our safety initiatives include reinforcing of our overhead network and switching off power supply in heavily waterlogged areas as and when required for ensuring public safety and the supply is again switched on immediately as soon the water level recedes.

Protection of our employees is of supreme importance to us and we ensure that they always wear their Personal protective equipment (PPE) while working and strictly adhere to all laid down safety procedures.

Sustainable Loss Reduction through Innovation & Collaboration: One of the key areas of focus for any power utility is reduction of distribution loss. In our journey towards sustainable loss reduction, we have adopted innovative cutting-edge technologies like co-axial cables, theft-proof pillar box to create a pilfer proof network. Implementation of disruptive technologies like automated remote surveillance through data analytics of smart meters & remote auto disconnection of pilfering supply sources have further bolstered our

efforts towards effective continuous Loss reduction. We have adopted methodical, multifaceted approach to curb losses and our efforts have paid us back in manifolds. Our multidisciplinary teams have worked relentlessly to reduce losses and we are proud to state that today our losses have reduced significantly over the last few years.

Along with technology adoption, we have also focused on social upliftment in the areas that we work to create positive societal impact. In this context, we conduct several programs and long-term initiatives for strengthening the social structure of the communities in high loss-prone areas. The same initiatives are explained in detail in our "Strengthening Communities" section. In this report, you will find snapshots of many other initiatives that we have undertaken along with highlights of our sustainability performance.

Employee Wellness Program: Our commitment to provide uninterrupted power supply to our consumers entail physical involvement of our dedicated workforce on the field. In our endeavour to protect our employees during the raging pandemic and uplift their morale and motivation levels, we embarked on a comprehensive 'Employee Wellness Program' starting with the screening of our affected workforce and followed up with an effective quarantine backup facility. Our Human Resource and Medical team left no stone unturned in arranging COVID Isolation beds with proper and prompt treatment of all our affected employees. We also embarked on a massive vaccination drive for all our employees in collaboration with various hospitals, for breaking the chain and containing the spread.

We aspire to further reinforce our **philosophy of Rising Responsibly** in our journey towards Sustainable business development.

Stay Safe, Stay Healthy

Mr. D. Banerjee
Managing Director (Distribution)

Message from the Managing Director (Generation)



We conduct structured training programmes and organise periodic meetings of employees, workmen and staffs with the CEO, Functional Heads and Department Heads.

Dear Stakeholders,

We are pleased to share our inaugural Environment, Social and Governance (ESG) report, which reflects yet another milestone in CESC's journey. While this is our first ESG report, our success to business is owed to the simple fact that we have always operated with integrity & respect and supporting and sustaining the communities were always the core ethos of our successful operation.

CESC from its inception is a people-centric, customer-oriented company focused on innovation and quality. CESC's integrated generation function, provides power to CESC Kolkata Distribution services from three generation stations Budge Budge Generating Station (BBGS) and Southern Generating Station (SGS), Haldia Energy Limited (HEL). Our generation station, Dhariwal Infrastructure Limited (DIL) at Chandrapur supplies power to our distribution subsidiary Noida Power Company Limited (NPCL) and also to the Tamil Nadu Generation and Distribution Corporation Limited in Chennai.

CESC strives to embody the Group's Core Values and achieve its Mission and Vision by attracting and nurturing a diverse, high-performance team. We owe our success to our colleagues whose passion to be the best in the industry has made our operations more efficient, resilient and

lean. Through this report we showcase more information on our existing policies, procedures and cumulative achievements of decades of hard work in the form of streamlining our supply chain to a more responsible one, reduction of resource footprint and ensuring community and employee welfare.

Streamlining our supply chain

We, through decades of responsible operation have created massive positive impact in the region of our operation. As the world moves towards massive supply chain disruptions, we at CESC, for decades have focussed on developing a robust supply chain network that is short and local. Our strenuous efforts in developing local suppliers not only assisted in boosting the local economy but has also paid us back in manifolds during the nation-wide lockdown because of COVID-19, by avoiding any kind of supply chain disruption. We are proud to disclose that about 15% of our total product procurement and services are conducted with Small and Medium Enterprises.

Reduction of resource footprint

Our emphasis in enhanced energy and water conservation, water and waste reuse & recycling have led us to install several systems that ensure our resource footprint is minimal. Our generation stations conduct frequent audits to detect and reduce water and

steam leakages. Our water recovery system such as ash water recovery system and reusage of water from cooling tower blowdown are few of the several initiatives we adopted to optimize water usage. We are proud to disclose that we have achieved Zero Liquid Discharge in four out of five generation stations, as well as 100 % utilization of our fly and bottom ash in all our generation stations.

Ensuring community and employee welfare

We believe that sustainable growth can only be achieved if it is inclusive. Accordingly, supporting local communities and safeguarding our environment are our key priorities, which we try to achieve by working with local businesses and enabling community welfare programs. Our numerous efforts ranging from providing free healthcare, constructing toilets in 7 villages and making them open defecation free, constructing rainwater

harvesting tanks, supporting 300 farmers in increasing their income through guidance on technologies, crop diversification and establishment of effective market linkages, empowering women and youth by setting up 14 small scale enterprises to developing a butterfly park have resulted in tangible benefits and helped us create a shared vision of harmony, prosperity and wellbeing in the communities around our areas of operation.

Our employees are our biggest asset, and our aim to create a work environment that is enjoyable and safe. CESC accords high priority to occupational health and safety and has adopted a target of 'Zero Incident'. While this is a continuous endeavour, we are happy to report that we have inaugurated a "Safety Park" at our generation station in Chandrapur, which provide live demonstration to our workmen, staff and visitors on safe working practices.

CESC recognises the invaluable role of its people in its continued achievements. We continuously work on enhancing our employees' capabilities and well-being. We conduct structured training programmes and organise periodic meetings of employees, workmen and staffs with the CEO, Functional Heads and Department Heads. These initiatives give a platform to our people to voice their opinions and align their thoughts and priorities with the organisation.

The report will provide you a deeper understanding of our dedication and efforts to make CESC a driving force in the power and utility sector. I hope you enjoy reading the report.

Mr. R. Chowdhury
Managing Director (Generation)

About CESC



CESC is India's first fully integrated electrical utility company. Headquartered at Kolkata, West Bengal, CESC is the sole distributor of electricity within an area of 567 sq. km. of Kolkata & Howrah and serve 3.4 million consumers which include domestic, industrial and commercial users.

CESC via its subsidiary, Noida Power Company Ltd, distributes power

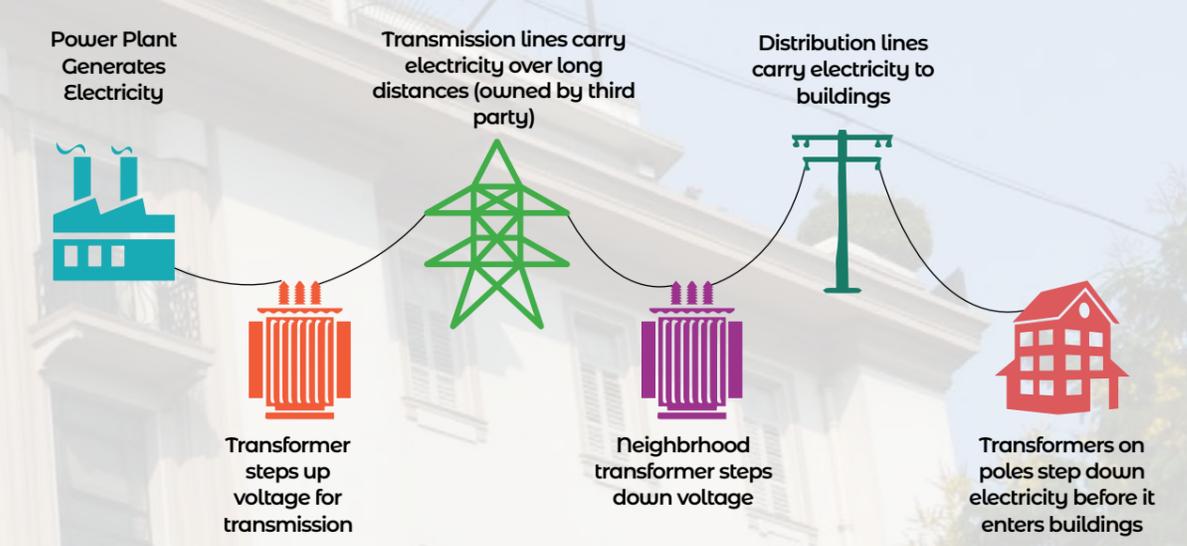
in Greater Noida, Uttar Pradesh with a license area of 335 sq. km.

CESC also operates three Distribution Franchisee (DF) in Rajasthan: Kota, Bharatpur and Bikaner. It also won the Distribution Franchisee of Malegaon circle, close to Nashik in Maharashtra, which commenced operations in 2019-20.

CESC is a public limited company committed to supplying safe, cost

effective and reliable electricity to about 4 million consumers which include domestic, commercial and industrial users. Supply of electricity is enabled by CESC Group owned installed capacity of 2,539 MW and a value chain comprising of 8,874 employees located across West Bengal, Maharashtra, Tamil Nadu, Gujarat, Madhya Pradesh and Rajasthan.

CESC's Value Chain



Products and Services

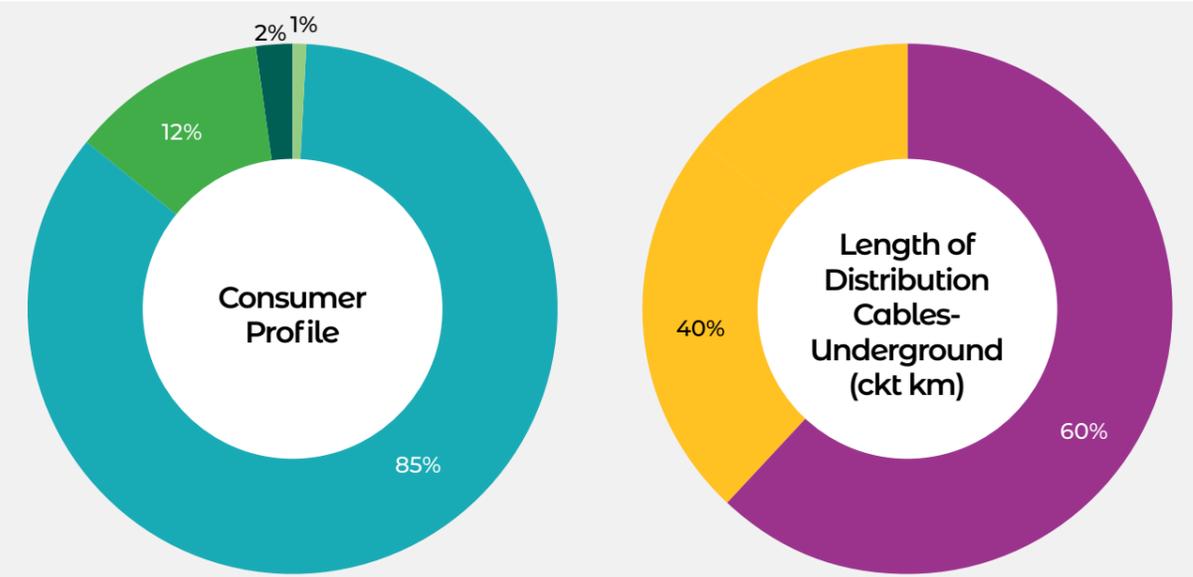
Distribution

CESC's electricity distribution network stretches across 29,907.50 circuit km of distribution lines having a supply capacity of over 2,359 MW.

Distribution Unit, City	State	Units Delivered in FY 2020-21 (mu)	Consumer base (in Lac)	LT Circuit Km	HT Circuit Km
CESC, Kolkata	West Bengal	10,282	34.49	13,798.00	9,428.00
NPCL, Greater Noida	Uttar Pradesh	2,012	1.05	1,825.00	1,300.00
CESC Rajasthan, Kota	Rajasthan	849	2.35	889.40	211.20
CESC Rajasthan, Bharatpur	Rajasthan	249	0.63	75.00	63.30
CESC Rajasthan, Bikaner	Rajasthan	667	1.70	450.00	432.10
MPSL, Malegaon	Maharashtra	1,076	1.11	935.00	500.50

Distribution units supply electricity to 41,35,002 consumers through high tension and low tension lines that run 11,935.10 circuit km and 17,972.40 circuit km respectively.

Type of Consumer	CESC Kolkata	MPSL	NPCL	CESC Rajasthan
LT Connections				
Domestic	29,41,902	86,032	94,584	3,91,359
Commercial	4,10,772	8,446	3,790	65,329
Industrial	65,101	15,274	3,332	6,117
Others	29,482	1,250	2,463	4,579
HT Connections				
Domestic	350	0	166	376
Commercial	598	3	241	656
Industrial	542	11	830	871
Others	342	3	111	90



■ Domestic ■ Commercial ■ Industrial ■ Others ■ LT ■ HT

Generation

CESC's thermal power assets are a key component of the energy mix to maintain balance between generation and consumption by adapting to the fluctuations in electricity consumption and renewable energy generation. These are responsible for maintaining suitable voltage and frequency levels across the grid. Renewable energy comprises 7.57% of the total energy mix. The generation assets supply power to the power distribution entities provided in the table below.

Generation Station, City	State	Source of Power	Installed Capacity (MW)	Units Generated (MU) (FY 2020-21)	DISCOM
Budge Budge Generating Station, Kolkata	West Bengal	Thermal	3X250	5,422.68	CESC, Kolkata
Southern Generating Station, Kolkata	West Bengal	Thermal	135	89.89	CESC, Kolkata
Haldia Energy Limited, Haldia	West Bengal	Thermal	2X300	4,224.93	CESC, Kolkata
Dhariwal Infrastructure Limited, Chandrapur	Maharashtra	Thermal	2X300	4,228.79	NPCL, Greater Noida & TANGEDCO, Chennai
Crescent Power Limited, Asansol	West Bengal	Thermal	40	346.00	CESC, Kolkata
Titagarh Generating Station, Kolkata	West Bengal	Thermal	4x60	0*	CESC, Kolkata
Surya Vidyut Limited, Ramnad	Tamil Nadu	Solar	18	24.33	TANGEDCO, Chennai
Surya Vidyut Limited, Amreli and Rajkot	Gujarat	Wind	70	114.19	GVVNL, Vadodara
Surya Vidyut Limited, Mandasaur	Madhya Pradesh	Wind	36	43.17	MPPMCL, Jabalpur
Surya Vidyut Limited, Surendranagar	Gujarat	Wind	26	40.39	GVVNL, Vadodara
Surya Vidyut Limited, Jaisalmer	Rajasthan	Wind	24	25.51	RUVNL, Jaipur

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

CESC's operating capacity of grid connected power amounts to 2,299 MW,

Thermal

Generation Capacity (MW)

2,125

Solar

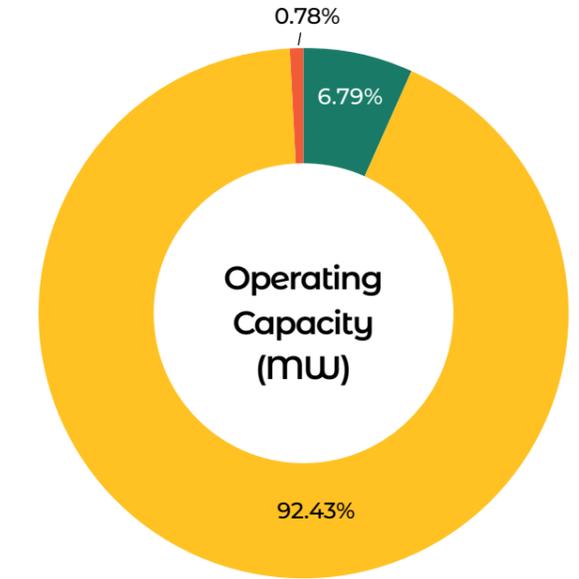
Generation Capacity (MW)

18

Wind

Generation Capacity (MW)

156



■ Solar Power ■ Wind Power ■ Thermal Power

All of CESC's generation stations are ISO 9001:2015, ISO 14001:2015, BS ISO 45001:2018 and ISO 50001:2015 certified.





Vision, Mission and Values

RP Sanjiv Goenka Group Values

Core Values

Customer First

Keep customer at the core of every action

Execution Excellence

Strive to be the best in everything we do

Credibility

Instill trust, confidence and accountability with our actions

Agility

Move ahead of time quickly

Risk-Taking

Dare to go beyond

Humaneness

Be fair, respectful, transparent and sensitive

CESC strives towards achieving and sustaining leadership in distribution, generation of electricity and other allied services as per acclaimed standards. Fostered by its vision, mission and group values the

Company conducts business responsibly and is accountable towards its stakeholders in its endeavour to meet their expectations regarding quality and reliability.

CESC Vision and Mission



Vision

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

- Achieving efficiency of operations and further developing core competencies.
- Readjusting the business consistent with the changing environment, technologically and commercially.
- Maintaining a rewarding and stimulating organizational climate with people orientation.
- Reaffirming faith in the organization's ethics and values developed in course of our long existence.
- Harnessing and developing our professional competence.
- Being responsive to social requirements.



Mission

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

- Accomplishing targeted performance in the key result areas of our business operations.
- Enhancing consumer satisfaction through value addition to service supported by a consumer feedback monitoring system.
- Improving work environment and helping employees for personal development and career satisfaction through an interactive approach.
- Being recognized as an ethical and environmentally responsive organization.

Governance and Accountability





The governance framework forms an integral part of CESC's business strategy. CESC views its stakeholders as partners to success and continue to strive towards achieving the maximum stakeholder value. The governance framework aims to uphold the highest uncompromising standards of transparency, accountability and independence. The Company being customer centric, ensures continuous improvement of its operations and services through the governance framework. Such practices are driven by a strong board oversight, highest levels of integrity in its decision making process, proactive cyber security practices and data governance to protect sensitive employee and consumer data.

Board Oversight



The composition of the Board of Directors (hereon referred to as “the Board”) is in compliance with the requirements of the Act and Regulation 17 of SEBI Listing Regulations. The Board comprises of 11 Directors including 6 Independent Directors out of which one is a woman Independent Director. The Board is headed by the Chairman who is a Non-Executive Director and Promoter of the Company. Nomination, appointment and compensation practices are governed by the Nomination and Remuneration Policy. Directors appointed by the Nomination and Remuneration Committee serve upto a period of five years and are eligible for re-appointment on annual basis except the Independent Directors who can hold office of maximum two tenures of 5 years each.

Policies and procedures ensure that the Board is timely informed and adequately equipped to discharge its responsibilities. The Board abides by the Code of Business Conduct and Ethics and the policy relating to Related Parties Transaction which delineates their roles and responsibilities and ensure conflict of interests are avoided and managed. An affirmation of the Board to these policies ensure adherence to the highest standards of corporate ethics.

Diversity within the Board is driven by their subject matter expertise, skills, achievements and competencies which are enabling factors towards a robust governance of policies and procedures including provision of key insights on strategy. The skill matrix representing the diversity of Board is showcased below.



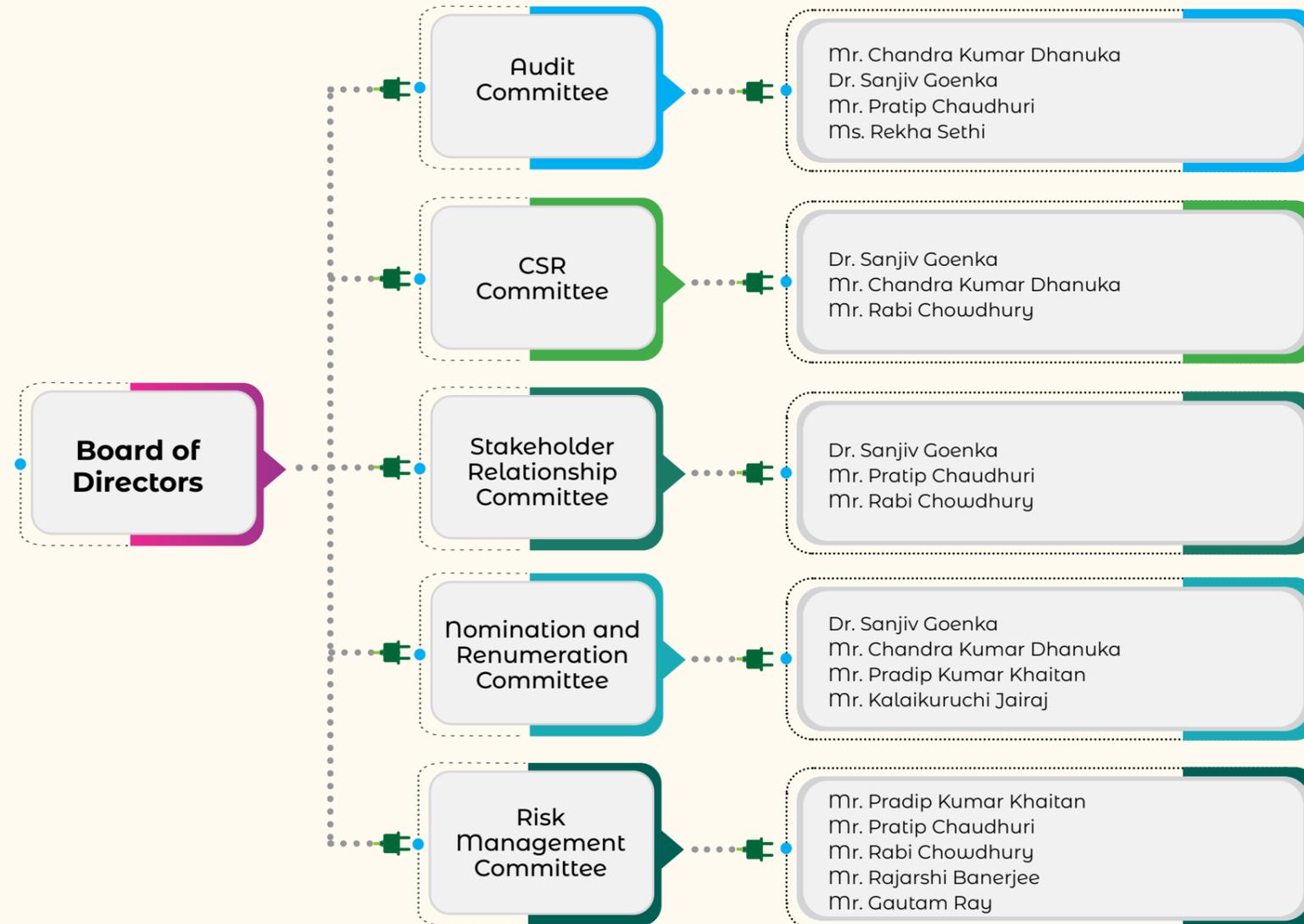
Name	Category	Gender	Finance and Audit	Risk Management		Regulation and Compliance	Human Resources	CSR and Sustainability	Marketing	Technical
Dr. S. Goenka	Promoter, Non-Executive Director	Male	●	●		●	●	●	●	●
Mr. Shashwat Goenka	Promoter, Non-Executive Director	Male	●	●		●	●	●	●	●
Mr. P. K. Khaitan	Non-Executive, Non- Independent Director	Male	●	●		●	●	●	●	●
Mr. C. K. Dhanuka	Non Executive, Independent Director	Male	●	●		●	●	●	●	●
Ms. R. Sethi	Non Executive, Independent Director	Female	●	●		●	●	●	●	●
Mr. K. Jairaj	Non Executive, Independent Director	Male	●	●		●	●	●	●	●
Mr. P. Chaudhuri	Non Executive, Independent Director	Male	●	●		●	●	●	●	●
Mr. Sunil Mitra	Non Executive, Independent Director	Male	●	●		●	●	●	●	●
Mr. Debanjan Mandal	Non Executive, Independent Director	Male	●	●		●	●	●	●	●
Mr. D. Banerjee	Managing Director (Distribution)	Male	●	●		●	●	●	●	●
Mr. R. Chowdhury	Managing Director (Generation)	Male	●	●		●	●	●	●	●

Governance Structure

The Board comprising of five committees namely the Audit Committee, CSR Committee, Stakeholder Relationship Committee, the Nomination and Remuneration Committee and the Risk Management Committee, address the concerns

associated with enforcement of policies and procedures across business functions. The Risk Management Committee further comprises of sub committees such as Disaster management cell and the Internal Audit. The upcoming reporting period will

observe institution of an ESG Committee which shall ensure seamless integration in business. The flowchart showcases the organization's governance structure.



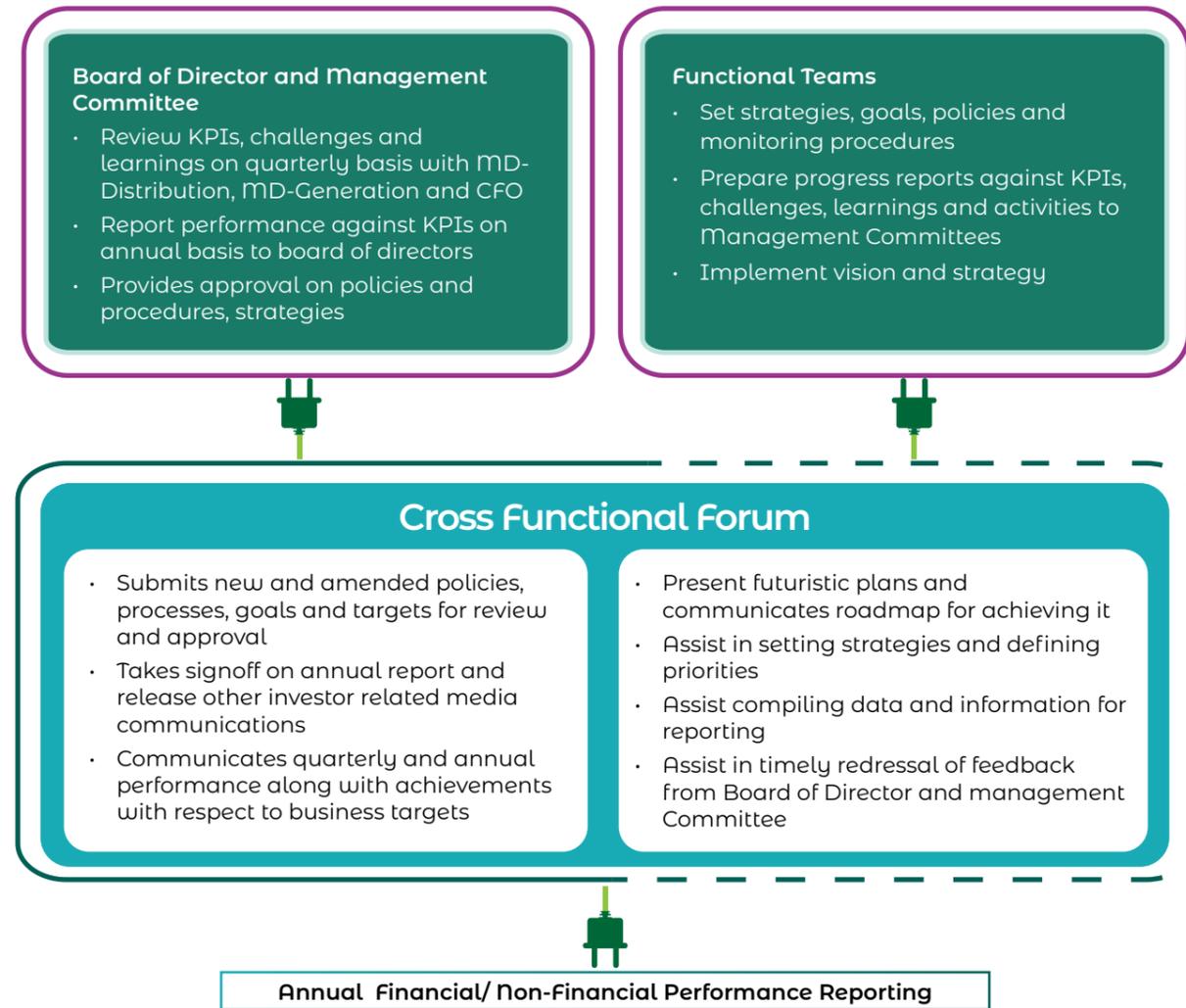
Roles and Responsibilities



The Board meets on a quarterly basis. The corporate responsibilities of the Committees are well defined to assess Company performance, provide strategic guidance, monitor effectively and manage risk.

The agenda of the Committee meetings is set by the Company Secretary in consultation with the Chairman, Managing Director/CFO and functional heads of the Company. The agenda is circulated a week prior to the meeting to keep relevant stakeholders informed. The Board is informed about the discussions held at the Committee meetings and their recommendations are put forth for approval. Further functional heads and senior managers are invited to represent before the Board to keep them abreast with the future plans and receive key strategic insights and feedback.

The Flow diagram below showcases the integration of CESC's executive oversight in each and every strategic decision making.



New Functions instituted by the Company

CESC remains agile to the changing scenario and redesign Organization Structure to address emerging areas/issues of importance. Some of the Departments created in recent past are:

Business Process Re-engineering Cell: To focus on re-engineering of critical business processes for enhanced effectiveness

Business Excellence & Quality Department: To focus on Business Excellence and promote Quality culture

Safety Department: To promote safety consciousness across the organisation and drive safety culture, processes and practices in various functions

Risk & Disaster Management Cell: To mitigate fire risks and handle disasters in a planned manner to minimise impacts

Business Intelligence & Analytics Cell: To analyse data from critical business operations and provide insights for better decision making'

Ethics and Compliance

The Company values the relationship built and the trust it shares with its business partners. RP Sanjiv Goenka Group Values are drivers to achieving the highest standards of ethics and integrity in dealing with its stakeholders. Value workshops for new hires create awareness and understanding on the

Core Values. 'Cherish', an interactive compilation of short stories illustrate the six values ' Customer First', ' Execution Excellence', ' Credibility', ' Agility', ' Risk Taking' and ' Humaneness' and a Competency Handbook are distributed amongst all the employees.



RPSG Foundation Day Celebration

Core Value Championship Awards

Launched in 2012, the Core Value Championship Award has been an integral part of the flagship event of CESC, RP Sanjiv Goenka Group Foundation Day. Employees showcasing consistency in demonstrating the Core Values are honoured with the award.

Code of Conduct

The Ethics and Code of Conduct ("Code") extends to all persons employed by CESC, its subsidiaries and its joint ventures. Employees are required to comply with the guidelines pertaining to ethics, insider trading, discrimination, harassment, anti-corruption, conflict of interest and conduct business activities with integrity

in accordance to applicable local laws.

CESC ensures compliance to the Code by organizing periodic trainings including refresher courses and awareness sessions. During the onboarding process, the employee is required to understand and acknowledge the Code.

Reporting Ethical Concerns

Employees are empowered to bring to the notice of the management, concerns related to suspected misconduct, fraud, bribery, corruption or any unethical behaviour without fear of disciplinary action or unfair

treatment by reporting to email address/contact details under the Whistle Blower Policy.

During the year under review the Company has received no complaints under the Whistle Blower Policy.

Data Governance & Security

ICT Enabling Infrastructure

The CESC Enterprise Information Systems rely on its pervasive corporate data network, i.e. the CESCNET. The Company responded to the pandemic last year by providing enhanced Work from Home access through secure and encrypted Virtual Private Network ('VPN') connections and by enabling easy access to business-critical IT Applications for business users. In order to enable virtual collaboration throughout the pandemic period, the Company has adopted digital platforms for holding almost all business & statutory meetings including Town Halls, Annual General Meeting & Board Committee meetings, through audio and video conferencing modes. All employee trainings and engagement programmes are also being conducted over the virtual platforms seamlessly.

As the infrastructure and application ecosystems continues to be dynamic, the organisation on review of its Business Continuity plan (BCP), is working to upgrade its Data Centre (DC) & Disaster Recovery (DR) sites at the same time, to establish a state-of-the-art 24x7 Network Operation Centre (NOC) & Security Operation Centre (SOC), to ensure unhindered business continuity.

The generation stations use digital and ICT technology extensively to monitor all environmental parameters related to emission, effluents and air quality in real time which are shared with statutory bodies through dedicated on-line channels for necessary compliance. The generation stations' remote performance monitoring and diagnostics system not only provide a rich set of industrial analytic libraries but also provide a unique framework to create machine learning analytics, which assist in predicting critical failures and driving efficiencies and safety.

Geographical Information System (GIS) is being used for monitoring various HT & LT operations on geo-referenced land-based maps. CESC is in the cusp of an upgrade of consumer indexing which besides asset monitoring, will provide capability for budgeting, network planning and will also bring about added integration of consumers and assets in the long run.

CESC continues to explore opportunities to improve deployment of cloud for secure data storage.

Cyber Security

CESC strives to adopt the best practices and establish a sound governance structure to assess



potential risks, monitor the information systems & security controls and take corrective & preventive actions wherever applicable for which it imparts regular training to its information security personnel. The corporate data centre is ISO 27001 certified.

The Company continues to update and publish the Corporate ICT Policy in the Company's intranet page from time to time and has

a practice of periodic IT-OT security assessment by CERT-IN empanelled auditors. It is also working with nodal agencies towards achieving a Critical Information Infra (CII) framework and strengthening its current cyber-crisis management plan.

These interventions will help the Company in its readiness for adopting a compliant privacy

setup when the India Data Protection bill gets legislated.

Operational Efficiency

CESC has leveraged IT substantially to enhance governance and transparency while ensuring resource efficiency through digitalization, thereby making processes energy efficient and paperless.

Paper based operation and maintenance data is being replaced by data capture and data analytics using mobile apps and tablets, as well as use of enhanced web/portal applications for statutory reporting and scheduling using system generated e-documents and workflows. Currently applications for new connections, load requirements, name changes, power outage

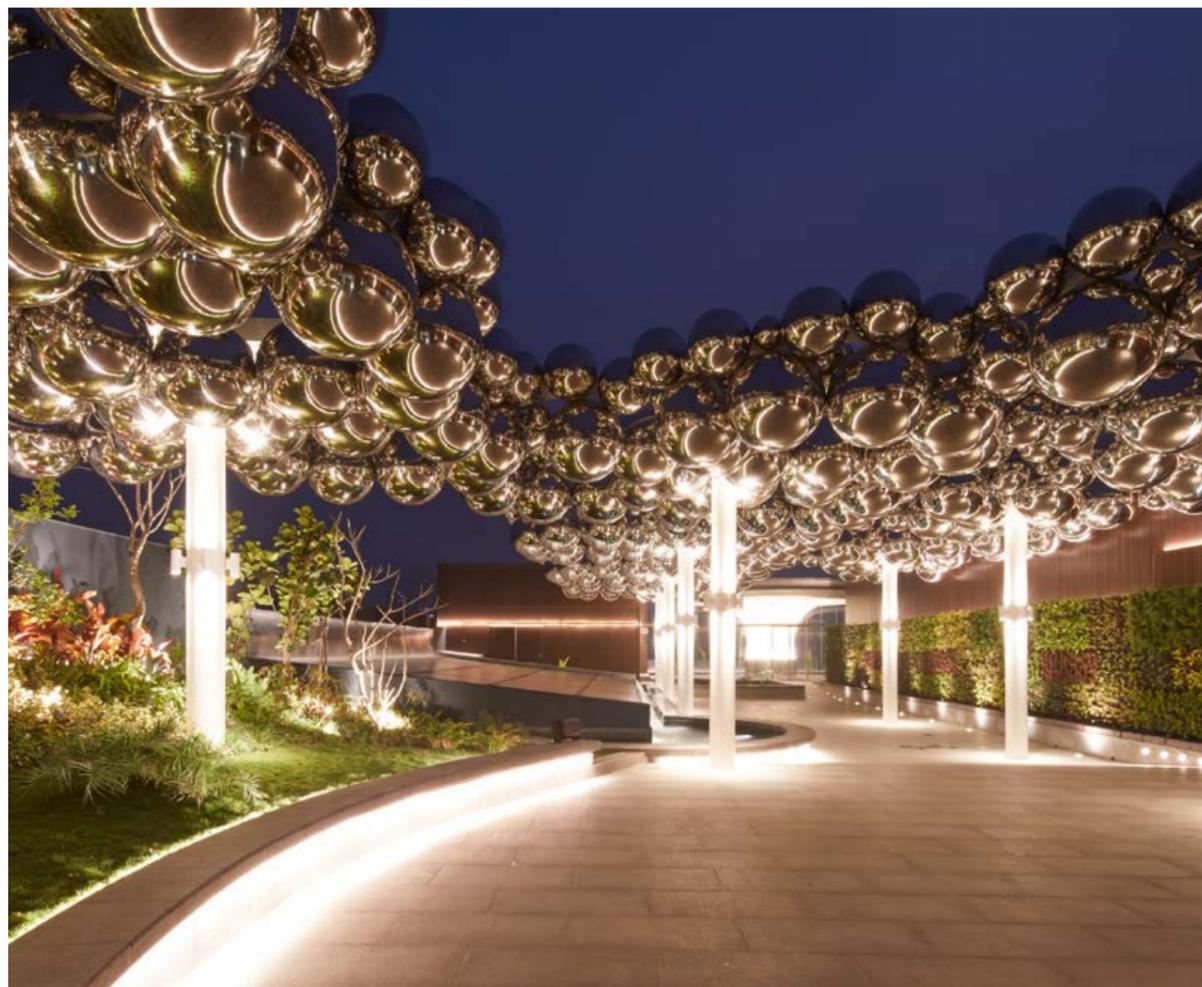
complaints and bill related issues received by CESC are being catered online through the 24x7 virtual office while the Company continues to promote and encourage e-billing and online payments amongst consumers through additional incentives. CESC has significantly improved its online payment realisation by around 50% compared to 2018-19. Further CESC has embraced auctions through home grown e-Procurement System. Consumer experiences have been further enhanced with the introduction of Mobile apps, AI-

driven chat bots and WhatsApp bots. This has helped in reducing the cycle time and minimize errors, the details of these interventions are highlighted in the chapter 'Reliable Power Supply'.

CESC data centres and disaster recovery centres have adopted energy efficient HCI & Virtualization technology resulting in consolidation of servers and reducing server footprint by 8-fold over the last few years, these are amongst the many initiatives of CESC represented in the 'Energy

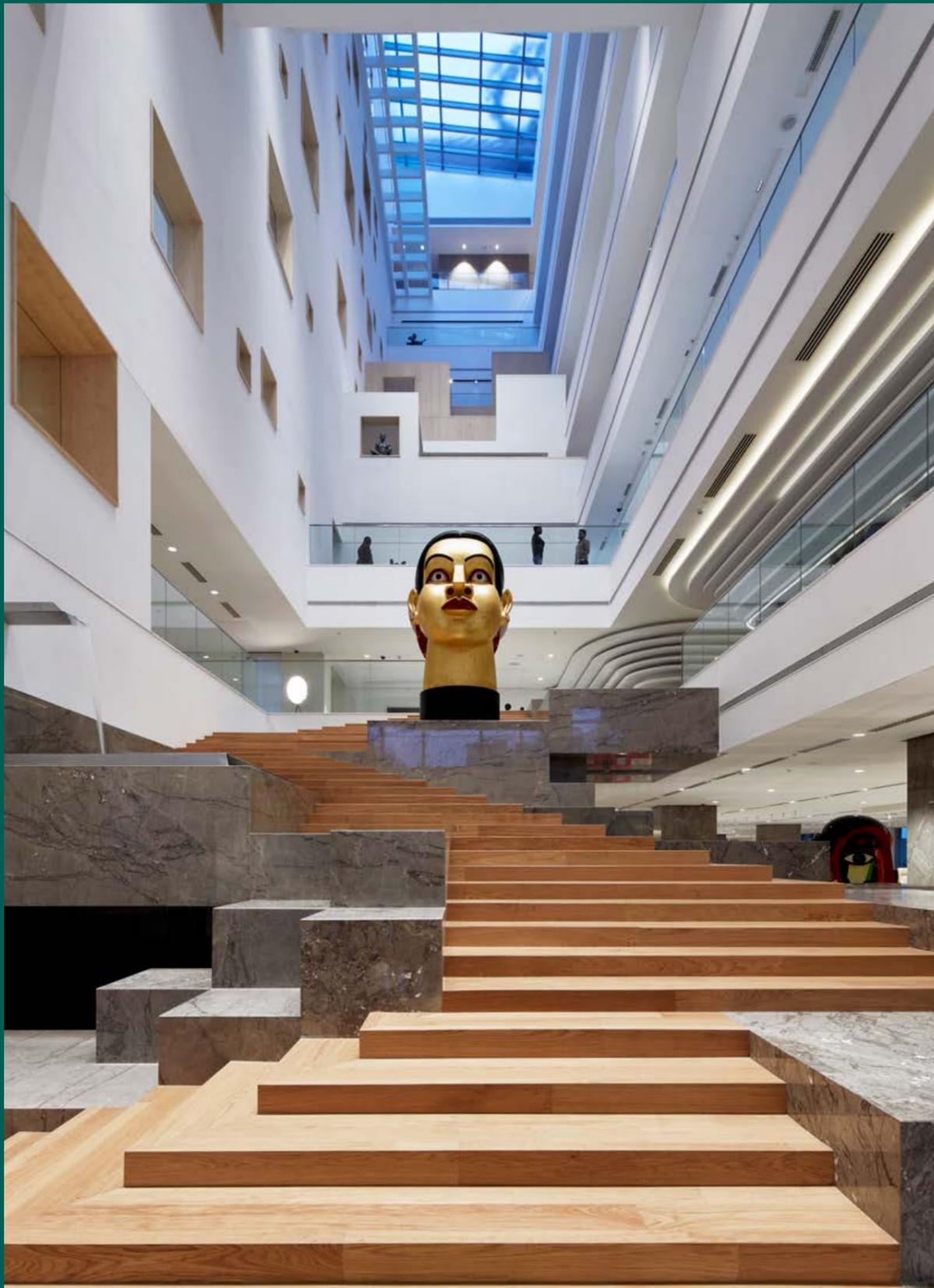
and Emission' section of the chapter on Environment. As a responsible corporate, CESC donates unused PCs in good working condition for CSR activities undertaken with several NGOs, the details of other such activities are represented in the 'Strengthening Communities' chapter.

CESC is currently exploring vernacular voice bots and robotic process automation which will add value to consumer services, improve operational accuracy and optimize cycle time.



ESG Priorities





Materiality assessment is the process of identifying and prioritizing Environmental, Social and Governance issues that are most significant to a company and its stakeholders. During FY 2020-21, CESC has conducted materiality assessment to re-evaluate the material topics through stakeholder consultation and management discussion. It was conducted in the following 4 stages:

◆ **Identification and selection of material topics:**

- Developed a list of relevant ESG topics from internal and external sources, including criteria from the business strategy, relevant ESG reporting guidance, such as the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB)
- Benchmarked ESG topics and trends across the Company's industry peers

◆ **Identified and engaged CESC's key stakeholders:**

- CESC's key leadership in collaboration with ESG subject matter expert identified key stakeholders who are impacted by CESC's operation. The stakeholders include employees, investors, suppliers, consumers, communities, NGOs and regulatory bodies amongst others.
- For materiality assessment, the Company carried out

an exercise to prioritize material topics in consultation with various identified stakeholder groups. The consultations included various modes such as but not limited to one-on-one interviews with representatives of local community, focus group discussions with employee union representatives, formal and informal feedbacks from suppliers, vendors and customers, need based discussion with regulatory bodies.

- Stakeholders were assigned 'importance rating' as high, medium or low to various topics based on the concerns raised by them during year-round interaction sessions with the respective departments.

◆ **Discussed the findings of this materiality assessment with the leadership team:**

- In order to align the ESG topics most material to CESC, the leadership analysed the impact of shortlisted material topics of the Company, taking

into consideration the sustainability objectives, business strategies, company policies and global market trends.

◆ **Materiality matrix and List of Material Topics**

- In the final step, a materiality matrix was prepared to map the outcome of materiality analysis exercise. The matrix presents material topics based on their significance to business and importance to stakeholders. Even though the matrix illustrated only showcases aspects, which are ranked on a scale of Moderate High to Very High, each Aspect will be addressed equally as CESC believes that an Aspect that might be of low importance today, could become more important in the future. Therefore, CESC has taken equal care to report on each identified material issue.

The following table maps the outcome of the above exercise and prioritizes the material issues.

Material ESG Topics: The topics CESC considers to be material to the Company and to the stakeholders



Risk Mapping & Strategy

CESC's Risk Management Policy delineates the process of risk identification, risk classification and risk assessment. CESC has identified the following risks and concerns in doing business.

Classification of Risk	Risk Exposure	Impacts	Risk Category
Financial Risk	Surplus generation capacities exposed to short terms PPAs and adverse price movements	Revenue	Short term
	Availability of debt finance with the country focus on achieving net zero emissions by 2050	Cost	Long term
Operational Risk	Ageing of generation assets impacting quality of service delivery	Cost, Revenue	Medium term
	Upgrading skills to become digitally enabled to maintain and improve productivity while creating customer convenience	Cost	Short term
	Unsafe work conditions including public safety concerns	Cost	Short term
	Supply of continuous and reliable power	Revenue	Short term
	Distribution losses in power supply as a result of technical losses and electricity thefts at vulnerable communities	Cost, Revenue	Short term
Supply Chain Risk	Availability of coal, coal quality and linkages for new projects	Revenue	Medium term
	Local suppliers for quality material	Cost	Medium term
Technology Risk	Cybersecurity risks threaten customer data privacy	Cost	Short term
	Adoption of clean technologies including Flue Gas Desulphurisation	Cost	Short term
Climate Change Risks	Physical risks associated with fluctuations due to weather conditions leading to frequent tropical cyclones, floods and water scarcity	Cost	Short term
	Transitional risks associated with possibility of Government capping amount of emissions, introducing carbon tax and increasing water tax	Cost	Long term
Regulatory Risks	Reducing water intensity below national benchmark and achieving zero liquid discharge	Cost	Short term
	Favourable policies for growth of renewable energy including green hydrogen fuels	Revenue	Long term
	Increasing stringent environmental norms	Cost	Long term



CESC focuses on creating long term value not only through its own operation, but also through designing and developing devices and solutions that enhance the consumer's positive environmental and social footprint and ensure consumer safety.

CESC's innovative services and solutions ensure that the operation

is in line with RPSG Core Values, "Customer First", "Execution Excellence", "Credibility", "Agility", "Risk-Taking" and "Humaneness. CESC's vision and mission statement derived from the RPSG group's Core Values cornerstones the Company's constant drive to provide the consumers safe, reliable and affordable quality power. To achieve the internal

benchmark, the Company imbibed numerous management strategies and technologies that assures the best service is provided to the consumers, which assisted CESC to create an environment of trust and reliability. This is considered as one of the most precious assets. The Company pursue reliable power supply in four key opportunity areas:

Continuous Power Supply to Consumer

CESC is one of the largest distribution companies in India with integrated generation stations to ensure the supply of power during peak load. The organization's multi-disciplinary team ensures that not only the services are compliant to the laws and regulation of the area of operation, but also the services are customized based on the region of

operation ensuring safe and reliable practices. One such best practice is the average timeline for providing new connection is within 2 days and meets EODB (Ease of Doing Business) requirement of 14 days.

The organization's continuous effort to monitor the power supply quality has led it to develop several homegrown

digital systems with a clear transparent objective to provide the best service to its consumers. Listed below are few digital systems that ensure that any deviation from best practice is redressed in a clinical manner.



Customer Relationship Management ('CRM') system:

This system is used to docket a consumer supply related complaint and identify & track faults pertaining to supply related issues. Any delay with regards to restoration of supply is flagged in the CRM dashboard, which is monitored 24x7 by LT Control Room Engineers, who expedite the supply restoration (as per SOP).

SOS System:

Any faults generating from supply related complaints entering into the CRM is automatically linked to the SOS (workflow management system at the site office). The repair of the fault is reported in the SOS.

Call Centre:

24 hrs call centre is available to docket and share updates regarding breakdown to the consumer and internal stakeholders.

MASD system

enables tracking of status pertaining to new connection / load augmentation / service shifting / strengthening and others. Delay with regards to new connection execution is facilitated by notification mailers / SMS to concerned officials; ready reports are also available.

1. State of Art SCADA System:

Monitoring & control of supply through SCADA System across the entire 220kV, 132kV, 33kV & 11kV Distribution network for intelligent situational awareness, outage scoping & quicker outage restoration from remote.

2a. Introduction of Flexibility in Network Operations:

Strategic "nodes" of the 6 kV & 11kV network have been equipped with Ring Main Units (RMUs), having "Fault Passage Indicators" (FPIs) for ease & speed of fault location, isolation & supply restoration from adjacent "ring" network.

2b. Enhancing Network Redundancy at 33kV:

RMUs with remote manageability have been introduced at strategic 33kV Substations so as to bring in additional flexibility & redundancy with the existing 33kV cable network. Feeding such bulk loads.

3. Automated RMUs at 6kV & 11kV:

Remotely operable motorised RMUs, equipped with communication infrastructure have been installed at key nodes feeding essential & important utilities like hospitals, pump houses, Government buildings & offices requiring uninterrupted power supply. This technology is also used to restore power during HT feeder tripping in select Durga Puja Pandals.

4. Self-Healing Grid Initiatives:

a) For 33kV Consumers: Taking decision making to the edge, intelligent Programmable Logic Controller (PLC) based decision making solution, riding on Intelligent Electronic Devices (IEDs) have been introduced for key 33kV consumers for intervention free automatic restoration of supply from adjacent ring network within the blink of an eye, following any power outage.

b) For Substations: Similar self-healing functionalities have also been introduced with existing Automation Units (RTUs) for such intervention free automatic quick restoration of bulk loads of substations too.

c) For 6kV & 11kV Consumers: Automated RMUs for some key consumers have also been equipped with edge computing capabilities so as to intelligently restore supply locally, within seconds, without any manual interventions, should there be any outage of supply from one of the two feeding points of the ring network.

d) For LT Consumers: LT changeover equipment has been installed for select LT consumers having dual feeds for automatic (intervention free) changeover to the alternate supply point, in case of power interruptions.

The Company is cognizant of the fact that along with digital

installation, robust governance structure and on ground

technological infrastructure is imperative to effectively identify

and apply predictive measures to reduce fault occurrence and fault remediation time. CESC Kolkata's strategic LTFMC (LT Fault Management Center)

plays a pivotal role in assessing and mitigating any risks that arises from faults and outages which tend to transform into consumer grievances. The Case

study showcases the structure and functionalities of the LT control room.



Case study on LT Control Room and Condition Monitoring

CESC Distribution's LT Control Room was conceptualised to create a Centre of Excellence within Distribution operations. The Centre is generally manned by handpicked officers, with few years of experience in operation and the selection is based on their strong technical knowledge and a knack in analytical skills.

The team acts as a value-added layer over all the decentralised operational units of LT Distribution and ensures standardisation in LT network performance over the entire licensed area and drives special projects by ushering in new technologies and introducing process changes. The LTFMC acts as a performance enhancement centre where the team continuously monitors and curbs breakdowns, faults & outages in the LT System; similarly the team conducts frequent process analysis to assess gaps in processes

and subprocesses, thereby continuously striving to enhance the network's productivity and efficiency. Along with process improvement activities, LTFMC conducts rigorous quality assurance, audits and inspections of all the installations such as but not limited to newly commissioned DTRs, pillar box installations and any fault sites.

Based on the findings of audits and inspection the team generates various management reports & MIS, which act as a strategic document for decision making and subsequently implementing process improvement projects. Another important function of LTFMC is driving improvement projects in a methodical manner. The Centre strategically plans and subsequently coordinates with various team to implement process improvement jobs such as but not limited to DTR commissioning, identifying and

mitigating network constraints and LT Network reorganization.

As electricity falls under the essential services, the continuous availability of power becomes a critical necessity for operation of important industries such as hospitals, medical supplies, public infrastructure and others. LTFMC believes that pre-emptive analysis of the networks and systems is the only way to ensure that reliable continuous power is provided to all the consumers and specially the industries which ensure public health, safety and wellbeing. The detailed list of activities showcased below portrays a clear dimension on how the LTFMC team works relentlessly to ensure that faults and breakdowns are controlled to minimum and if anything similar occurs the supply of power remains continuous for critical industries and the restoration time is negligible.



Co-ordination of LT Control Room with Customer Relations Department

CESC's LTFMC in line with the Group's Core Values believe that consumer should come first. In line with the belief the team

maintain 24 hours coordination with the consumer call centre to manage and monitor LT programmed outage and rare VIP outages like fusing's faults and outages. The Centre liaisons with consumer service to identify, review & monitor and close consumer complaints throughout the LT network.



Audits and Inspections

More significantly to avoid occurrence of the above mentioned faults and outages, LTFMC pre-emptively conducts frequent audits and inspections of various types of defects in the network such as but not

limited to distributor & service cable faults, pillar box fusing and also service apparatus at consumer premises (Cut-out fusing & faults). Similarly, the LTFMC plays a pivotal role in conducting audits and inspection of own installation in order to reduce any future faults and outages, the activities are including but not limited to pre & post commissioning audits of distribution transformers (the costliest equipment in LT distribution), site verification and root cause analysis of modified pillar box fusing & fuse strip burning. LTFMC is also intricately involved in network planning activities such as but not limited to analysis of repetitive faults & suggesting RO jobs, carrying out RO job related audits, preparation & validation of network reorganization schemes and post commissioning audit of RO jobs.



Preparation of Reports & MIS

Based on the information and results from the above-mentioned audits and inspections, LTFMC generates several reports such as

- Management reports such as but not limited to like LT Outage Management Report, Feeder fusing report, Daily Fault Report, Automated Metering Report, Monthly LT System Report
- Bulletin for programmed outages which reports fuse call, network constraint & repetitive distributor fault of the system, repetitive

consumer complaints, low voltage complaints, LT source outages, SAIFI & SAIDI Report input validation.

LTFMC, more importantly integrates GIS in daily operations, whereby the team updates faults & fusing, modified pillar box, network reorganization in the GIS maps; the updated maps are also used to generate MIS reports on faults & fusing.



Process Improvement Project and New Technology

Based on the MIS reports and analysis, the team under the guidance of senior leadership develops strategic road maps on identification and implementation of recommendations which includes development of joint teams such as post commissioning audit & functioning of joint analysis centre at Maniktala and Taratala, implementation of new projects through collaboration with reputed research institutes (such as LT Cable Fault location project with Indian Institute of Technology, Kharagpur) and incorporation of new technologies.

New technology scanning and deployment with focus on innovation is the most coveted job of LTFMC. The broad activities include scouting new technologies and carrying out pilot projects, horizontal deployment of the new technology & imparting training

among others. Some examples of new technology integration the team has conducted over the span of last few years are LT auto changeover, voltage regulator, water level indicators in pillar boxes, fuse failure indicators of transformers and others.



Training and Development

Training & Development is an integral function of the department. This includes processes like introduction and information dissemination about the new technology (like modified pillar boxes), imparting training to employees on new technology, preparing technical presentations/write-ups for training and carrying out training to contractor employees on LT Jointing, validation and testing of LT jointer's and issuing jointing cards to them.

While the customer service team and LTFMC ensures that the consumer receives continuous power supply by reducing breakdowns, faults and decreasing response time of the same, the distribution technical team carries out the strategies and plans to access quality power from the grid and supply it to the household and at the same time assures smooth operation of above mentioned teams.

The next section showcases the management approach CESC Kolkata adopts while planning and strategizing a network augmentation for sourcing power from the grid to the household.

Condition Monitoring for Sustainability

Condition Monitoring Cell from its onset on July 2010 has been working to prevent the failures of electrical assets in the distribution network by proactively monitoring their health in non-invasive manner through the state-of-art technologies like partial discharge detection, Infrared thermography to name a few.

Assets covered under its purview can be categorized into Upstream (220/132/33 kV Power Transformers, Outdoor Isolators, Indoor Switchboards etc.) and Downstream (6/11 kV Distribution Transformer, Ring Main Unit,

Consumer Module, PSS etc.) network assets with predefined periodicity of inspection for each.

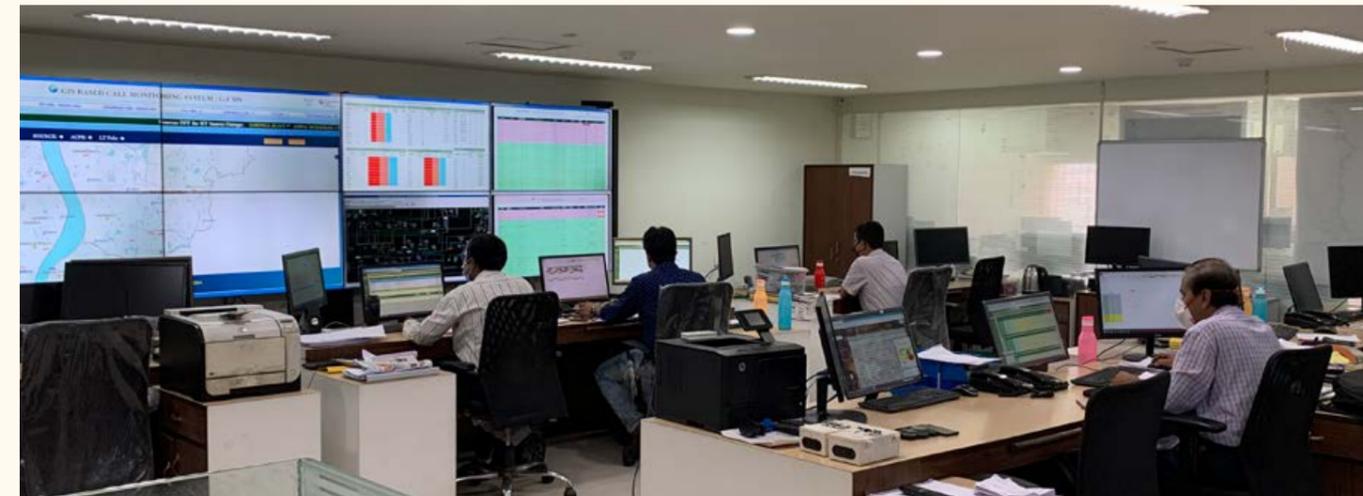
Periodic inspection of all HV & EHV consumer installations along with necessary feedback system through Customer Relations is also covered under activity of Condition Monitoring Cell.

Defects observed as an outcome of Status Monitoring (Visual inspection) and Condition Monitoring (Non-intrusive measurements using CM equipment) are reported to respective operational

department for necessary rectification activities at their end.

Over the years, the significant benefits achieved are

- Aversion of disruption to normal operations.
- Reduction of cost of maintenance and asset failures.
- Enhancement of equipment reliability.
- Less unscheduled downtime due to catastrophic failure and in turn ensuring customer satisfaction.



LT Control Room

Network Planning and Innovative Technological Intervention

With the onset of digitalization and increasing popularity of energy-saving options, consumers are using more and more digitally controlled equipment such as computer, LED lights and others. This is leading to the disturbance of

harmonics in the distribution network, which in turn affect the power quality due to voltage variation. The Company aspires to provide 24x7 supply of quality power to its consumers. To address these issues CESC Kolkata adopts a robust strategic

plan which is segregated into long term, medium-term and short term, the table below briefly touch base on CESC Kolkata's strategic approach during network planning.

Short-term planning

The short-term planning is carried out to mitigate local overloading, undervoltage and address installation & testing of new applications at Low/Medium voltage (230/400V). Execution of short-term plan is a routine activity and has a definite pattern unless there is special activity like replacement of largescale meters.

Medium-term planning

The medium-term planning is carried out for establishment of 33/11kV substations considering load growth in the area and capacity deficiency conditions. Usually the time period for execution is 2 to 4 years. The execution of mid-term plans requires multidisciplinary team and allocation of CAPEX budget to optimize the results.

Long-term planning

The long-term planning is carried out to enhance import capacity at extra High voltage system (220/132kV) from external sources and bulk power transfer. This is required to meet load growth and mitigate the gap that is being created due to dwindling capacity of embedded generation. Usually the time period for execution is 2 to 4 years. The execution of long-term plans require multi-disciplinary team and allocation of CAPEX budget to optimize the results.

One such example of CESC Kolkata's long term and mid-term plan is Space optimization of EHV station which along with reducing cost and resource footprint, played a pivotal role in saving the Company's assets.



Example of CESC Kolkata's robust network planning: Space optimization of EHV station

Description	<ul style="list-style-type: none"> Space optimisation means to accommodate more transformation capacity and greater number of bays in a substation than that can be accommodated in an outdoor yard. Previously, EHV substations were outdoor and required large footprint for installation of various equipment. With gradual decline in cost of GIS, indoor substation with GIS will become cost competitive when compared to outdoor yards.
Advantage	<ul style="list-style-type: none"> Space optimizations leads to accommodation of many tiers and require much less resource footprint. Hence more power supplying capacity can be installed in lesser space. With such program, switch gears indoor are compact and less susceptible to bad weather conditions, ensuring easier and safe to operate.
Application	<ul style="list-style-type: none"> CESC Kolkata converted one substation from outdoor to indoor recently and this conversion helps to augment the capacity from 100 MVA to 400 MVA with commensurate increase in number of bays

CESC Kolkata's readiness to face and mitigate any adverse challenges were developed through consistent efforts, which in turn helped the organization to seamlessly adapt during any kind of crisis such as the recent pandemic COVID as well as the climate related disaster, cyclone 'Amphan'. The excerpts below testify the Company's readiness for facing any challenges that the future may present.



Setting Global Standards for Reliability: Success over Cyclone Amphan

Cyclone Amphan made landfall as a powerful Category 5 cyclone at Bakkhali, West Bengal on 20th May 2020 at 2:30 pm IST. The super cyclone moved northwards at a peak speed of 155 mph affecting the coastal areas of West Bengal comprising of East Midnapore, North 24 Parganas, South 24 Parganas, Kolkata, Hooghly and Howrah.

Adoption of Pre-emptive Measures

CESC ensured real time communication channel through WhatsApp was established with the India Meteorological Department, 3 days prior to the landfall of the cyclone for receipt on hourly weather updates which were circulated amongst key officials and operations team. Consumers were notified via SMS of the possible interruptions in supply and the safety precautions to be taken.

Adequate arrangements were made in advance for real time checking and monitoring of Network Automation features to automatically restore power through standby supply in

case of primary power supply failure with respect to all emergency establishments like Pumping Stations, COVID-19 Hospitals & Quarantine centers, Administrative Head Quarters. Backup diesel generators were also arranged to maintain

uninterrupted power supply and water supply especially to essential health facilities amidst the growing concern of the pandemic COVID-19.

Approximately 150 emergency supply restoration gangs



Effect of Amphan in our Operating Area

were strategically placed at decentralized locations while call centre infrastructure and consumer handling resources were ramped up. Additional stocks of emergency materials like poles, conductors, fuse wires, single core cables were adequately maintained beyond safety stock for quick power restoration. The challenges associated to roadblocks and restrictions due to COVID-19 were

accounted for on planning for the cyclone.

Aftermath of Cyclone Amphan

Amphan brought with its intense storms, incessant rainfall, inflicting damage to life and housing property, uprooting several trees and street lighting poles leading to road blocks and flooding the communities. The super cyclone also inflicted devastating damage to the region's electricity infrastructure

with more than half of the distribution licensed area of CESC reporting power outages.

The effect of Amphan was predominantly in Overhead Network areas for CESC, which accounts for approximately 30% of the LT overhead network. These are primarily located in areas such as the Southern part of Kolkata and other fringe areas of Howrah, Srerampore, Maheshtala and Budge Budge.

The Restoration processing

In the aftermath of the cyclone, almost all upstream network (EHT/ HT Network - 220 to 6 KV) which were kept off during the storm was running normally under the thorough supervision of engineers from System Control/ HT command station. This upstream network coupled with SCADA system, provided network visibility and control for achieving minimal downtime.

Existing decentralized emergency control rooms for real time monitoring and management of power supply restoration facilitated the overall emergency response process. The control rooms use available sensor based IoT platform and drones for online health monitoring and predictive maintenance of the Network & Equipment to ensure uninterrupted power supply (24X7).

HT & LT Command Centers backed up with GIS technology, enabled quick mobilization of gangs through Crew Management App along with GPS tracking to quickly attend the affected places. The priority was to promptly restore power for healthcare facilities and major drainages within 30 mins through RMU automation.

Similarly, approximately 98% of the large area outages, which includes CESC's HT networks were restored within 2 hours. The State-of-the-art Ring Main technology enabled faster restoration for the consumers.

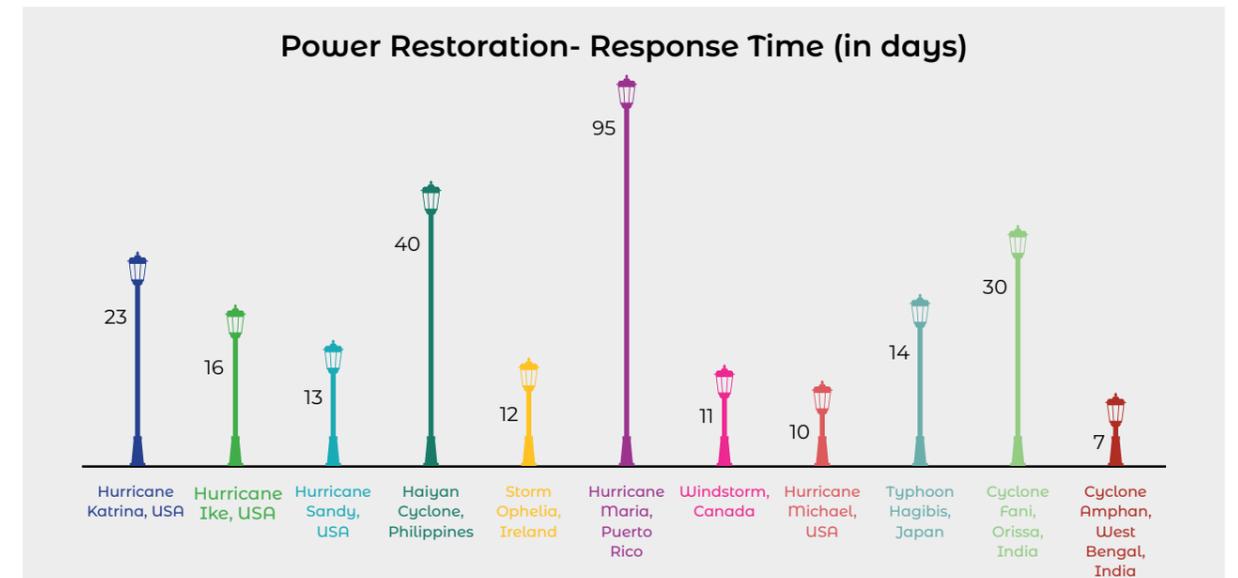
To speed up the process further, CESC deployed additional gangs from CESC's distribution franchisee businesses and the existing gangs were redeployed from areas that were restored earlier to those that required immediate attention. Special hydraulic machines were pressed into service for expediting pole replacement. Shortage of materials for repair were overcome by deploying the Rapid 3A Supply Chain model (that focuses on 'Agility', 'Adaptability' and 'Alignment') through



Post Amphan Restoration Process

prompt liaison with vendors, speedy transfer of existing stock to affected sites and cross docking of subsequent incoming goods for dispatch to zonal depots. These efforts were effectively supplemented by the support from the police and municipal authorities to enable structured and systemized power restoration.

The progress of area wise power restoration process was communicated daily on newspapers and news channels. Approximately 99% of the affected outages were restored in phases within next 7 days and this was a global benchmark.



Resiliency through Adaptability: Responding to COVID-19

In 2020, the COVID-19 pandemic changed the world and tested multiple aspects of the business from operations and supply chain to health, safety and profitability. Its repercussions echoed around the world, leaving no one untouched in both business and at home. CESC's Core values summarize the approach. Ensuring safety and well-being of the employees, their families and the communities in which the

Company operates was the priority followed by adjusting business to remain a reliable supplier of power to the consumers.

Business Continuity

Like most companies, CESC's ability to quickly respond to business and supply chain disruption were tested. CESC's business supports life supporting services including hospitals, life-critical medical devices and food. As a result, CESC had to operate

with a robust business continuity plan to keep business functioning and employees safe.

CESC Kolkata's already existing digital ecosystem enabled the Company in seamlessly adapting to the new normal that the pandemic brought. These existing initiative are including but not limited to online consumer services through BPO, chatbots and WhatsApp Bot, rolling out of frequent SMS and E-mails to consumers guiding

them to avail digital services and pay online, as well as enabling Work-From-Home provisions for employees (using VPN Connectivity and Soft Phone Technology).

Similarly, with the onset of lockdown, contactless operation became a priority for ensuring reduced exposure. This required several adaptive changes in the existing modus operandi. CESC is committed to provide the

consumers with responsive and best-in-class consumer service and experience through 24x7 reliable supply of power, meter reading and billing including automatic meter reading system (AMR) for high-end consumers.



Glass Window Installed with the Onset of the Pandemic COVID-19 in our Regional Office

Breakdown and Maintenance Teams maintained round-the-clock operations to quickly respond and address any faults. Few of the steps are listed below.

Decentralized operations were carried out to maintain COVID-19 protocols while strict social distancing norms and protocols were observed

Small teams were dispersed to multiple locations to avoid large gatherings of workmen

Logistic arrangement (for workforce staying in city outskirts) and Dynamic Duty Roster were made available for employees to work safely with minimum exposure to the externalities

Use of PPEs and appropriate sanitization norms for workmen and transport vehicles were observed

Consumer Precaution and Awareness Generation

For any distribution company the lifeline of the company is the meter to cash cycle. CESC Kolkata's already existing resilient infrastructure helped the business to continue without any disruption.

CESC, keeping in mind the extraordinary times took several steps to reduce over-crowding of consumers for bill payment. The list alongside showcases some of the key interventions that CESC imbibed to ensure timely payment of bill by generating consumer awareness on various modes of bill payment mechanisms and at the same time ensuring safety through maintenance of social distancing norms.

- Layouts at regional offices were changed for walk in consumers; glass panes and speakers at the front-end counters were installed to observe social distancing norms
- Consumer communication regarding change in cash office timings, Meter reading & Bill delivery activities were carried out through various media channels
- SMS, newspaper advertisements and social media communications were rolled out to encourage the adoption of digital services from the comfort and safe confines of home or workplace
- Customized area specific communication channels were created in case there were any local issues in containment zones
- CESC also introduced cheque collection drop boxes at various retail outlets for easy payments of the bills. The details of the same were communicated in the website and also through text messages

Enhanced Consumer Convenience

With COVID -19, all the major economies of the world got affected and India was no exception. The imposed lockdown affected businesses and livelihood of several people. CESC, keeping in mind the extra ordinary situation, adopted several measures to enhance consumer convenience. Some of the measures are listed as follows:

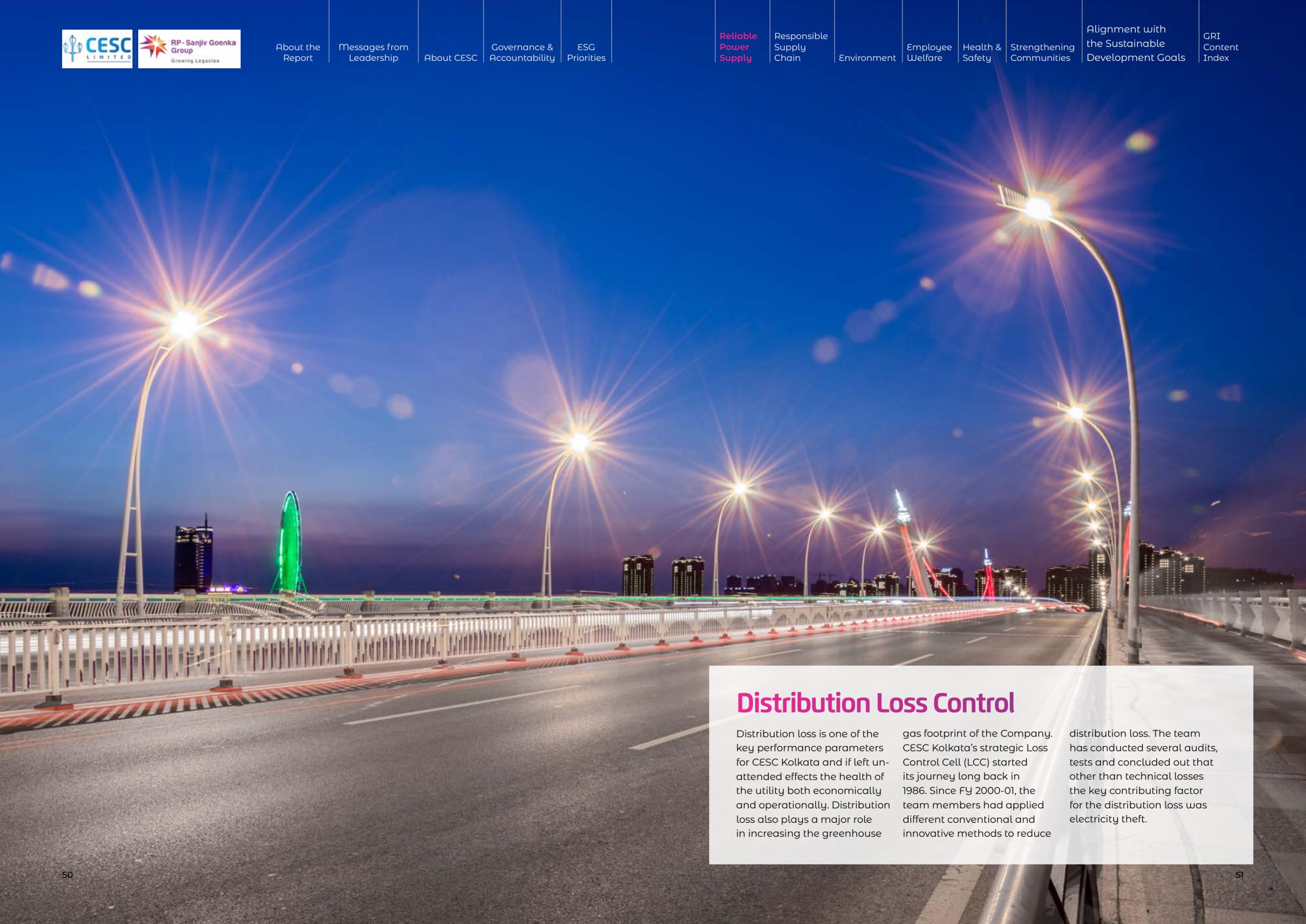
- Withholding of disconnection activities during the lockdown period
- Due dates for bill payment were extended
- Introduction of easy instalment payment scheme for the unbilled consumed units for the lockdown months

CESC believes that these extraordinary situations like the COVID and Amphan tested the mettle and resilience of the Company. Through decades of structural governance approach and efforts to uphold the Core Values to constantly put customers first and to embark on a journey that is sustainable,

long term and resilient has placed the Company in a strong foothold to overcome the above-mentioned crisis.



Social Distancing being maintained during Operations



Distribution Loss Control

Distribution loss is one of the key performance parameters for CESC Kolkata and if left unattended effects the health of the utility both economically and operationally. Distribution loss also plays a major role in increasing the greenhouse

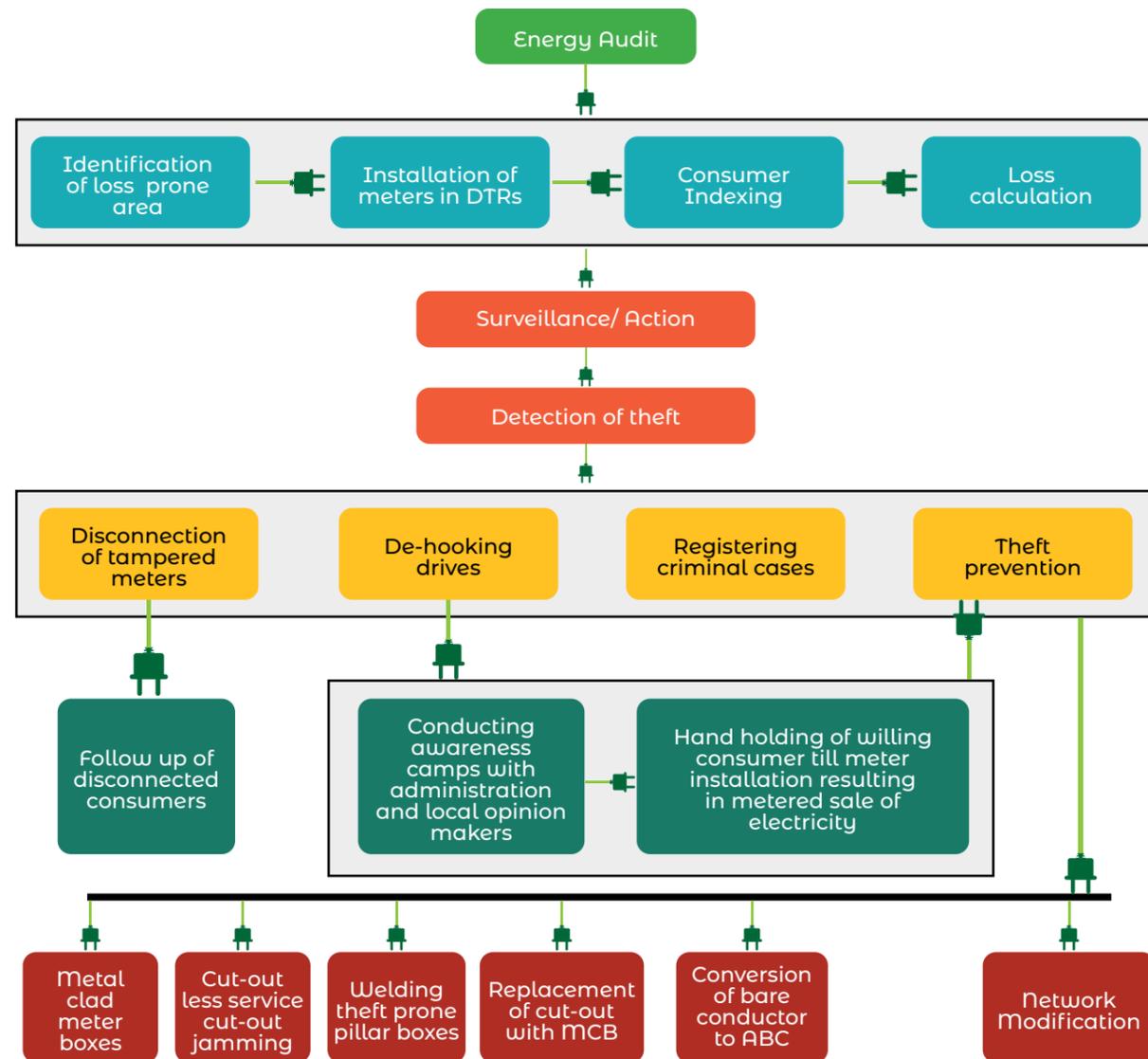
gas footprint of the Company. CESC Kolkata's strategic Loss Control Cell (LCC) started its journey long back in 1986. Since FY 2000-01, the team members had applied different conventional and innovative methods to reduce

distribution loss. The team has conducted several audits, tests and concluded out that other than technical losses the key contributing factor for the distribution loss was electricity theft.

CESC Kolkata's journey to success began by developing an interdisciplinary management team led by the LCC. The team consisted of representatives from IT department, O&M, HT system, Testing department and LCC.

CESC Kolkata's interdisciplinary team adopted a methodical strategy to curb losses. The team continuously monitored and took meter reading through GPRS

(General Packet Radio Service) communication. The flow chart below showcases the outcome of the audit and relevant mitigation steps that CESC Kolkata adopted for reducing loss.



The loss prevention steps included implementation of both managerial measures and technical measures. The illustrative below highlights few innovative measures that played a pivotal role in loss reduction.

 <p>Technical</p>	<p>Network Reconfiguration</p> <ul style="list-style-type: none"> Creation of Distribution Zones (DZs) for micromanagement of theft <p>Lines and Pillar Box protection</p> <ul style="list-style-type: none"> Replacement of overhead lines by underground lines in some areas Replacement of LT AB/Bare conductor with co-axial cable in overhead mode Application of busbar protecting paint Application of armour cast tape Installation of theft proof pillar box <p>Technological Advancement</p> <ul style="list-style-type: none"> Replacement of electromechanical meters Renovation of meter boards for proper installation
 <p>Operational</p>	<p>Detection of Theft</p> <ul style="list-style-type: none"> Area wise focused checking Vigilance of disconnected consumer after reconnection
 <p>Management</p>	<p>Organizational Changes</p> <ul style="list-style-type: none"> DZ Supervisor role introduced for management of DZs Service focus Hassle free new connection at affordable rates Social Impact – through CSR such as <ol style="list-style-type: none"> Meeting with local opinion makers / local administration, local youths Enhancing employability through the CSR Programs described in Strengthening Communities' section



Distribution Transformer Metering Arrangement



Modified Pillar Box

PILLAR BOX MODIFICATION

Description:

The previous pillar boxes of mild steel shell with locally made fuse strips has been replaced by LT compact pillar boxes with imported fuse strip units.

An initiative was taken jointly by CESC Kolkata along with vendor, M/s Asiatic Electricals & Switchgears for modification of pillar box.

Advantages

- In previous design, the breakdowns were frequent and maintenance cost was high.
- The modified design has longer life, reliability, dependability and very less tripping / breakdowns.

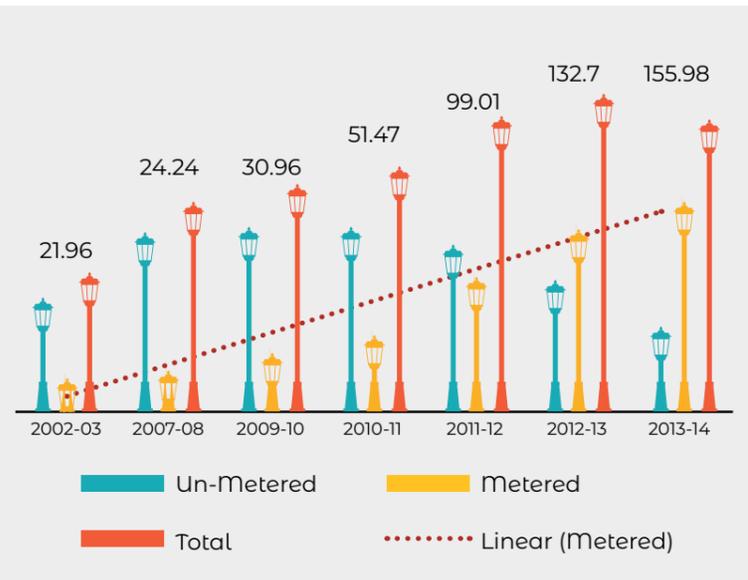
CESC Kolkata has observed significant progress in minimizing electricity theft through various initiatives including but not limited to secured pillar boxes, organizing various awareness campaigns and community driven initiatives to eliminate social evils. Monitoring this progress

was made successful through the implementation of meter connections. Street lighting, which were already a pilfer prone zone have been initially governed by the contractual billing policy which often resulted in the contractual load delivered being less than the connected load. Market solutions

being limited, CESC Kolkata took up the daunting task of developing the Smart Street Lighting Management System (SSLMS), consistent with its strategic objectives of reducing distribution loss and increasing billing efficiency to enhance consumer satisfaction.

Smart Street Light Management System (SSLMS)

The SSLMS system launched in FY 2008-09, has been able to reduce breakdowns and outages, thereby reducing the operational expenses and increasing operational efficiency through **100% metering of all streetlights across municipalities by 2016**. This contribution significantly reduced overall system loss of 20%



Operational Efficiency

- Reliability in power supply through phase changeover feature
- Switching on & off the load at editable pre-set time
- Self-protection against overload and short circuit
- Automated meter reading through base-station server for energy bills
- Condition monitoring of the unit & switching devices
- Generation of MIS reports for initiating O&M action

Increase in Metered Sales (in MUs)



Decrease in AMR Failure Cases

Progress towards Zero AMR failure

- Successful implementation of SSLMS system is dependent on managing Automated Meter Reading (AMR) Failures. This was made possible by
- introducing in-house developed Communication Failure Management System for AMR failure reporting and analysis
 - fixing of timer switches to prevent modem hang
 - re-configuration of nonfunctional SIMs
 - removal of zero consumption MCBs
 - direct fault entry at SOS through system integration

Consumer Safety

CESC's role in enhancing consumer safety has played a crucial role in business continuity even during extraordinary times like COVID and Amphan. CESC ensures safeguard to public from any injury or loss or damages

arising out of any untoward incident of the organization.

Public safety management processes concern not only about safe installations by CESC but also ensuring the consumer

is fully aware of the safety precautions while handling their installations. The following sections discuss about CESC's interventions to ensure



Ensuring Safety and Access Control of CESC's Plants and Equipment in Public Places

CESC's installations include distribution transformers, pillar-boxes, overhead distribution lines, underground cables and street lighting supplies, in addition to which CESC installs and maintains connections to switchgears for its HT consumers and to the meter boxes of the LT consumers.

CESC mitigates risk of its own installations by removing unsafe conditions through various interventions like

- renovation of meter boards
- replacement of Fuse based service cut outs with MCBs
- periodic maintenance of MVAC overhead network

- trimming of tree branches near Overhead lines
- installation of diamond type spacers in overhead lines to trap snapped wires
- measurement and rectification of pole earths
- fixing of insulated FRP jacket on poles up to accessible height
- conversion of bare overhead LV network to PIC or AB cable in selected areas
- replacement of existing Pillar Boxes with state of the art Pillar Boxes with HRC fuses

- upkeep and maintenance of Pillar Boxes
- raising of pillar boxes in known water logging areas
- O/T Compound cleaning and locking
- T/H room door locking, open LT unit replacement, fire safety audit
- replacement of oil filled distribution transformer by dry type transformer in crowded areas like markets, hospitals and slum areas
- periodic status and condition monitoring of CESC's vital installations at important public places like hospitals and nursing homes



Pole Cover



Diamond Device on OH Lines

The above interventions ensure safe access and control of CESC's plants and equipment in public places.

Ensuring Safety during Operations and Activities

During execution of any new installations, fault isolations, repairs and maintenance at public area, all CESC workmen including contractors' employees are instructed to take the maximum precaution by

keeping in mind that no outside person shall be affected by the operation and activities. The public are cautioned by providing danger notices, caution boards and physical barriers while working beside residential

area or roads. Working personnel apply utmost safety control measures to minimize the risk of public. CESC mitigates the possibility of danger to public through a threefold process.



Safe Handling of Electricity

CESC's consumers draw electricity connection from the main supply point provided by CESC through wires and cables to connect various electrical gadgets and equipment for household, commercial or business establishments, factories or for public utility purposes. The consumers including private and public organizations undertake the installation and maintenance job for their electricity connection through licensed electrical contractors. Certifying safety of their electrical installations is the responsibility of the respective consumer. However, CESC puts in its earnest endeavour to ensure safe use of electricity. The Company found most of the electrical accidents to originate from the consumer owned installation or by unauthorised abstraction of electricity. Hence, electrical safety related concerns with these connections could only be mitigated through awareness sessions.

To improve level of awareness amongst the public with respect to general electrical safety, safety related issues with electrical installations at public places and safe use of electricity, CESC organizes various electrical safety awareness programmes throughout the year. These include the following:

- Tableau movements with consumer engagements through dramas, musical performances, skits, spot quiz on safe use of electricity with token prizes

- Distribution of leaflets and broadcasting pre-recorded safety awareness messages at various lanes and bye lanes in identified Police Station areas
- Setting up kiosk to distribute leaflets and broadcast pre-recorded safety messages at important road intersections
- Branding of CESC's call centre vehicles with safety awareness messages for the consumers
- Safety awareness programmes, workshops and seminars at different schools, universities, colleges, housing complexes, madrasas, clubs, hospitals and alike to bring awareness on safe use of electricity
- Electrical safety workshop for electricians, especially prior to festive seasons
- Safety message such as Do's & Don'ts through social media to make public aware about the hazards of electricity use
- Promotion of use of ELCB/ RCCB/ RCBO in household application

- Electrical safety awareness related announcement prior to monsoon and festive seasons on newsprint, electronic and social media
- Safety awareness messages and safety tips propagation through electricity bills, mailers, leaflets and flyers, routine SMS and mails to consumers
- Safety posters and standees at CESC regional offices and cash offices
- Safety awareness messages through hoardings on pole mounted transformer structures
- Billboards and hoardings at identified locations across the city

CESC organises safety awareness every year during the monsoon season highlighting the various safety precautions that the consumers need to follow to avoid electrical accidents at home as well as when they are on the public roads.



Electronic Signages to Create Awareness on Household Electricity Safety



Electrical Safety Awareness at Hospitals



Electronic Signages to Create Awareness on Household Electrical Safety



Safety Tips on Display Boards



Electrical Safety Awareness at Schools



Creating Public Awareness

During this reporting period, CESC collaborated with 66 local police station authorities at 10 districts in Kolkata to improve general awareness of the public on electrical safety.

The respective business heads of CESC coordinated with the authorities of the identified police stations for flagging off the safety canter and ensuring smooth and effective execution of the programme.

The campaign deployed 5 tableaus branded with safety creatives for 27 days from 12th August 2020, that moved around the lanes and bye-lanes of these districts, broadcasting pre-recorded safety messages in Bengali and Hindi languages and distributing colourful trilingual leaflets with safety



Canter Movement to Create General Awareness on Electrical Safety

messages among local public. Started as a parallel initiative, one of the safety tableaus was deployed as a stationary kiosk at important road crossings from 8th September onwards for 10

working days to improve general awareness of public at large on electrical safety related aspects. Both the awareness campaigns concluded on 24th September'20.



24x7 Call Centre Vehicle with Messages on Electrical Safety

As a next step as on 15th March 2021, CESC commenced deployment of this approach to create awareness throughout the year by branding their 24x7 call centre vehicles with

messages on electrical safety. The medium commercial vehicles, mostly of four/ five variants, operate 24x7 as call centre vehicles transporting employees and materials to

the spot across the twin cities of Kolkata and Howrah and their suburbs whenever they receive reports on disruption of supply of electricity. With the dual objective it was decided to brand these vehicles of all the 36 call centres through suitably designed, colourful vinyl safety awareness messages pasted on both side door panels and carrier portion of the vehicles. The new look vehicles will improve the visibility of call centre vehicles and communicate to the public the importance of electrical safety through carefully phrased messages.

The next section of this chapter discusses on the efforts undertaken by NPCL and CESC Rajasthan to ensure reliable, safe and cost-effective power to its consumers.

NPCL and CESC Rajasthan - Supplying Reliable Power

NPCL endeavours to ensure Zero Defects in service delivery. Through consistent innovation and improvement in business processes, implementation of best available technologies to provide error free services to consumers through an empowered, committed and creative workforce, NPCL endeavours to ensure Zero Defects in service. The alignment to reliable power supply is no different in case of CESC Rajasthan, as it understands the outcome of the synergy between access to electricity and better quality of life will be complete consumer satisfaction. The roadmap to achieving their vision through consumer service, operational efficiency, technology upgradation and loss control has been challenging so far, which both NPCL and CESC Rajasthan are proud to disclose below.



Dedicated centralized consumer care services aided by an Interactive Voice Response System (IVRS) system are available 24x7 at distribution licensed areas of Rajasthan and Greater Noida. Consumers can approach the relevant teams to resolve billing and supply related issues by contacting on the publicly available toll-free number or physically meeting them at customer centre offices, self-help kiosks at regional offices and consumer grievance redressal camps. Consumer services has also transformed into a digital service, with consumers having access to smart phones being able to swiftly report issues vide website, email, mobile apps like RajVidyut' in Rajasthan and WhatsApp.

As responsive power companies advance information on outages is provided to all consumers through newsprint, SMS, radio broadcast amongst other channels. A dedicated Consumer Experience portal captures consumer feedback from all the sources and compute real-time CSAT score of NPCL.

Various consumer engagement initiatives are organized to understand the consumers' needs and experiences across urban, rural and industrial segments to create awareness on electrical safety, bill reading, bill payment modes, power theft and energy conservation. Such awareness is promoted through activations including but not limited to YouTube videos and street plays. In FY 2020-21, NPCL organized 'Sampark Samadhanaverm Uttam Seva', an annual consumer week to build trust amongst its consumers where a bilingual consumer handbook was launched that delineated about electricity usage, bill reading and payment related details and safety guidelines. Similar other initiatives include Sarv Samadhan Divas and Suggestion Mela that provide consumers with a quick redressal to complex and critical cases.



Both NPCL and CESC Rajasthan strive towards penetration of smart meter reading services to enable accurate billing as well as identification of possible revenue leakages by virtue of the inhouse analytics package. Some of these meters have been GPRS enabled and group metered for a set of consumers. NPCL continues to install nodal point metering on HT network and Pin-Type compact resin cast LTCT meters for the LT network to improve operational efficiency, while improving upon new sources of transformer installation and splitting the LT network to cater to increased load demand and reduced network losses.



CESC continuously strives to create a supply chain that is reliable, resilient and above all responsible. According to CESC, a responsible supply chain means identifying and assessing environmental, social and regulatory risks, pre-emptively mitigating or adapting the assessed risks, thereby future

proofing any disruptions arising from legal non-compliance, climate change and human right violations.

CESC's journey to transform its supply chain into resilient, robust and responsible one has resulted in rolling out various good practices throughout its value

chain. These practices range from new product development through close collaboration with suppliers and various internal functions to digitally transforming its supply chain operations. The case study below showcases one such initiative.



The SAP-SRM (Supplier Relationship Management) system implemented at NPCL in 2014 digitally synchronizes all processes, minimizes time, streamlines operations, enforces compliance and improves overall spend management.

Advantages

- Better supply strategies through focused sourcing initiatives, supplier selection and contract management
- Expedited purchasing processes through process automation and compliance management for goods and services
- Higher supplier participation through supplier self-service, connectivity, collaboration and supply chain visibility



Strategic Purchasing & Sourcing

- Supply strategy development
- Spend analysis
- Supplier selection (RFx, Auction)
- Contract management



Operational Procurement

- Self-service procurement
- Services procurement
- Plan driven procurement



Supplier Collaboration

- Supplier registration
- Design collaboration
- Order collaboration
- Collaborative replenishment

Several other similar collaborative efforts illustrated throughout this ESG report aided in reducing material and fuel footprint throughout the value chain and played a pivotal role for CESC, in receiving numerous awards and accolades.



Supplier Excellence Award, 2019

Certificates and Awards



Certificates

CESC Distribution units and Generation stations are certified ISO 9001:2015 Company for all procurement, storage, distribution and supply chain management of materials from central stores and sub-

stores to different areas to meet requirement of the distribution unit and generation station. It also serves the purpose of procurement of services for civil jobs and finalization of contracts for scrap disposal as per user requirement.



CESC Receiving SCALE Award 2020

Awards

2018

- ◆ Winner of CII Supply Chain and Logistics Excellence (SCALE) Awards under following category:
 - Exemplary Position under Energy Power Utility and Distribution

2019

- ◆ Winner of Manufacturing Supply Chain Awards 2019, under two categories:
 - Operational Excellence in Procurement
 - Strategy Excellence in Inventory Planning & Control

- ◆ Winner of CII Supply Chain and Logistics Excellence (SCALE) Awards under two categories:
 - Excellent Position under Energy Power Utility and Distribution
 - The Best Filled-Up Application Form Amongst All Participants

- ◆ Supply Chain Excellence Award from Indian Institute of Materials Management for Best Initiative in Digital Transformation

2020

- ◆ Winner of Manufacturing Supply Chain Awards 2020, under two categories:
 - Operational Excellence in Sourcing
 - Strategy Excellence in Vendor Managed Inventory Programs
- ◆ CII Supply Chain and Logistics Excellence (SCALE) Awards
 - Excellent Position under Energy Power Utility and Distribution
 - Special Award for Supply Chain Collaboration

CESC's partners are expected to commit to the "Supplier Policy". The policy enshrines the principles of "We Source Responsibly"; the principle ensures that all suppliers, employees, contract workers fully comply with applicable

laws and adheres to the environmental, social and corporate governance standards (ESG standards).

CESC's material division assures that a robust supplier selection methodology, auditing, monitoring and capacity

building mechanism is adopted in the supply chain. The Know Your Vendor form acts as a facilitator to conduct several vendor or supplier assessment exercise.

Supplier or Vendor Assessment

The KYV (Know Your Vendor) process paves the way for selection criterion which applies to

1. selection of vendors for new business
2. selection of vendors for OEM/ Import Substitution, Value Engineering, New Product Development

3. Reward & Recognition
The KYV form cornerstones on 6 key assessment pillars and based on the site audits the vendors are scored. The 6 key pillars are

1. Business basics
2. Infrastructural Soundness
3. Quality Assurance

4. Delivery, Logistics & Supply Chain Management
5. Technology & Innovation
6. Safety and Environment Management

In case, any supplier/vendor existing or new, scores below expectation, the Company discusses with the relevant party and assists them in



Vendor Capacity Building



Annual Vendor Meet

capacity building their systems and processes. CESC believes that vendors and suppliers are the key for the success and growth. Vendor's requirements are frequently discussed and resolved immediately. CESC

also has a supplier grievance mechanism which is robust and effective for early redressal of grievances. Other than grievance redressal mechanism, the Company frequently conducts vendor satisfaction surveys

and annually conducts vendor meets to discuss any gaps and collaboratively engage with the vendors on improvement roadmaps.

Inclusive Growth and shared value

CESC believes in inclusive growth of all its stakeholder by generating shared value. The

Company prioritizes in reducing supply chain risks, by developing local skillsets and short supply chains, in the process aiding small and micro manufacturers to develop, grow and contribute to the local economy, as well

as CESC's growth. CESC has a total of 396 active vendors. The categorization of the vendors for CESC and other subsidiaries is provided in the table below.

	Strategic business partners	SME associates	Micro units
CESC Kolkata	53	136	207
NPCL	58	91	65
CESC Rajasthan	73	38	15
MPSL	3	29	2
HEL	35	68	26
DIL	55	55	3
SVL	6	5	14
CPL	17	46	54

In FY 2020-21 about 15% of the total procurement for CESC has been from MSMEs. There are several efforts to help and grow local MSMEs such as providing business assurance at higher rate, thereby enabling their

business continuity and growth. CESC as an organization believes in diversity and equality not only within the boundaries of the Company but also in its supply chain. CESC has established long term partnership with several

organizations that employ senior citizens and women entrepreneurs. Illustrated below are few efforts to make the supply chain more responsible, inclusive and equitable.

Enabling Growth of Local Women Entrepreneurs

CESC's relationship with M/S Carpe Diem is from 1975. It started with supplying one item.

Over the years, Ms. Ipsita Batabyal, the present proprietor, successfully and sustainably established her business and has become one of the major vendors. M/S Carpe Diem supplies several electrical distribution materials such as but not limited to ferrous items, non-ferrous items, FRP meter boards, service kits and RCC protection covers.

The organization has been with CESC through several murky waters and her contribution on meeting the supply demand in tumultuous times such as during 'Amphan' highlights the resilience in CESC's supply chain.

In 2017 annual vendor meet, CESC was proud to award Ms. Ipsita Batabyal, recognizing

the organization's sustainable contribution as a woman entrepreneur.



Vendor Recognition and Rewards

Capacity Building of Local Vendors: Manufacturing of Weather Resilient and Safe Electrical Equipment Casing

As an ongoing effort to enhance safety of the consumers, insulated FRP jacket and FRP Pole clamp was developed by QA Cell in consultation with Mains Department and Safety Cell and in collaboration with local vendor M/S Bhagya Lakshmi Electricals. M/S Bhagya Lakshmi Electricals is a major supplier of all M.S/G.I./C.I. Items related to hardware and spares of electricity distribution network since 2012. It has expanded from one factory to three factories within a span of 6 years.

At first Bhagya Lakshmi Electricals was a sub vendor, CESC Kolkata in collaboration with the vendor developed several critical items such as FRP Meter Board and RCC Cable Protection Cover to

enhance safety for the public from electrocution. Currently, it is one of the most dependable and reliable suppliers and supplies about 30-35 repair and maintenance items. During Amphan, Bhagya Lakshmi

Electricals was one of the key pillars for CESC Kolkata's effective and accurate response time to mitigate the adverse effect of the natural disaster.



FRP Insulated Jacket

OEM (Original Equipment Manufacturer) -Substitution: Supplier Capacity building

An initiative was taken jointly by CESC Purchase and BBGS along with vendor, M/s Amalgamated Industrial Composites Pvt. Ltd (AICPL) for replacement of existing cooling tower fan blade by a light-weight energy

efficient fan blade to reduce power consumption. After considerable amount of research, test and design deliberations, the design and profile of the fan blade got modified by AICPL and same has been installed in phased manner.

Installing the newly designed fan blade resulted in energy savings of approximately 3.70 Lacs units per fan per year in Unit-3. A total of 52 Fans are in the process of being replaced.



Transformation towards Green Energy by Replacing Transformer Oil with Ester Oil

CESC rolled out an initiative where 68,485 Litres of ester oil were used instead of mineral oil in existing transformers. CESC's purchase team and substations collaborated with M&I Materials India Pvt. Ltd. and Cargill India Private Limited to roll out a less flammable and biodegradable ester oil.

The operational benefit of the project was immense and the same are listed below.

- Ester oil has a higher heat withstanding capability and is less flammable as compared to mineral oil
- Reduction in transformer size, so as to be capable of higher loading, as the paper impregnated in ester oil is classified as higher thermal class
- Ester oil when compared to mineral oil can handle higher water and generates lesser sludge. This reduces maintenance and increases asset life. Moreover, the solid insulation can last longer than mineral oil, in the process increasing the asset life
- Reducing the maintenance and increase in assets

The Material procurement data for FY 2020-21 are provided in the table below

Material Procurement	Generation Stations				
	BBGS	SGS	HEL	DIL	CPL
Coal (MT)	31,20,388.79	59,215.15	27,31,504.00	25,11,272.00	3,88,224.00
HSD (KL)	195.66	24.19	0.00	2.81	1.14

Material Procurement	Distribution Units	
	CESC Kolkata	MPSL
Cables (meters)	10,63,126	51,712
Power Transformer (Nos)	5	1
Pole (Nos)	4,640	373

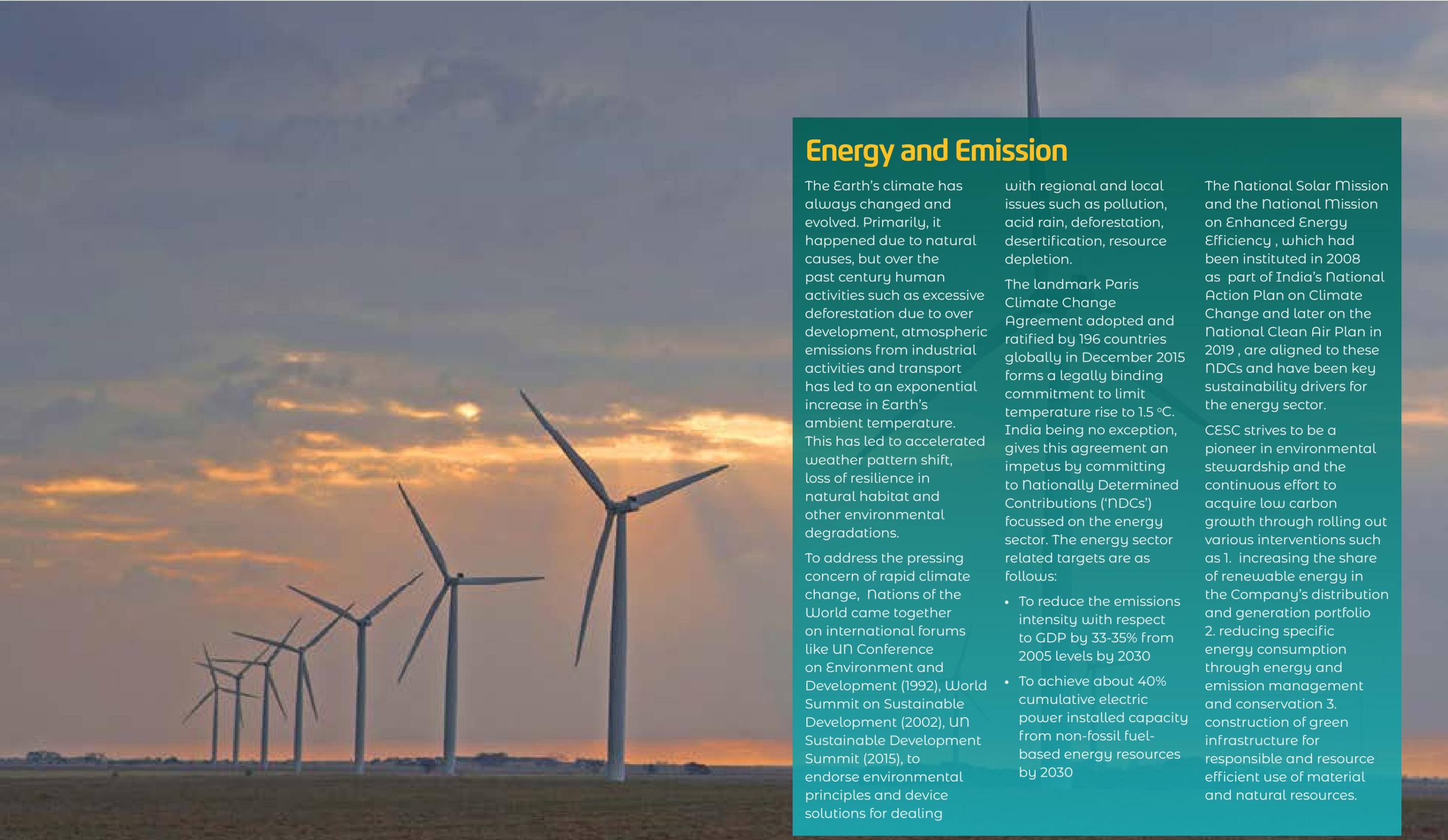
The next chapter illustrates the Company's environmental footprint and showcases CESC's numerous efforts to reduce energy, water and waste.



Material Handling

Environment





Energy and Emission

The Earth's climate has always changed and evolved. Primarily, it happened due to natural causes, but over the past century human activities such as excessive deforestation due to over development, atmospheric emissions from industrial activities and transport has led to an exponential increase in Earth's ambient temperature. This has led to accelerated weather pattern shift, loss of resilience in natural habitat and other environmental degradations.

To address the pressing concern of rapid climate change, Nations of the World came together on international forums like UN Conference on Environment and Development (1992), World Summit on Sustainable Development (2002), UN Sustainable Development Summit (2015), to endorse environmental principles and device solutions for dealing

with regional and local issues such as pollution, acid rain, deforestation, desertification, resource depletion.

The landmark Paris Climate Change Agreement adopted and ratified by 196 countries globally in December 2015 forms a legally binding commitment to limit temperature rise to 1.5 °C. India being no exception, gives this agreement an impetus by committing to Nationally Determined Contributions ('NDCs') focussed on the energy sector. The energy sector related targets are as follows:

- To reduce the emissions intensity with respect to GDP by 33-35% from 2005 levels by 2030
- To achieve about 40% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030

The National Solar Mission and the National Mission on Enhanced Energy Efficiency, which had been instituted in 2008 as part of India's National Action Plan on Climate Change and later on the National Clean Air Plan in 2019, are aligned to these NDCs and have been key sustainability drivers for the energy sector.

CESC strives to be a pioneer in environmental stewardship and the continuous effort to acquire low carbon growth through rolling out various interventions such as 1. increasing the share of renewable energy in the Company's distribution and generation portfolio 2. reducing specific energy consumption through energy and emission management and conservation 3. construction of green infrastructure for responsible and resource efficient use of material and natural resources.

CESC's Renewable Story:

India being a signatory to the Paris convention aims to produce 100 GW from solar, 60 GW from wind, 10 GW from biomass and 5 GW from small hydropower by 2022. It is estimated that the share of coal in the energy mix is projected to fall to 50% by 2040, while the share of renewables shall rise significantly. India is gifted with abundant renewable potential and it is projected that India will achieve almost 100% renewable electricity system by 2050.

CESC is cognizant that the change in energy mix is dependent upon innovative technologies, growing energy demand, strong wind and solar resources, policy support, and

huge investments. The Company views this transformation as an immense opportunity for growth. Robust policies, procedures, stakeholder consultation mechanism and numerous hallmark initiatives incorporated throughout the value chain has placed the Company in a commanding position to capture this seamless opportunity.

The completeness of CESC's approach addresses any challenge arising from but not limited to investment attractiveness, price competitiveness, policy consistency, encouraging consumer participation and creating consumer awareness to uptake renewable energy.



Few of CESC's proud hallmark initiatives facilitating attractiveness of renewable energy among its distribution stakeholders are showcased below.



Battery Energy Storage System

CESC at present have embedded generation capacity between 30 to 40% of its peak power requirement and the balance is imported from power exchanges, grid networks and other sources. CESC believes that increase in renewable integration will lead to increased deviations between the mandatory day ahead schedule and the actual withdrawal. This will lead to increased cost. BESS will help in balancing load and sources, and avoid high deviation charges.

BESS also has several applications along with encouraging increase in renewable energy such as:

- Enhance frequency regulation
- Deferral of capital expenditure for T&D expansion
- Consumer peak charge avoidance by supplying off-grid energy during on-grid peak consumption hours
- Surplus power can be stored in batteries for consumption later when renewable power generation is low and electricity demand increases

Batteries are a proven commercially viable energy storage technology in many countries. In recent years there has been an increase of use of lithium-ion batteries in consumer electronics and electric vehicles, which has led to an increase in manufacturing expansion of modular systems to store energy called Battery Energy Storage System ('BESS'). It is expected that the cost of these modular devices will reduce in the future.

Roadmap

CESC at present has installed one BESS of 315 KWh capacity as a pilot project. The Company has a plan to increase their energy storage capacity to MWh. The plan entails exploring several business models for incorporation of the technology, collaboration with experts in assessing size & feasibility, identification of technology partners and conducting in-house studies to understand the efficacy of the technology on voltage regulation, load levelling and deviation addressal.



Battery Energy Storage System

Awareness Campaign on Alternative Fuel Sources

CESC through various communication channels such as but not limited to website and social media channels promote use of Electric Vehicle, electric cooking and star-rated appliances.



Electric Vehicle Charging Points

Indian automotive industry is the fifth largest in the world and it is projected to be third largest by 2030. Though Indian Electric vehicle market is in a nascent stage but based on a report published by India Energy Storage Alliance (IESA), the Indian EV market in FY 2019-20 stood at 3.8 lakh units, and the EV battery market stood

at 5.4GWh. The EV market is expected to grow at CAGR of 44 per cent between 2020-2027 and is expected to hit 6.34 million-unit annual sales by 2027. Similarly, the annual battery demand is forecasted to grow at 32 per cent to hit 50GWh by 2027, of which, 40+ GWh will be on lithium-ion batteries. Despite the Government's thrust for EV

uptake through Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles ('FAME') policy intervention, there are certain key challenges that might hinder the projected ambitious target. One of the major challenges is insufficient charging infrastructure.

Roadmap

CESC views this challenge as one of the opportunities that will ensure shared growth of the economy as well as that of the organization. CESC has provided supplies to West Bengal Transport Corporation for establishment of electric bus charging stations at about

10 locations across the city. At present there are 80 e-Buses plying on the road. CESC has started taking small but strong steps in creating an infrastructure that will create an uptake of electric vehicle. Currently CESC has piloted three charging points in Kolkata. The

organizations' research team is testing several types of electric chargers. CESC is currently deliberating with Government, Confederation of Real Estate Developers' Associations of India (CREDAI) and KMC (Building Plan) for increasing Electric Vehicle Charging footprint.



Electric Charging Station

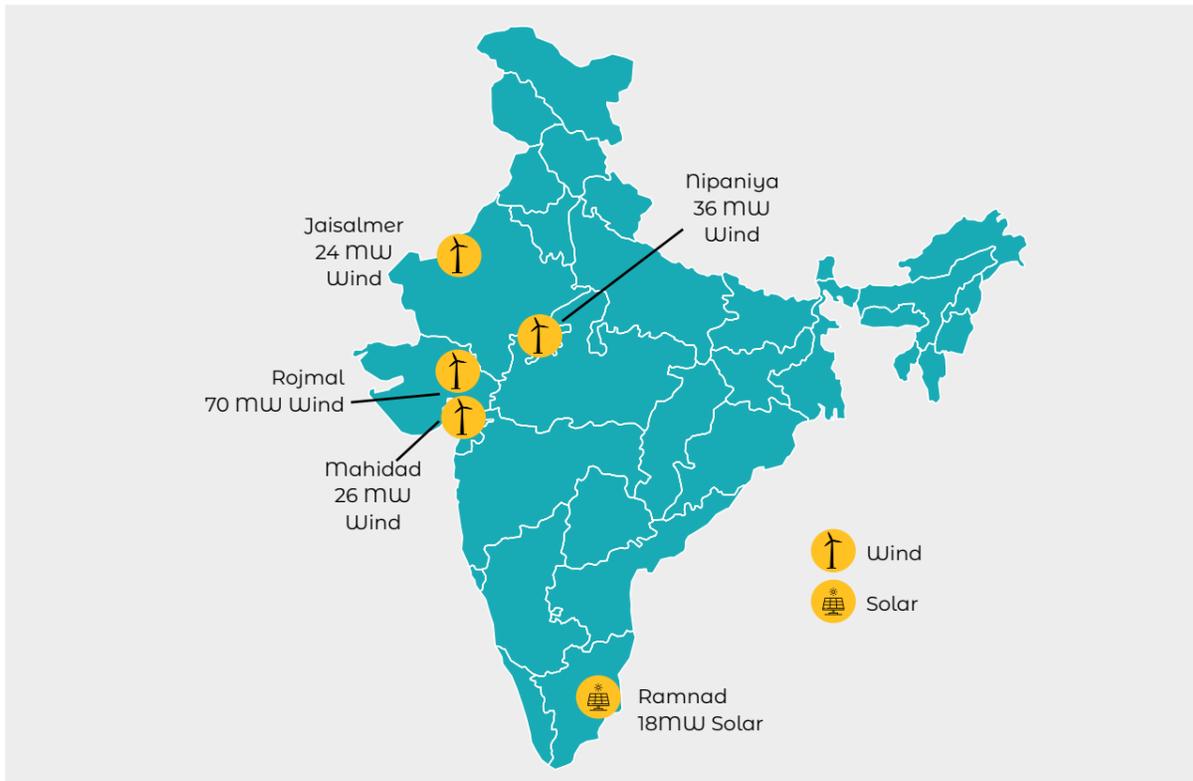
Renewable Energy Compliance

CESC boasts of having a renewable energy portfolio of approximately 7.57% of the total operating capacity. However, having distribution licenses in geographies away from its solar and wind plants, has made it necessary to purchase

additional renewable energy through power purchase agreements in order to meet the RPOs of respective State Electricity Regulatory Commission of Kolkata and Greater Noida.

In FY 2020-21, NPCL has signed power purchase agreements with renewable energy generators for 1,43,000 MWh of energy and traded for renewable energy certificates on the Indian Energy Exchange to meet the desired obligations.

Growth of Renewable Energy Portfolio



The launch of the National Solar Mission by the Government of India and the state governments catapulted CESC to foray into the space of renewable energy in 2010. Currently CESC has 156 MW wind power generation capacity under its 100% owned subsidiary SVL and 18 MW of solar power generation station under its 100% owned subsidiary CPL. The Picture illustrates the growth in the renewable energy portfolio.

All renewable energy subsidiaries follow CESC's policies, procedures and framework. The sites were selected as per pre-selection

feasibility audits which is designed based on several factors such as but not limited to topography of land, weather conditions, availability of water source, sub-station of the utilities, transport/logistics from nearest port/manufacturing facility and local manpower availability.

The renewable energy facilities are equipped with best in industry digital and analytical tools to perform best practices such as but not limited to preventive, predictive and corrective maintenance practices, real time scheduling and forecasting, thermal inspection of solar modules,

fuse boxes, insulators, HT cables terminations, transmission lines, AB switches and drone inspection of turbines. The Company believes in attracting talents with niche skill sets for operating the renewable energy sites. The robust framework coupled with digital and statistical interventions has enhanced the operational efficiency of the renewable sites. CESC proudly discloses one of the best portfolios in terms of tariff (average tariff INR 5.12/kwh) and returns. Listed below are the awards received for the landmark renewable energy projects.



18 MW Solar Plant at Ramnad, Tamil Nadu

Awards

Received the Gold Award for Solar Power Project of the Year at the Asian Power Awards for consecutive 3 years from 2012-2014 for Gujarat Solar Plant

Received the Performance Excellence Awards at the CII Performance Excellence Awards for Solar and Wind Plants in 2019 for Neeravi (T.N) Solar Power Plant and Mahidad (Gujarat) Windfarm

Received the Performance Excellence Awards at the CII Performance Excellence Awards for Solar and Wind Plants in 2020 for Rojmal (Gujarat) Windfarm



CII Green Power 2019 Award

Renewable Energy Augmentation in Auxiliary Consumption

CESC's integrated generation station has also implemented several pilot renewable projects for auxiliary consumption to future-proof the existing

operations from any future disruptions in the space of changing energy mix due to increasing regulatory compliance or further alignment

with the country's ambitious targets. The list below showcases the existing captive renewable energy projects.

Southern Generating Station (SGS)

- 3X15 KW Micro Hydel project utilizing condenser cooling water discharge to Ganges
- Solar Power Module of capacity 3.2 kWp installed on the roof of turbine house building

Haldia Energy Limited (HEL)

- HEL has a 30 KWp roof top solar plant installed on the administrative building roof
- HEL has a battery-operated vehicle for internal transportation of materials which can be recharged from this solar power source.
- Solar Garden Lights of 500 W capacity have been commissioned near administrative building



Reducing Energy and Emission intensity:

CESC is an integrated power distribution company, CESC Group has 5 operating thermal generation stations with a total capacity of 2,125 MW that are augmented to suffice the power needs during the peak hours. In line with CESC's core values to decrease carbon footprint and achieve sustainable development, the Company has installed best in industry energy efficient technologies to control the emission and air quality. The generation stations adhere to emission and other environmental norms as well as carry out continuous monitoring of the ambient air quality and stack emission. Real time data is transmitted online to statutory

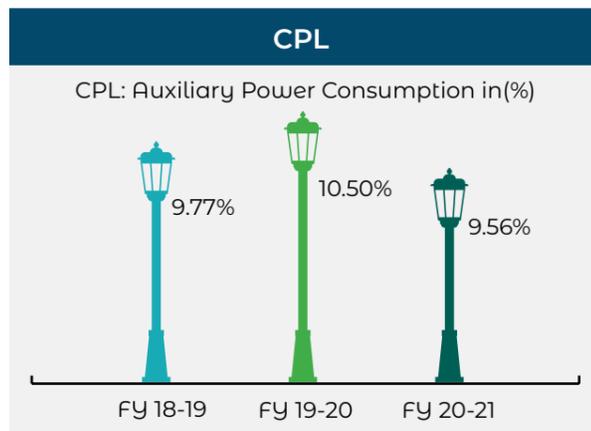
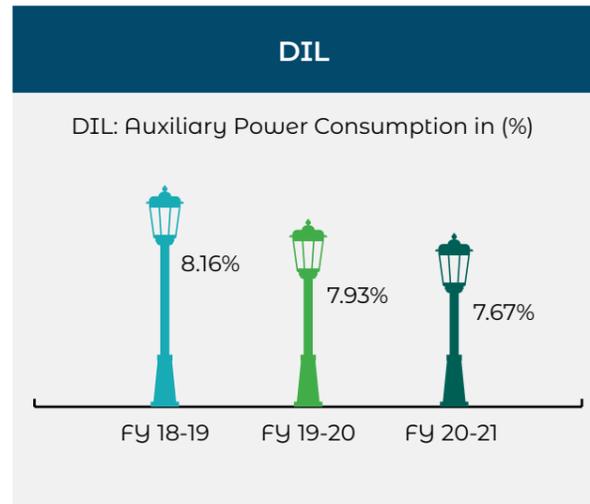
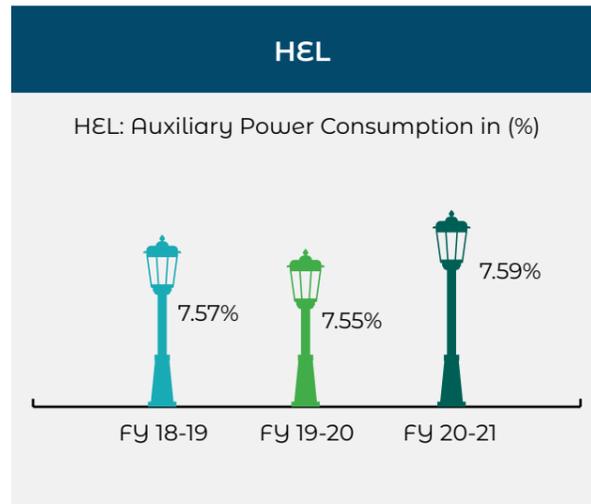
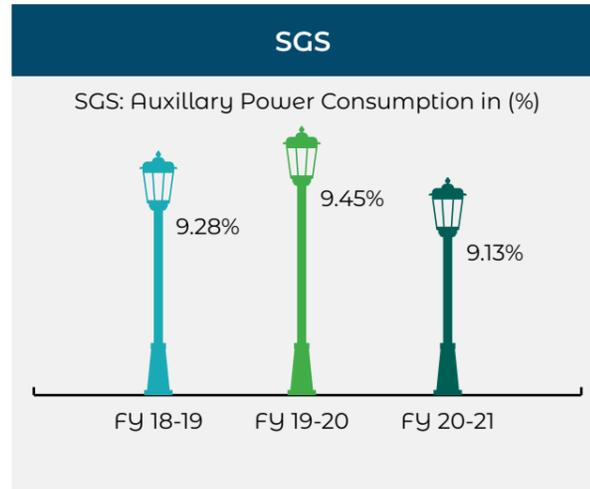
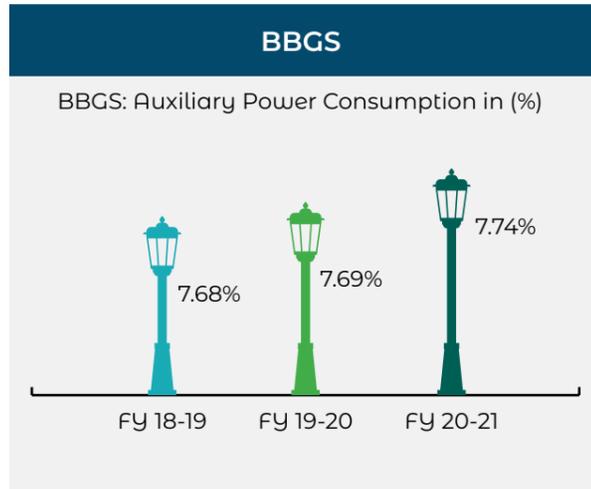
authorities. CESC's site specific P&EHS (Planning, Environment, Health and Safety) department make sure that each site implements the Environment Management Plan. The plans ensure that all activities are in line with site-specific Integrated Management System Policy, Sustainability policy and HSE Policy. The Environment Management Plan also lays down procedures to keep a strict vigil on the performance of the monitoring systems, Electrostatic Precipitators (ESPs), stack emission control mechanisms and greenery of the generation stations. In case of identified risks, the respective P&EHS (Planning, Environment, Health

and Safety) departments make necessary recommendations and implements them.

Auxiliary Power Consumption (APC) is one of the major performance parameters of a generation station. CESC and its subsidiaries, through various initiatives to improve process parameters, implement new ideas, induct state of the art technologies, and through constant guidance and encouragement from top management, has been successful in reducing Auxiliary Power Consumption (APC) over the years. The charts below showcase the generation station specific trends in APC.



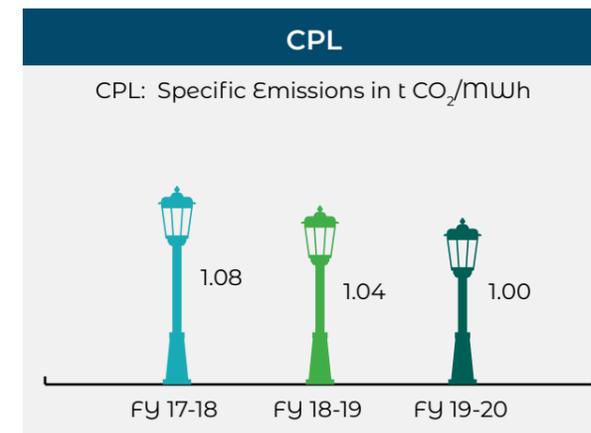
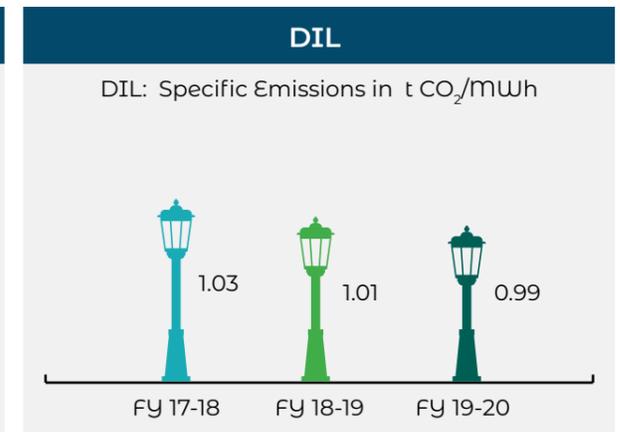
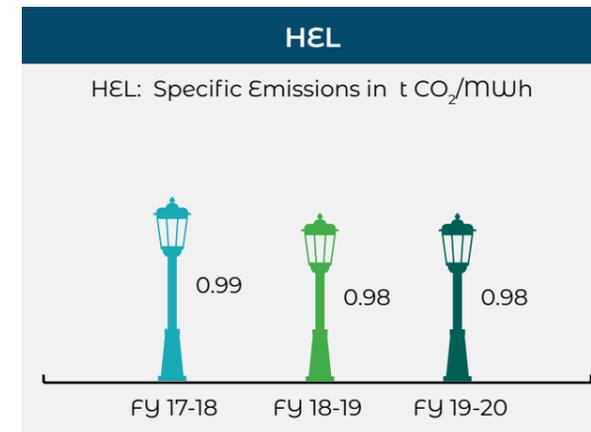
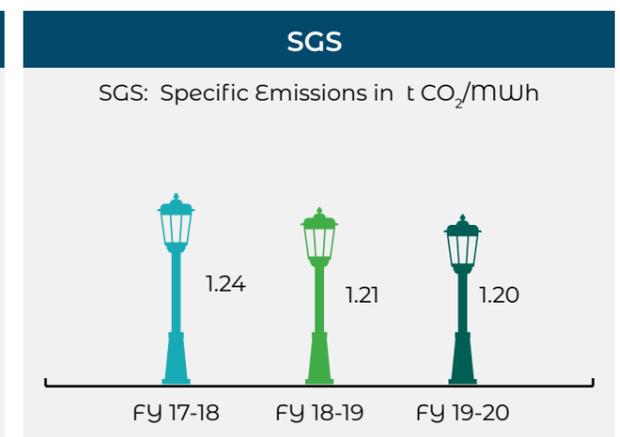
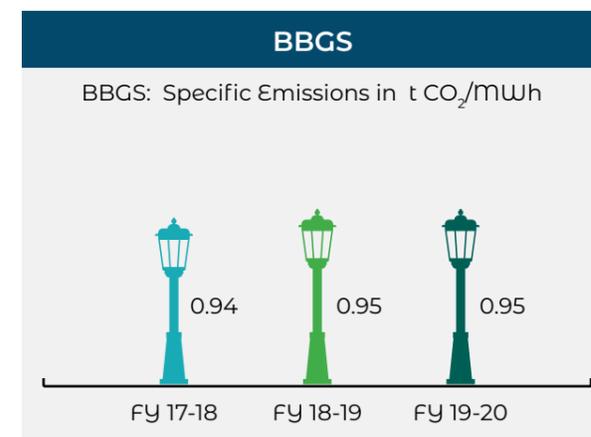
Trends Showcasing Auxiliary Power Consumption as a Percentage of Total Generation



Along with measures to reduce Auxiliary Power Consumption, CESC believes that tracking and monitoring the quality of fuel, proper storage and blending of coal plays a pivotal role in reducing carbon emission. The Company's numerous operational efficiency initiatives throughout its value chain has ensured that it has gradually but steadily reduced its carbon dioxide emission intensity. The charts below showcase the trend of Carbon Dioxide (CO₂) emission intensity based on Central Electricity Authority (CEA), Ministry of Power, Government of India database.



Specific Carbon Dioxide Emission Trends of CESC's Generation Stations as per CEA database



*Data for CO₂ emissions in CEA website is available up to FY 2019-20

Globally Recognized UN Approved Carbon Reduction Initiatives

The United Nations Framework Convention on Climate Change ('UNFCCC') came into force on 21st March 1994, with the objective of stabilizing the greenhouse gas emissions and limiting the global average temperature rise. In 1997, the Kyoto Protocol became a landmark international agreement in the global efforts of UNFCCC to combat climate change. This marked the first addition to the UNFCCC that embraced on the 'Polluter Pays Principle' which allow developing nations to voluntarily participate in national programs to reduce their emissions of greenhouse gases while emission reduction is binding upon developed nations. Its innovative and cooperative mechanism assist developing nations in achieving sustainable development by promoting environment friendly investments from developed nations that enable transfer of clean technologies. The Kyoto Protocol however came into effect only on 16th February 2005, and the targets added up to an average 5% emission reduction compared to 1990 levels over the five-year period 2008-2012 which was the first commitment period. One such market-based mechanism that facilitated

the technology transfer is the Clean Development Mechanism (CDM) which also enabled governments and private entities in industrialized countries to implement emission reduction projects in developing countries and receive certified emission reductions (CERs) (where 1 CER is equivalent to 1 tonne CO₂eq offset in the host country) to fulfil their national reduction targets. CESC has been conscious about climate change and at a very early stage have proactively contributed through energy efficiency measures and thereby reducing greenhouse gas emissions released in the air from fossil fuel consumption. The strategic focus of the Company has been on steady growth by developing and assimilating technologies of tomorrow to remain competitive in the challenging market for power generation and distribution, while striving for consumer satisfaction through better performance in contributing towards sustainable development. The project activity, which includes energy efficiency improvement measures, is one of such tools towards accomplishment of its mission of being recognized as an environmentally responsive organization.

CESC have been front runners in being able to register small scale CDM project activities at Budge Budge Generating Station and Titagarh Generating Station. With the growing concern for cleaner production the Company invested in upgradation of technologies and instrumentation to enhance their energy efficiency and reduce its carbon footprint. The projects discussed were the first of its kind in India and there existed no such precedence of such technologies in the Indian power plants; these projects are registered under the approved small-scale methodology of UNFCCC, designed to offset a total of 7,887 tCO₂eq annually during the crediting period.

The projects discussed were the first of its kind in India and there existed no such precedence of such technologies in the Indian power plants; these projects are registered under the approved small-scale methodology of UNFCCC, designed to offset a total of 7,887 tCO₂eq annually during the crediting period

Replacement of Existing High-Pressure Dosing by 'All Volatile Chemical Treatment' in Boiler at BBGS

In India for safe, reliable and corrosion free operation of high pressure boiler usually phosphate dosing was carried out to maintain pH of the boiler water within a limit of 9 to 10, however the process requires a continuous blowdown operation to remove the sediments and prevent scale formation resulting in net loss of thermal energy. In April, 2000, CESC pioneered the technology All Volatile

Chemical Treatment process in India at BBGS, through which the pH levels in the feed system were maintained through ammonia and hydrazine dosing which resulted in elimination of blowdown operation and thereby saving heat energy lost through coal combustion in the furnace. The project activity was registered on 16th September 2006. The annual heat loss due to blowdown avoided from this

intervention offsets 3,192 tCO₂eq per year on 10 year average basis.

The annual heat loss due to blowdown avoided from this intervention offsets 3,192 tCO₂eq per year on 10 year average basis.



Monitoring Environment Parameters

Modification in 'Auto Furnace Draft Control' Logic in Induced Draft (ID) Fan Vane Scoop Combination Control

The annual energy savings derived from this intervention offsets 649 tCO₂eq per year on 10 year average basis

The Auto Furnace Draft Control logic initially, allowed vane scoop opening at the Induced Draft fan input to modulate between an upper limit of 55% and a lower limit of 40%, through a demand signal.

In October 2001 through the implementation of Differential Vane Control (DVC) at BBGS, upper and lower limits were made dynamic and compatible with vane-scoop control position feedback. When the vane-scoop reaches a certain position, the vane upper set point becomes dynamic and it triggers an increase in the upper limit value. On receiving further demand signal, the vane scoop remains constant and vane modulates till it reaches changed upper limit. Similar dynamic control operation of vane-scoop is

practiced during lowering operation also.

As a result of increased vane opening the project activity avoids throttling loss, thereby reducing the specific energy consumption of the Induced Draft (ID) fan and auxiliary electricity consumption used in the process.

The annual energy savings derived from this intervention offsets 649 tCO₂eq per year on 10 year average basis.

Modification of the Furnace Draft Control System at Titagarh Generating Station

The project registered on 7th August 2008 involved installation of 'Variable Voltage Variable Frequency Drives (VVVFDs) in Furnace draft control', which through variable speed drives for the ID fan ensured smooth control of the motor operating speed, commensurate with the system flow requirement, thereby reduced the energy losses and increased the fan efficiency. This was done in three phases between May 2007 and January 2009.

The Titagarh Generating Station comprises of four pulverized coal fired units each of 60 MW capacity. These units operate two induced draft fans each, that

direct the flue gas generated from the combustion air (required for drying and carrying the powdered coal from the coal mills to the boiler) to the Electrostatic Precipitator. The control of furnace draft is done through throttling of inlet guide vanes at the suction of ID Fans, resulting in throttling losses in the system and wastage of energy due to high running fan speed.

In the modified system the furnace draft control will be carried out through a combination of fan speed control (through VVVFD) and inlet guide vane control. The project activity reduced auxiliary consumption

resulting in coal savings and its related emission reduction.

The energy savings through this project activity offsets 4,046 tCO₂eq annually.

The above projects underwent through a defined project cycle which involved preparation of the project documentation, taking approvals from the Government authority and committing to the national targets, getting the project validated by an independent auditor accredited by the CDM Executive Board referred as the Designated Operational Entity which is followed by registration process. Once registration is completed and on successful

monitoring, verification and certification, CERs were issued by the CDM EB which were traded and sold to entities operating in developed nations who are responsible for approving the project under their Designated National

Authority to meet their national commitments and investing in the clean technology transfer. The value earned by CESC from the sale of the credits in the market have been a motivation towards business growth and sustainability.

The energy savings through this project activity offsets 4,046 tCO₂eq annually.



Successful issuance and trading of 30,042 CERs to parties in Germany and United Kingdom of Great Britain and Northern Ireland between April 2002 and August 2010.

This second commitment period between 2013-2020 was established at Doha in 2012, sets a goal of reducing greenhouse gases by at least 18% compared to 1990 levels by the participating

countries. As a parallel the Paris Agreement which is a legally binding treaty for all developed and developing nations to limit global warming to 1.5°C compared to pre industrial

levels was evolved due to the weakening of the carbon markets globally making adoption of clean technology projects economically unfeasible for developing nations.

Other Air Emission

CESC is well aware of the consequences of the pollutants like SO_x, NO_x and Particulate Matter (PM) emitted during power generation activities on the environment. All CESC's generation stations not only comply with stack emission

norms set by the statutory authorities but operate at values which are significantly below them.

CESC has utilised several technologies that ensure that the stack emission as well as ambient air quality is well within

the prescribed limits set by the respective statutory authorities. The generation stations strive continuously to reduce the fugitive emission. Some of the technologies used are listed below.

- High efficiency ESPs have been installed to keep the Particulate Matter (PM) emission well below norms.
- Automated Ammonia dosing system is in place to control the PM emission during combustion of varying coal quality and other probable excursions.
- Technology for NO_x control like low NO_x burners and over fire air damper in the boilers are already in place at all generation stations. In addition, through continuous operational optimization and trials, further reduction of NO_x emission is being done.
- Feasibility study for installation of Flue Gas Desulfurization system (FGD) for SO₂ emission control has been completed and bids have been invited through International Competitive Bidding (ICB) for setting up of Wet Limestone Based Flue Gas Desulphurisation (WLFGD) System for generation stations.
- Installation of Dry Fog Dust Suppression system in all the dust prone areas of coal handling plants.
- Telescopic chutes installed in fly ash unloading spout for dust free dry ash unloading from ash silos.
- Green belt developed along the periphery of coal stock yard to act as a natural green shield to curb fugitive emission.
- All coal conveyors and all transfer points are covered along the entire length and equipped with dust extraction systems.
- Coal Handling Plant is provided with rain guns and water sprinklers to control fugitive emission.



Electrostatic Precipitator used for Reducing Air Emissions

Generation Station	Capacity (MW)	Air Emissions for FY 20-21 (tonne/year)		
		PM	SO ₂	NO _x
BBGS	750	573	16,600	10,448
SGS	135	18	304	152
HEL	600	273	18,967	5,344
DIL	600	352	17,938	3,758
CPL	40	35	640	1,792

CESC's core belief is to grow sustainably, it includes ensuring great returns by providing exceptional consumer services coupled with resource efficient and inclusive growth. The continuous effort to be resource efficient, environment friendly

and inclusive is not only restricted to energy and emission reduction but also to all the key environmental and social parameters such as but not limited to water conservation, waste management, community strengthening and employee

wellbeing. The Company's construction and development of several green infrastructures are one of the exemplary achievements that assures that the Company is growing in desired path aligned with the Core Values.

Message from the Executive Director, Investor Relations



Our pathbreaking transformative journey of converting 1.27 million square feet of operating area into green building certified spaces testifies our commitment towards our goal to become the most responsible player in the power industry. Green Buildings have now been ingrained in the DNA of the Company.

Green is good business. CESC has been practicing sustainability because our leadership believes in deploying resources in a manner that is environmentally responsible and socially inclusive. Our efforts aim to inspire our stakeholders including consumers, suppliers and employees to take similar initiatives in creating a difference at their homes, offices and manufacturing setups. Our integrated approach goes well beyond just reducing carbon emissions and we focus on reducing our entire resource footprint.

Our pathbreaking transformative journey of converting 1.27 million square feet of operating area into green building certified spaces testifies our commitment

towards our goal to become the most responsible player in the power industry. Green Buildings have now been ingrained in the DNA of the Company. Our green building initiatives include installation of energy and water efficient technologies and retrofitting old installations for optimum usage of natural resources. We are proud to disclose that six buildings which include office spaces and substations are certified green buildings with many firsts. Our pioneer project, CESC House, an 88 plus years heritage building, has been awarded LEED Platinum Certification by the United States Green Building Council, which is a first in India. All our decades of cumulative efforts have been

recognized with numerous accolades and awards from various international and national forums, the most recent one being 2021 USGBC Leadership Award for the South East Asia region for CESC HOUSE. A company like ours is moving at lightning speed to bring Green at

the heart of brand management, innovation & business processes. This is just the beginning. We wish to carry this further and leave marks of our green footsteps wherever we touch.

BL Chandak
Executive Director-
Investor Relations

2021 USGBC Leadership Award for the South East Asia region for CESC HOUSE



Green Building Leadership of CESC House

CESC's journey on green building commenced with transformation of the Company's 88 years old building, CESC House. The Company ensures that creation of all new buildings and retrofitting of old buildings follow the Green Building norms and guidelines through application of processes that are environmentally responsible and resource efficient throughout the building lifecycle; at the same time the processes and materials used should not have

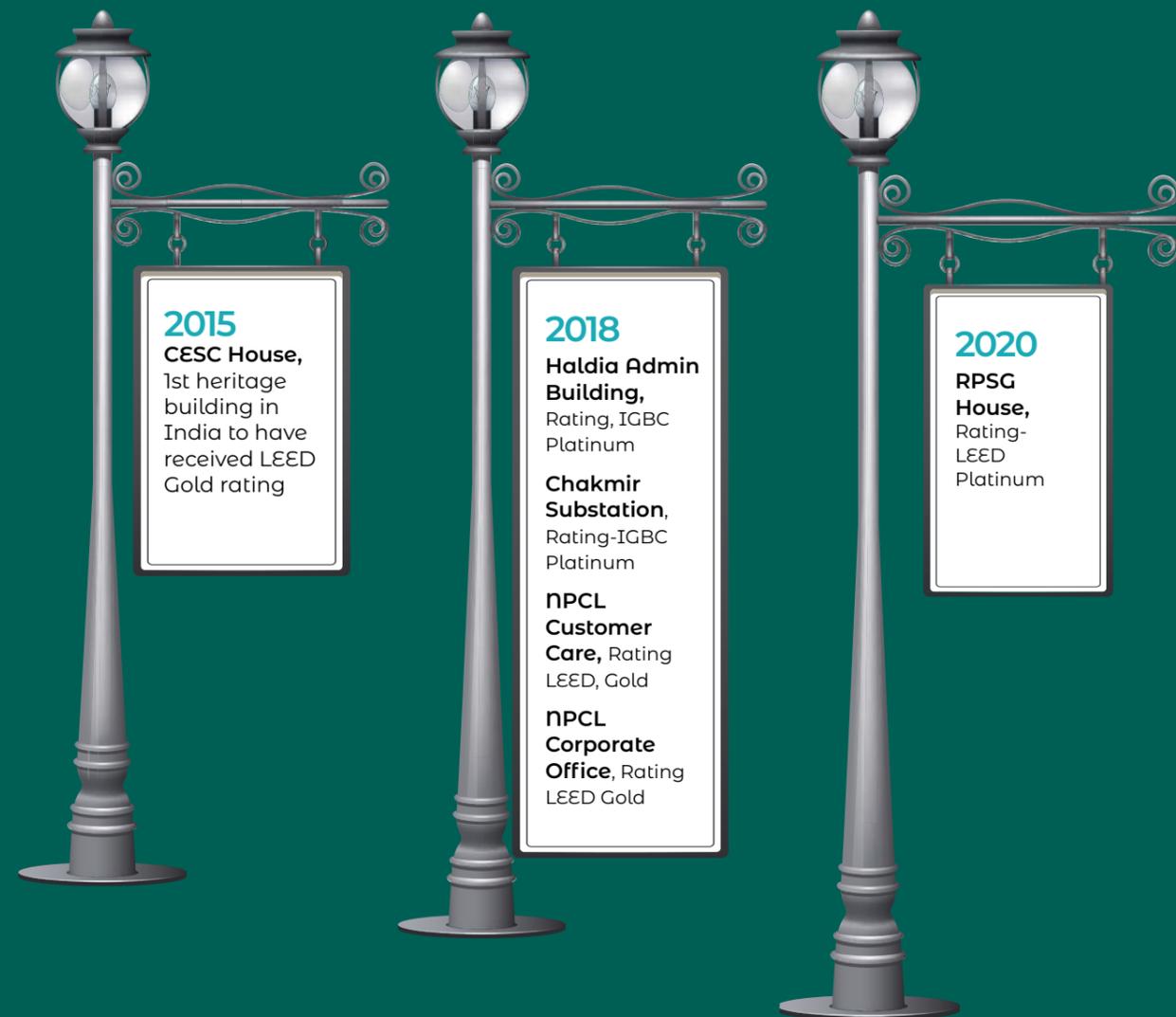
any negative impact on human health.

CESC has implemented the 'Sustainable Operations Management' with the purpose of improving asset valuation, maintaining the green legacy and continuously endeavour to do better. The management system ensures monitoring and benchmarking the performances, analysing gaps and developing strategies to mitigate the identified gaps. RP-Sanjiv Goenka Group was recognized

as the "Green Champion" by the Indian Green Building Council in 2017. Currently, more than 1.27 million sq. ft of operating space are green building certified.

RP-Sanjiv Goenka Group was recognized as the "Green Champion" by the Indian Green Building Council in 2017

The journey till now is illustrated below



CESC House: 1st Heritage Building in India to be Certified by USGBC

Background:

CESC house project was a breakthrough not only because the project was the first of its kind for CESC, but also the infrastructure was an 80-year-old heritage building with a built up area of over 83,000 sqft.

Some of the key challenges in the journey to convert this historic building into a Green Corporate Office were retrofitting a nationally recognized heritage building while protecting

its aesthetics and legacy, while arranging for building drawings and historical data were cumbersome. Considering the challenges eco-friendly orientation had to be done away through non-structural renovations.

To overcome the challenges, CESC formed a going green committee. The Committee initiated the task of converting CESC House into a green building by engaging Johnson Controls (India) in 2011. Later, Godrej

and Boyce were roped in as green consultant for the project. After implementing the Facility Improvement Measures (FIMs) in various phases in FY 2012-13, an application was filed with United States Green Building Council ('USGBC') for certification in 2014.

The initiative was recognized nationally in June 2014 as CESC received the first runner up position in the CII-NDTV-Mission Energy Challenge under commercial building category.



CESC House



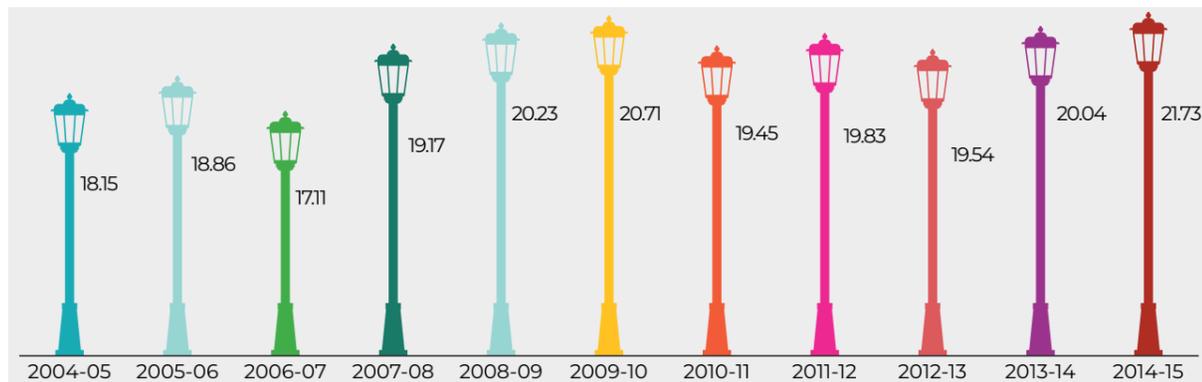
Key Interventions

- Rolling out of energy saving policy
- Awareness generation on environment protection
- Five hundred Compact Fluorescent Lamps ('CFLs') in common areas of entire CESC House was replaced with highly energy efficient Light Emitting Diode ('LED') lighting to reduce energy and carbon footprint
- To optimally use the Heating, Ventilation And Air Conditioning systems ('HVAC'), set points were set two degrees higher than current level and the operating time was rescheduled to start 30 mins late and stop 30 mins early from its usual time leading to 1 hour of electricity and energy saving
- Installation of 60 occupancy and lux sensors which switches off a cabin light within 20 minutes, of the occupant leaving his/her cabin leading to energy saving
- Solar Reflective paint in roof leading to reduced roof heating and thereby causing reduction of energy consumption and enhanced utilization of day light
- Solar energy use for water heating in pantry
- Use of glass windows to utilize natural day light
- Installation of exhaust fans in toilets and pantry replaced with energy efficient ones
- Installation of Water Management System for Cooling tower and use of low flow water faucets in all toilets causing reduction in usage of water and indirectly saving energy consumption
- Purchase and installation of Star Rated Split ACs which conserve energy

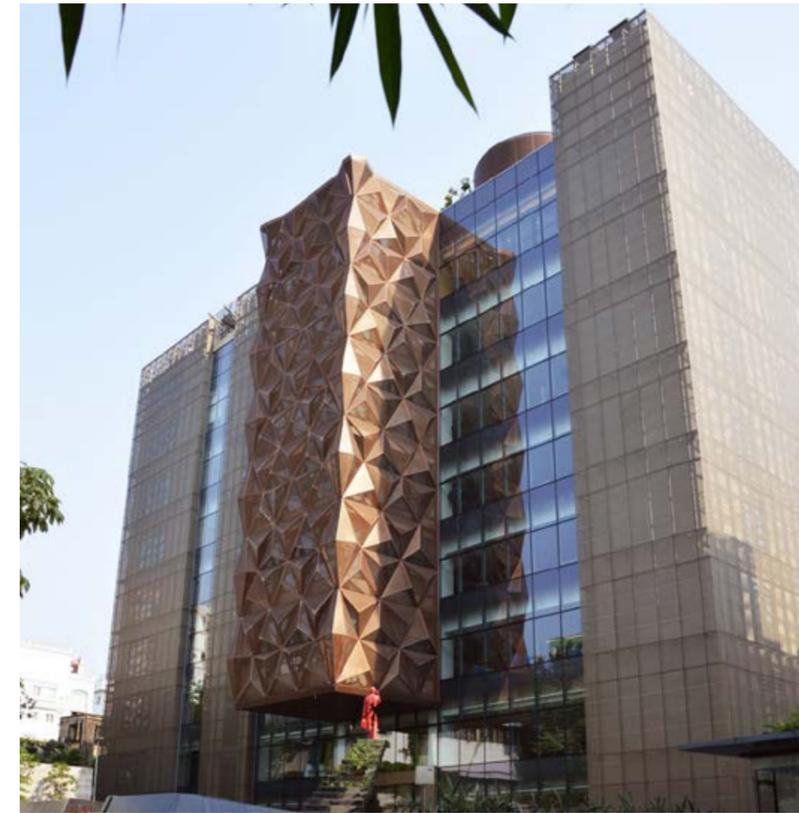


Benefits

The facility improvement measures under Green Building started from FY12. Since then the energy consumption of CESC has fallen at levels last seen in 2005



- In addition to this, the initiative is saving 2 Lacs+ litres of water annually and improved the air quality in CESC House



RPSG House



NPCL Customer Care Office



NPCL Corporate Office



Chakmir Sub-Station



Haldia Energy Limited-Admin Building

CESC is proud to disclose that its committed efforts to conserve natural resources, reduce greenhouse gas and enhance zero waste initiative have been recognized by the United States Green Building Council (a non-profit trade organization

founded in 1993 that promotes sustainability in how buildings are designed, built and operated) with the 2021 USGBC Leadership Award for the South East Asia region with special mention of the historic building, CESC house. CESC house has achieved

the highest certification in the form of LEED v4.1 O+M Platinum in a virtual event, USGBC live held during the year which focussed on insightful and engaging conversations about the future of buildings, cities and communities.



The next sections showcase the efforts to be resource efficient by adoption of goals, target, procedures to manage and reduce water consumption, effluent and waste generation.

Water and Effluent

Water Consumption and Conservation

A joint report published by World Resource Institute (WRI) and International Renewable Energy Agency predicts that water demand in 2050 is expected to reach 1,400 billion cubic metres which is unlikely to be met by the current surface water and groundwater capacity. Power sector is expected to account for 9% of the national water consumption by 2050, growing from 1.4% in 2025.

In response to the growing concern over water scarcity and

its economic impact on thermal power plants (as evident from a study undertaken by WRI that shows shutdowns related to water scarcity in 2016 resulted in loss of approximately 14 TWh of thermal electricity generation), the Ministry of Environment, Forest and Climate Change (MoEF&CC) published a set of rules dated 7th December 2015 mandating

- existing thermal power plants to install cooling towers and achieve specific water

consumption of 3.5 cubic metre per MWh by December 2017

- existing thermal power plants using cooling towers to reduce specific water consumption to a maximum of 3.5 cubic metre per MWh by December 2017

- new thermal power plants, installed post 1st January 2017 to meet specific water consumption of 2.5 cubic metre per MWh and achieve zero discharge



Water Stress Map

Increase in water demand beyond availability results in water stress. Water stress causes freshwater depletion and deterioration in quality resulting in negative impacts on human health and

ecosystem. CESC continuously monitors the water stress using the Water Filter tool of World Wildlife Fund (WWF) and manages water resources effectively as per the facility level Integrated Management

System policy and the corporate level Sustainability policy. With reference to the Water Filter tool (as showcased in the map) Chandrapur faces acute



water stress pertaining to the drought prone conditions in the region. Although, West Bengal doesn't face the risk of water shortage, the chlorine content in water for the region is very high resulting in increasing costs for water management.

Hence water being an essential resource in generating electricity is materially significant issue for CESC.

At CESC generation stations, raw water is primarily sourced from the local rivers. The raw water undergoes pre-treatment to remove suspended solids and feed clarified water to the demineralization plant where dissolved impurities are removed through filtration and chemical processes, resulting in water suitable for use in boilers for generating steam. Generation stations at Budge Budge and Haldia have installed Ultra Filtration Reverse Osmosis (UF-RO) plants to mitigate the challenges due to high chloride content water.

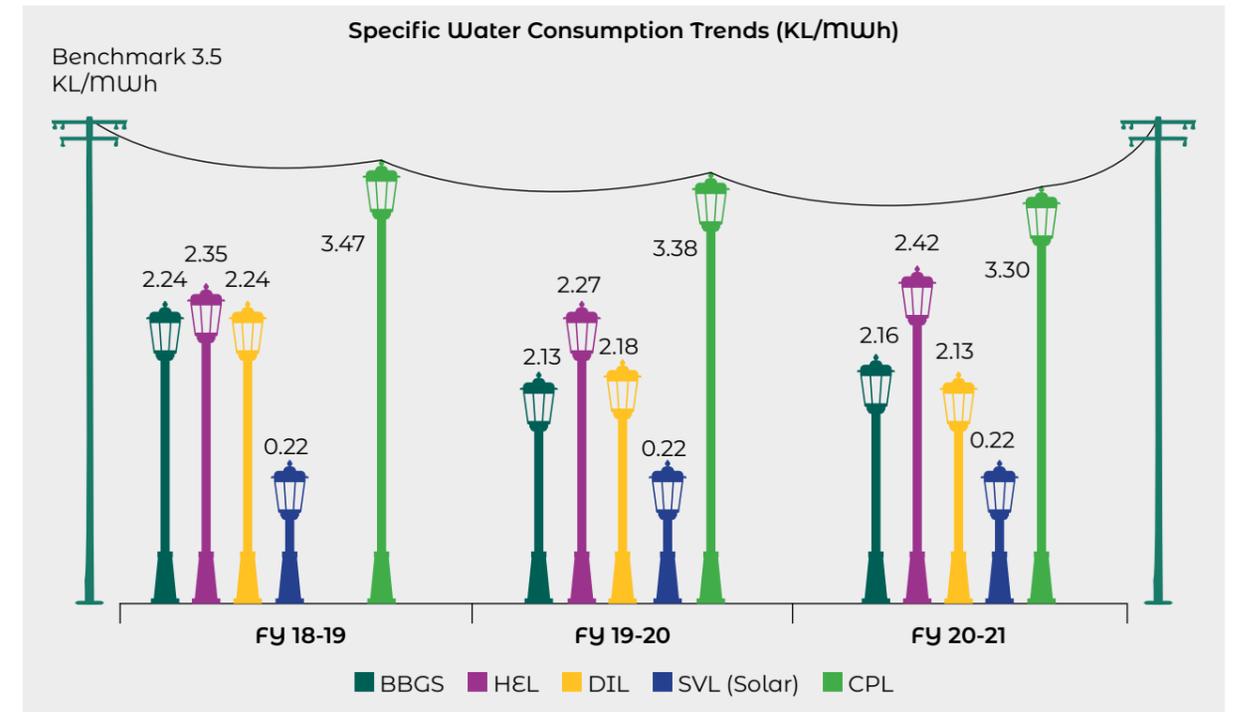
Water in thermal power plants is mainly required for the power cycle (for steam generation), cooling cycle (cooling towers/condensers/equipment cooling) and in bottom ash conveying system. Other than these process related requirements, there are uses of water in sprinklers / foggers, gardening and for drinking and personal hygiene purposes of employees. Further at solar energy generation station of SVL, water is utilized for solar module washing.

The Company optimizes its internal water use by recycling for multiple purposes and ensures water availability in the surrounding area for irrigation and drinking water as per the requirements of local communities and maintains specific water consumption levels well below MoEF&CC benchmark of 3.5 m³/MWh. The gross water consumption and related specific water consumption are represented in the table and figure shown below.



Preserving our River Water as a Shared Resource

Generation Station	Capacity (MW)	Source of Water	Water Consumption (m ³)		
			FY 18-19	FY 19-20	FY 20-21
BBGS	750	River Hooghly	1,34,74,103	1,23,38,988	1,17,35,835
SGS	135	River Ganga	4,72,99,258	5,65,54,540	1,49,79,453
HEL	600	River Hooghly	1,08,27,293	1,00,49,535	1,01,87,754
DIL	600	River Wardha	72,26,570	73,69,801	90,02,994
SVL (Solar)	18	Bore well	2,710	2,568	2,190
CPL	40	Ajay River	10,92,300	6,59,100	12,02,454



However, in the case of SGS, since cooling water system is in open circuit, specific water consumption was 166.64 KL/MWh during FY 2020-21.

As a water steward, CESC optimizes its water footprint and meets internal benchmark standards through various initiatives undertaken across all

generation stations. The case studies below illustrate a few water conservation initiatives of BBGS, SGS, HEL and DIL.

Minimizing wastage of water

- HEL, DIL and BBGS control boiler water chemical parameters through AVT (All Volatile Treatment). In addition to corrosion control, this treatment process greatly reduces the boiler blowdown which in turn reduces water consumption.
- In all generation stations, water and steam leakages are attended to with great priority to minimize losses.

Reuse and Recycling

- Water rejected from the dual media filtration and ultra-filtration processes (essential for removal of impurities during the raw water treatment process) is utilized in various processes at HEL and BBGS.
- Implementation of Ash water recovery system at BBGS, HEL and DIL ensures the water in the slurry is reused for bottom ash removal from the boiler.
- Cooling tower blowdown (essential for protection of the system) water is utilised for dust suppression and service water applications as far as possible in all the major stations.

The case study below represents the interventions undertaken by DIL on adaptation to water stress in the drought prone district of Chandrapur.



Dhariwal Infrastructure Limited adapting to water stress



Rainwater Harvesting Pond

DIL located in the drought prone area of Chandrapur district of Maharashtra faces acute water stress in the region. The zero liquid discharge thermal power station adapts and mitigates the impact of the growing water stress through:

- construction of 4 water reservoirs having 25.2 lakh cubic metre capacities to store water of River Wardha when river level is high during monsoon
- collection of rainwater in one reservoir through natural "nallah" originating from upstream of the plant
- reduction in Cooling Tower blowdown water quantity through effective chemical dosing
- utilization of Cooling Tower blowdown water in bottom ash collection and for dust suppression systems in Coal Handling Plant
- utilization of treated wastewater for
 - I. Dust suppression of roads
 - II. Gardening and landscaping purposes
- reutilization of decanted water through bottom ash water recirculation system in the process of bottom ash evacuation
- utilization of recovered seepage water from reservoir for ash handling system



Case study on Rainwater Harvesting



Aerial View of DIL Rainwater Harvesting Pond

Additionally, rooftop rainwater harvesting systems at BBGS (of 1,954 cubic metre annual harvesting capacity), HEL (of 5,500 cubic metre annual harvesting capacity) and SGS (of 3,013.2 cubic meter annual harvesting capacity) were installed to reduce water withdrawal

Rainwater harvesting is an opportunity to collect, convey and store rainfall to address water shortage and future water stress. HEL has a collection capacity of 1 Lakh cubic metre in two rainwater harvesting ponds. In DIL rainwater is collected in one reservoir through natural "nallah" originating from upstream of the plant.

Additionally, rooftop rainwater harvesting systems at BBGS (of 1,954 cubic metre annual harvesting capacity), HEL (of 5,500 cubic metre annual harvesting capacity) and SGS (of 3,013.2 cubic meter annual harvesting capacity) were installed to

reduce water withdrawal. Rainwater harvested is used in the following areas

- Demineralized water production at HEL and DIL
- Cooling tower makeup water at BBGS
- Gardening and landscaping purposes at SGS and DIL
- Ash water tank filling at DIL for bottom ash removal
- Dust suppression of roads at DIL

In addition to the above water conservation measures, reuse and recycle of wastewater in operations result in reduced water demand.

Effluent Management System

The Company understands the impact effluents can have on the ecosystem if not discharged responsibly in adherence to the statutory laws of the state pollution control board. Untreated wastewater impacts life in water resulting from dearth of oxygen and increase in neurotoxin producing algae. Chemicals and heavy metals accumulate into the food chain and cause water borne diseases to humans. CESC follows a robust effluent treatment process to eliminate such impacts.

Wastewater entering the effluent treatment plant undergoes the process of physical, chemical and biological treatment until the desired quality is achieved. The discharge quality is continuously monitored and tested at in-house laboratories to comply strictly with the applicable norms. Further, HEL and DIL have laboratories accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL).

CESC seeks to implement Zero Liquid Discharge (ZLD) processes across its operations such that water is reused and recycled in its operations and water withdrawal is limited. The thermal power plants, BBGS, SGS, CPL and DIL have already achieved Zero Liquid Discharge status.

Zero Liquid Discharge is achieved through processes that arrest oil, grease, suspended and solid particles, while reusing treated effluent water collected in the holding pond. Treated wastewater including water from blowdown operations in boiler and cooling towers is reused for bottom ash collection, dust suppression, ash conditioning, gardening, landscaping and fire hydrant pump sprinkler systems.

Further the wastewater as sewage is treated at the sewage treatment plant. Treated domestic water is also reused for landscaping and dust suppression system.

CESC is proud to disclose that 100% of treated water is reused and recycled in BBGS, SGS, CPL and DIL plants

In FY 2020-21 there have been no incidents of non-compliance with respect to the water quantity and quality, permits, standards and local regulations. Through judicious management of natural resources, the Company is keen to unlock the value of waste streams. The relevant management procedures and initiatives to streamline our waste disposal processes are highlighted in the next section.

CESC is proud to disclose that 100% of treated water is Reused and Recycled in BBGS, SGS, CPL and DIL plants



Reuse of Effluent Water for Gardening at HEL

Waste Management

CESC manages disposal of non-hazardous and hazardous wastes generated at their operating sites diligently based on its Environmental Management Systems (EMS) and complies with the legal and statutory requirements. Such waste generated are collected and segregated at source and transported by waste handlers with license for end treatment of the waste.

Hazardous Waste Management

Hazardous waste generated includes used oil, used transformer oil, waste oil, spent resins and oil soaked cotton wastes, which are segregated at source, stored in a designated space and handed over to a) Hazardous Waste Treatment, Storage and Disposal Facility (TSDF) operators and b) recyclers, authorised by the State Pollution Control Board

(SPCB) as per Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2019. The Company handles all wastes within the domestic market and does not engage in trade agreements under the Basel Convention. The quantity of some of the hazardous wastes significant to the Company's generation stations generated and disposed for FY 2020-21 is showcased below.

Waste Type	Waste Generated				Waste Disposed			
	BBGS	SGS	HEL	CPL	BBGS	SGS	HEL	CPL
Used Oil (KL)	20.28	3.30	32.36	0.61	24.90	4.00	32.36	1.10
Waste Oil (KL)	0.00	0.00	14.28	0.00	0.00	0.00	14.28	0.00
Used DM Plant Resin/Chemical (MT)	0.69	0.00	0.16	0.00	0.85	0.00	0.16	0.00
Oil soaked cotton waste (MT)	0.34	0.13	0.40	0.59	1.10	0.20	0.40	0.59

Waste Type at DIL	Waste Generated	Waste Disposed
Used Oil (MT)	39.41	39.41
ETP Sludge (MT)	0.10	0.10
Empty barrel/container/liners (MT)	0.01	0.01

Distribution Station	CESC Kolkata	NPCL	CESC Rajasthan	MPPL*
Used Oil (KL)	17.64	25.00	0.00	NA
Transformer Oil (KL)	0.00	27.00	0.00	NA
Waste oil (KL)	0.00	2.00	0.00	NA
Oil soaked cotton (KG)	0.00	0.25	0.00	NA

* Data is not available

Ash Management

Ash forms a major component of the non-hazardous waste generated. Domestic coal has a high ash content, hence there is a mandate to ensure that the ash leftover from the combustion of coal is managed effectively to safeguard the environment. Fly ash containing toxic chemicals and traces of heavy metals are carcinogenic in nature. Increase in fly ash released to air and water bodies, and subsequent bioaccumulation in the food web

causes ailments to the lungs and the heart. Through controlled collection, handling, movement and storage of ash, such impacts are mitigated.

Ash handling systems collect and transport the fly ash and bottom ash from the boiler to respective storage points. Bottom ash is crushed to fine powder and mixed with water to form the slurry. The slurry in turn is transported to the ash dyke or

dewatering bin from where ash is separated from water through the decantation process and the water is recycled. Fly ash collected at the electrostatic precipitator (ESP) hoppers is transported in dry form to separate silos for value added utilisation. The fly ash generation and corresponding utilization by the generation stations are showcased below.

Generation Station	Ash Generation (in Lakh MT)		
	FY 18-19	FY 19-20	FY 20-21
BBGS	12.17	11.28	10.43
SGS	0.54	0.70	0.21
HEL	10.49	10.02	9.59
DIL	6.91	7.44	9.31
CPL	2.45	1.48	2.26

Generating Station	Ash Utilization (in Lakh MT)		
	FY 18-19	FY 19-20	FY 20-21
BBGS	12.17	11.28	10.43
SGS	0.54	0.70	0.21
HEL	10.49	10.02	9.59
DIL	7.26	7.98	9.46
CPL	2.45	1.48	2.26



Making Tiles from Fly Ash



Fly ash used for Brick Making

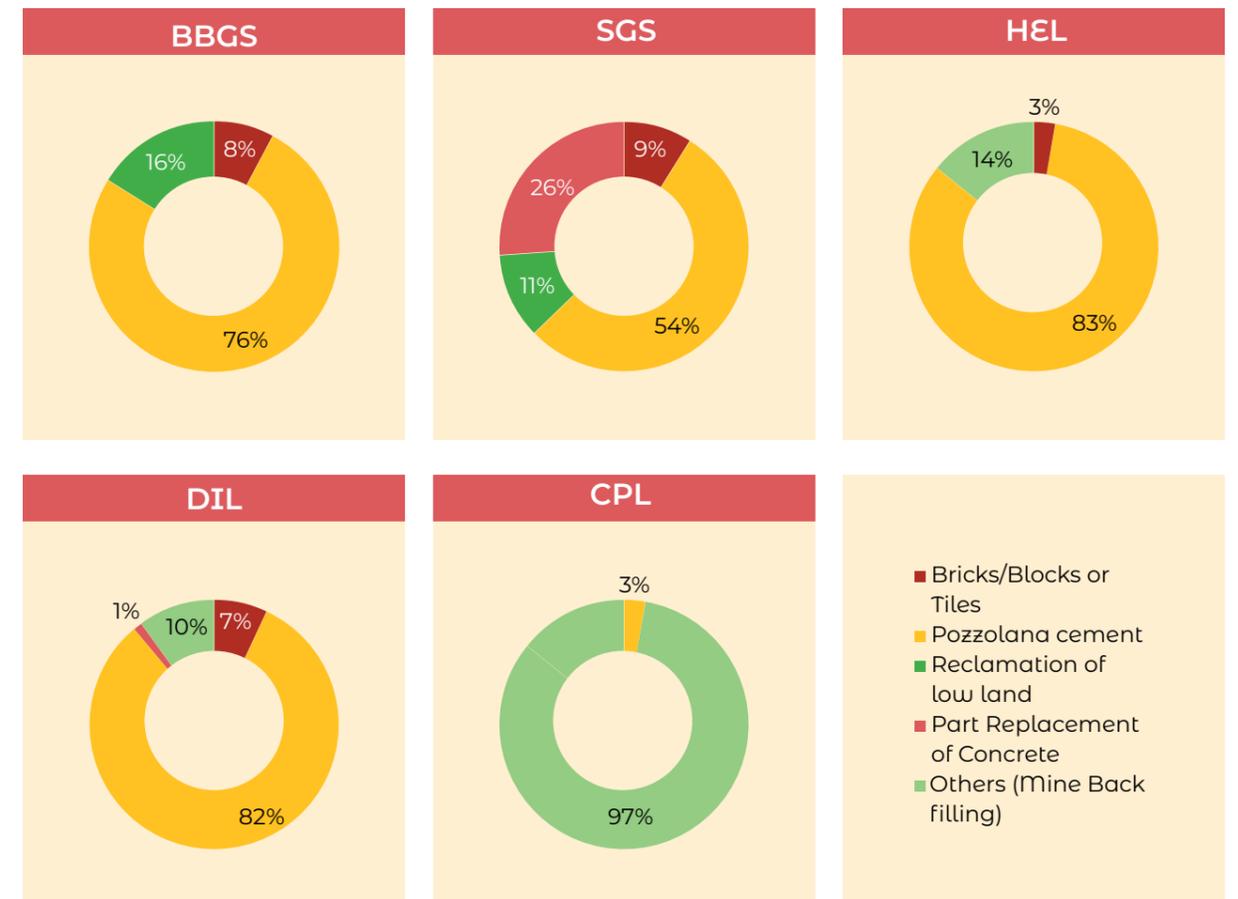


Ash Utilization

There is 100% utilization of the ash generated at all the generation stations (as showcased in the charts below), which finds application in

- cement production
- bricks, blocks and tiles manufacturing
- construction of roads and flyovers
- reclamation of low land
- developing various grades of concrete for road construction at the thermal power station in Chandrapur (DIL) by using bottom ash as a substitute of sand through a joint research programme with Visvesvaraya National Institute of Technology

Ash Utilization % by Application for FY 20-21





Pavement using Bottom Ash Blocks



Composting Machines Installed at Generation Stations



Ash Garden

The Company is also exploring farming on ash beds at Haldia in collaboration with Bidhan Chandra Krishi Viswabidyalaya, Kalyani, an agricultural institute in West Bengal. CESC is actively promoting the application of bottom ash

in brick manufacturing by indigenously developing paver blocks (M25-M30 grades), kerb stone and geopolymers (50% ash content) roads that are economical, eco-friendly and of high aesthetic quotient. Other uses include land filling

and developing of roads and embankments.

The table showcases the quantity and treatment methods used for CESC's major conventional waste streams for the reporting period FY 2020-21.

Type of Waste	Distribution				Generation					Segregation and Treatment
	CESC Kolkata	NPCL	CESC Rajasthan	MPSL	BBGS	SGS	HEL	DIL	CPL	
E-waste (MT)	0.49	0.00	3.41	0.00	0.13	0.36	2.28	1.20	0.00	Segregation at source and disposed through authorized recyclers of the State Pollution Control Board as per the E-waste (Management) Amendment Rules, 2018
Battery Waste (Nos)	275.00	110.00	0.00	0.00	0.00	0.00	0.70	112.00	0.00	Segregation at source and disposed through authorized recyclers of the State Pollution Control Board as per the Battery Waste Management Rules, 2001
Biomedical Waste (KG)	0.00	0.00	0.00	0.00	4.90	5.40	5.87	39.49	0.85	Segregation at source and disposed through authorized waste handlers of the State Pollution Control Board as per the Biomedical Waste Management (Second Amendment) Rules, 2019

Further, composting machines are installed at generation stations to convert kitchen waste and garden waste into manure, which is utilized in nurseries and gardens, as well as for promoting organic farming.

The Company is pleased to disclose that there has been

no occurrence of significant spillage in FY 2020-21. A sound environmental compliance management system ensures CESC's operations abide by applicable local regulations and laws. All the efforts to maintain social and environmental harmony is directed towards

upholding the ecological values in CESC's region of operation. The next subsection showcases the studies conducted to assess the impact of CESC's operations on the surrounding biodiversity.

Biodiversity

CESC understands that the availability of ecological goods and services are essential to economic growth. The Company is aware of and respects the limitations pertaining to availability of the ecological goods and services including the provisions for competitive uses and users of ecological systems

as per existing environmental regulations. The Company is fully compliant with all environmental regulations governing conservation of wild habitats, species of flora and fauna and forestry in local communities and is committed towards its obligation to safeguard the regenerative

processes and interactive ecosystems. CESC endeavours to understand the risks on biodiversity associated with its business operations and mitigate threats and impacts. The case studies showcase some of the interventions of CESC towards biodiversity conservation.



Floral Biodiversity

A total of over 3.5 lakh trees have been planted as part of the green belt drive across all facilities.

Under the Project 'Rishi Krishi' the HEL facility maintains 80 species of medicinal plants like Mint, Holy Basil and Anantamool amongst others. The BBSG facility also maintains 17 varieties of medicinal plants, herbs, shrubs and trees like Aloe Vera, Asparagus and Acorus. In addition to plantation activities, DIL has built an orange orchard and a sandalwood corridor.



Butterflies

Under the Titli Rani initiative a butterfly garden at HEL accommodates 50 types of host plants and nectar plants to attract more butterflies for feeding and spawning. Seventeen butterfly species including blue tiger and lime butterfly from 5 families exist within the operational area.



Birds

Plantations and water bodies in and around the HEL operations are home to 38 species from 30 families of birds including migratory species such as Green Sand Piper and Brown Shrike and aquatic birds like Little Grebe and Bronze winged Jacana. At DIL, a swan park is also maintained, with waterfowl species enhancing the biodiversity in CESC's operations.



Mammals

Wildlife in the form of Golden Jackal, Jungle Cat and Small India Civet are common species that are provided a secure habitat inside the HEL facility.

CESC's commitment towards enhancing biodiversity value, highlights its actions as an environmental steward beyond environmental compliance. The next section of the report discusses on the systems and processes upholding environmental compliance.

ECO Club for Schools:

Eco Clubs in different schools initiated by HEL and BBSG undertake plantation activities and take care of environment as part of the project 'Basundhara' and 'Urja Chetna' respectively.



Vertical Gardening



Tree Plantation Drive in Community

Environmental Compliance and Management

In a constant endeavour to protect and preserve ecological goods and services through judicious use, CESC ensures compliance to applicable environmental regulations in India and de-risks its operations from potential risks through a sound Environmental

Management System. These processes are periodically audited internally as well as through external certification bodies and local regulatory authorities. CESC is proud to announce that during FY 2020-21, there has been no cases, show cause notices and fines

levied for non-compliance with environmental norms and standards.

Such commitments and initiatives aiding to resource efficiency is recognized through the following awards listed below.

Awards



Grow Care Awards, 2020



BBGS

- Asian Power Awards 2014 in Innovative Power Technology
- RE-Engineering award 2014 from UNFCCC
- Excellent Energy Efficient Unit 2014 from CII
- Best Power Plant in India By CSE (3 leaves award), 2015
- ICC Environment Excellence Award 2015
- "Rashtra Vibhushan Award 2016-17" -Gold Award by FAME
- Innovative Power Technology of the Year - 2017 from Asian Power
- Greentech Safety Award 2017-18 (Gold)
- CII National Award for Excellence in Energy Management 2018- "Excellent Energy Efficient Unit"
- Greentech Environment Award 2018 (Platinum)
- Clean Generator of the Year 2018
- Exceed Award 2018 (Gold)
- Apex India Green Leaf Award 2019 for Water Stewardship (Gold)
- EEF Global Award 2019 on Water Conservation
- Energy Efficient Unit, 2019 by CII
- CII National Award 2019 on Water Management
- ICC Environment Excellence Award 2019
- Greentech Environment Award 2019
- National Energy Conservation Award 2020 from Bureau of Energy Efficiency, Ministry of Power
- Energy and Environment Foundation Global award on Water Management, 2020

SGS

- ICC Environment Excellence Award 2018 – Special Appreciation Award
- Greentech Environment Award – Gold Award in the year 2018, 2017, 2016, 2015
- Asian Power Awards 2014 – Bronze Award for Innovative Power Technology of the year; Micro Hydrel Units (3 X 15 kW) to extract waste energy from circulating cooling water return to river at the outfall point
- Engineering Excellence Award 2014 (Singapore) – Innovation: Micro Hydrel Turbine Application in Thermal Power Station
- Engineering Excellence Award 2014 (Singapore) – Innovation: Zero Effluent System
- IPPAI Power Awards 2014 to recognize Innovation: Cryogenic Isolation methodology in O&M



- IPPAI Power Awards 2014 for Energy Conservation: 3 X 15 kW Micro Hydel Units in Circulating Cooling Water Outfall

HEL

- Gold Award for Coal Power Project of the Year- 10th Asian Power Award Program 2014
- Global Environment Platinum Award in 2015
- Global Environment Award- 2016
- ICC Environment Excellence Award- 2017
- Greentech Environment Gold Award- 2017
- Apex India Environment Excellence Award- 2018
- CII (ER)Energy Conservation awards 2020 - 1st Runner up
- CII(ER) Green and Clean Award 2020-21 - 1st Runner up
- Environmental upgrade of the year-India – Asian Power Award 2020
- Innovative Power Technology of the year- India – Asian Power Award 2020

DIL

- Golden Peacock Award 2014 for Environment Management
- Fame Award 2017 (Gold) for water conservation
- Apex India Excellence Award 2018 (Gold) for Water Management
- Maharashtra Pollution Control Board- 5-star rating in 2018 and 2019
- Grow Care India 4th Annual Excellence Award 2020 (Gold) for Environment Management

Employee Welfare



Message from Executive Director: Human Resources & Administration



In pursuit to CESC's journey in developing environment, social and governance report, we endeavored for achieving sustainability all across the organization and aimed towards building capability to meet the requirements towards this goal. It has been always a conscious effort to develop people including the leadership team with proper succession planning to ensure continuity in best level of efficiency in operations as well as robust service delivery mechanism. In CESC, people management is not separate from life cycle management of an employee as in most of the cases the engagement with the organization is for lifetime initiating the process of selection at a very young and budding stage from the premier academic institutions through well led down process of internship "Unmesh" and subsequent induction programme "Anwesan" people

grow in the organization with a culture of knowledge sharing, skill development and enhancement of managerial capability. CESC has always been contemporary and contextual in using the latest frontier technology and people capability werebuilt up for adaption, absorption and application related innovations on such technologies of global standard. We give emphasis on following a very robust training methodology and curriculum which also impart skill-based training for large cross section of employees with facilities of upskilling, reskilling and multiskilling. As a measure of sustainability, we follow whistle blower policy and PoSH and also take care of employee welfare and wellbeing in the form of providing best medical facility to ensure preventive measure. As an example, CESC has completed the COVID related vaccination

for 90% of its employees at a very initial stage. We practice strong employee relation process and conduct events for participation of employees and the family members which includes felicitation to the children of the employees, talent hunt competition, recreational facilities, sports so that simultaneously with the work culture and job responsibility, employees at large can be benefitted through the culture of openness. Special attention is given to ensure the safety standards. CESC organizes Safety Day as an unique event with large scale participation of employees. Similarly, to infuse innovation and creativity, Knowledge Carnival is being organized every year where employees demonstrate their innovations in the form of expression of knowledge. Such deep routed engagements resulted in CESC being recognized as among the top 100 companies in Great Place to Work and best in class in energy and oil sector. In organization matters, to keep pace with the latest development, new initiatives like Business Process Reengineering, Business Excellence & Quality, Risk & Disaster Management, Business Intelligence & Analytics are a few latest initiatives which help CESC in achieving best in class service and sustainability.

Gautam Ray
 Executive Director – HR & Admin

HR Governance and Strategy

HR strategy of CESC has been formulated considering various micro and macro trends in the regulated environment as well as insights drawn from different survey and review mechanisms. Aligned with the business strategy, the HR strategy aims at ensuring a capable and committed workforce with the requisite skills to attain the business goals.

Talent attraction, talent development, employee engagement, rewards and recognition, diversity, inclusion, adherence to applicable human rights and occupational health and safety regulations are cornerstones of CESC's HR strategy.

CESC's human resource policies and processes, reviewed by the Board, ensure regular

performance monitoring by measuring key performance indicators and thereby ensuring informed and data driven decision making.

The organization's constant endeavour in creating a better workplace has resulted in receiving several awards and accolades over the years.



CII HR Excellence award-2019

CESC has been Great Place to Work® certified for two consecutive years in 2019 and 2020. CESC was also recognised by the Great Places to Work Institute as one of:



Other notable awards received by CESC in recent past are:



Leadership in HR in CII National HR awards, 2018 and 2019

Winner in CBIP Award for Capacity Building and Training, 2019

Winner in Category 'A' in National Award for HR Best Practices by NIPM, 2018

Winner in Gold Category for Energy & Environment Foundation Global HR Skill Development Awards, 2018

Our People

As on March 31, 2021 the total workforce at CESC comprises 7,379 employees.

Employee Classification at CESC *	
Employee Strength by Gender	7,379
Male	6,883
Female	496

Employee Strength by Age Group	
Employee Strength by Age Group	7,379
<30 years	284
30-50 years	3,151
>50 years	3,944

Employee Category	Employee Strength	Female Employees
Executive	794	70
Junior Management Staff	139	81
Workman	2,694	55
Supervisor	3,752	290

* CESC workforce comprises of employees representing BBGS, SGS and distribution functions.

To enhance the collaborative relationship at the workplace with all employees, Employee Relations Cell has been formed with focus on proactive Industrial Relations management through open communication, building emotional connect with employees and their family members, developing consistent feedback mechanism and investing on employee wellbeing. All of these are essential to ensure workplace prosperity and creating a diverse, equal and equitable workplace.

Workplace Prosperity

CESC believes that delivering high quality service to consumers can only be achieved by attracting the best talents & retaining, nurturing and enhancing their skills and leadership capabilities.

The Company delivers power to over 3.3 million consumers across its licensed area. Alignment of people to the Core Values and Organisational goals and objectives ensures consumer satisfaction and business growth and helps in professional development and achievement of career aspirations. In addition to talent attraction and development, motivating the human capital through engagement, training and rewarding their efforts are key elements to employee retention and enhancing the employee productivity at the workplace.

Talent Attraction Programmes

With the objective of early identification and acquiring of talent, the summer internship program, Unmesh, is conducted for pre-final year students from select premier academic institutions. They are evaluated through aptitude, technical, and psychometric tests followed by personal interviews. 'Unmesh' provides a perfect opportunity for the organisation to assess the competency as well as the cultural fit of the students while the students get the first-hand experience of working in CESC and of its culture. Selected

candidates undertake live projects of business relevance under the guidance of in-house domain experts. The best projects are awarded. Suitable candidates from the internship program are provided with pre-placement offers to work with the Company based on the final evaluation at the end of the internship period.

In an endeavour to attract the best of talents and be recognized as 'Employer of Choice', CESC has formed a Campus Connect Cross Functional Team (CFT) of young and veteran alumni

from premier institutions who are presently working with CESC. CFT organises other initiatives like technical seminars conducted by CESC's subject matter experts based on the needs identified from the Institutions and sponsors campus events to help the potential students connect with the Company's Brand. The CFT members also keep regular contact with the selected candidates after campus hiring till they join the Organisation to ensure their smooth onboarding.



Unmesh Winner being Awarded, 2019

Induction

CESC believes that successful integration of new recruits is essential for making them part of the CESC family and imbibing the values and the culture of the organization. The induction programme for new fresh graduates joining as Management Trainees is christened as 'Anweswan', while 'Unmilon' is a separate induction programme organised for new hires joining as Technical Supervisors.

Anweswan kicks off with a unique practice of inviting the parents of new joinees and distinguished professors from their educational institutions. The induction programme, extending up to six weeks, not only sensitizes new hires about the organization, its Core Values, its business goals and challenges, but also provides a guided and holistic exposure to different functions, facilitated by classroom trainings, outbound

programmes, departmental visits and interactions with various departments.

The top leadership team, including the Managing Directors, interact with the new joinees and share perspectives, experiences, and wisdom to inspire and motivate them at the beginning of their professional life.



MD-Distribution address during Anweswan



MD-Generation address during Anweswan

Highlights of Anneswan:

- Outbound Experiential Learning Programme-** The programme aims at harnessing team building skills through exciting outdoor activities. Senior leaders also share their stories to motivate the new recruits.
- Residential Management Development Programmes** - Management trainees are taken through two Residential Programmes conducted by

Xavier School of Management, Jamshedpur and International Management Institute, Kolkata with the purpose of sharpening their managerial and behavioural skills.

- Mentorship Programme** - All management trainees and lateral hires are assigned mentors from the senior leadership team, who play a key role in providing guidance on job related issues and

contributing towards their personal and professional development.

For **lateral joinees**, individual induction programmes are organised, including around 4-week visit schedule to all major functions for familiarising them with various functions, practices and culture prevailing across the organisation.

New Hires at CESC			Turn Over Rate at CESC		
FY 18-19	FY 19-20	FY 20-21	FY 18-19	FY 19-20	FY 20-21
141	102	82	0.20%	0.38%	0.20%



Outbound Programme

Talent Development and Talent Management

CESC believes that retaining talent by creating fair and equal opportunities for growth and development is essential to business continuity and unlocking new business opportunities. An integrated appraisal system is deployed to manage and assess employee performance, increment, performance bonus and career progression using the Balanced Business Score Card. The targets based on the strategic objectives set by the leadership team are communicated through Key Result Area (KRA) workshops and divisional meetings. Employees are assessed based on performance against targets and competencies aligned with the Core Values.

The annual appraisal process also helps in identifying

development needs of an employee 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 annual training plan is prepared in consideration of individual, divisional and organizational level training needs to attain business objectives. The plan, which covers all categories of employees including contractor personnel, details the training programmes including the objectives, scope, target participants, venue and dates. Individual training plans

are intimated to all officers of the Company at the beginning of the year and are executed and monitored to ensure adherence. The trainings are enabled through state-of-the-art training facilities at O&M Training Institute, Distribution Training Institute, and Plant Training Centres equipped with training simulators, models, films and handbooks. Trainings are imparted by in-house trainers and experts as well as external faculty members. All courses and modules are made available in the Oracle Learning Management System, once the training session is completed. The step diagram illustrates the structured approach for learning and development.



Management Training Programme-Classroom Training



Power Plant Simulator training



Trainings undertaken are classified as follows



Training Classification

<p>1. Need based training programmes conducted throughout the year on various areas for all levels of employees which cover both behavioural and technical areas</p> <p>2. Curriculum based training programmes to develop the knowledge and skills of people engaged in specific areas to a desired</p>	<p>level in collaboration with institutes of repute like Xavier School of Management Jamshedpur, Indian Institute of Technology, Kharagpur, Jadavpur University, Indian Institute of Engineering Science and Technology - Shibpur</p> <p>3. Specific interventions programme to address the areas of concern and/or</p>	<p>priority of the organisation in collaboration with consultants and institutes of repute</p> <p>4. Leadership development programmes to enhance the leadership potential that drives business growth and excellence.</p>
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Frontline employees are trained on customer centricity as part of continuous endeavour to enhance consumer experience. CESC also offers e-learning courses to its employees on behavioural and management areas through

the globally recognised Percipio platform from M/s Skillsoft, which offers flexibility to learn at one's own place, time, and pace. E-learning courses on technical areas are delivered in collaboration with SNTI.

CESC collaborates with external training partners like the Indian Institutes of Management, the Indian Institutes of Technology, the Xavier School of Management Jamshedpur, the Administrative Staff College

of India Hyderabad, the School of Inspired Leadership, the Federation of Indian Chambers of Commerce and Industry,

the Confederation of Indian Industries. for providing learning and development support to its people.

CESC's focus towards the learning and development of its people is captured in the table below:

Partner Institutions



Training Performance: Permanent Employees

Employee Category	Training Man Day/Employee		
	FY 18-19	FY 19-20	FY 20-21 *
Officer	6.25	5.26	6.12
Supervisor	1.42	1.44	0.25
Workman	1.55	1.56	0.02
Combined	1.96	1.88	0.75

*Due to restrictions in physical training in pandemic situation, the average training mandays for supervisors and workmen has dipped in 2020-21. Executive training programmes were quickly migrated to virtual platform.

Knowledge Management

To promote a culture of learning and innovation Knowledge Carnival is organised over two days every year. It consists of a Knowledge Fair, Technology Seminar by prominent experts, Technical Paper Contest by employees and Quiz Contest aimed at fostering a culture of creativity and innovation

involving fun and sharing. The Knowledge Fair is a forum where various departments of CESC showcase their innovations through models, videos, presentations, charts, and handouts. As part of campus brand building initiatives, Paper Presentation Contests are organised for Engineering and

management students from premier institutes.

Eclectic, a journal consisting of technical papers and write-ups from in-house domain experts and external experts from Universities/Institutes is published biannually. The best three projects of Unmesh are also published in the journal.



Knowledge Carnival

Rewards and Recognitions



Saptarshi Award Ceremony

CESC believes that reward and recognition motivates people, enhances commitment and engagement and creates a strong employer brand. Appreciation of good behaviour and work creates happiness and job satisfaction while promoting teamwork, competitiveness and loyalty towards the Company.

The RP-Sanjiv Goenka Group Foundation Day held annually on 13th July, since 2012 recognizes such employee contributions and actions aligned with the Core Values. On this day, awards in honour of exemplary performances during the financial year like Top

Gear Awards, Young Manager Awards, and Core Value Champions Award are handed over to the recipients in the presence of all employees and their family members.

Some of the other Company level awards are listed below:



Kaizen and 5S Award Distribution

1. Udaan - for Senior level Executives
2. Nakshatra - for Mid and Junior level Executives
3. Surya- Supervisor of the Year
4. Saptarshi- for Team Performance of workmen
5. Eklavya- Workman of the Year
6. Abhay- for Team performance of workmen
7. Sabash- Spot Award
8. Kaizen and 5S- - Innovative approach towards better ways of doing things

In addition to rewards and recognition, employee engagement is key to enhancing employee productivity at workplace which not only motivates the workforce but also encourages them to pursue their passion and cherish success as a team.

Employee Engagement

The highly committed and competent workforce in CESC is the primary driver in providing uninterrupted electricity service to its millions of consumers 24x7, 365 days a year. Various

engagement initiatives undertaken throughout the year motivate its employees to contribute in achieving goals and success for the Company. Due to the restrictions on physical

gathering amidst the growing concerns of the pandemic, most of the engagement programs and activities listed below were undertaken online in the past year.



Engagement Programme



Town Hall, Family Group and Small Group Interaction Meetings

CESC launches the Annual Communication Calendar at the beginning of every year, communicating a detailed schedule of Town Hall Meetings and Family Group Communication Meetings. During Town Hall meetings the Top Leadership Team of the Company along with the Managing Directors interact with the Executives across the Organisation and address queries and suggestions put forward by them. The senior management team also interacts with the executives at departmental level in Family Group Meetings and with the non-covenanted staff in Large and Small Group Interaction Meetings.



Coffee with MD

A weekly one to one interactive session between the employees and the Managing Director to understand the vision and roadmap towards achieving the business goals and sustainability. Employees are encouraged to leverage the opportunity to discuss about



Ankur Samman

Annual felicitation programme for the meritorious wards of the employees, who perform well in the board examinations celebrating their success, with an aim to make their personal achievement a source of collective joy for the Company. The students accompanied by their parents are felicitated by the leadership team of the Company.



Avishkar

Annual talent hunt competition provides a platform for employees and their family members to showcase their capabilities in performing activities such as dance, art, music, recitation and cooking.



Celebrating Departmental Achievements

The annual communication initiatives, Utkarsh Dibas and

Sankalp Dibas, are organized at different units of Substations and System Control departments respectively where departmental goals and achievements are put forward to the employees. They also provide opportunity for employees to build synergy at work by interacting with partner departments and showcase their talents in various areas.



Suvechha

Greeting employees on their birthdays with a card, cake and bouquet of flowers which are delivered to their individual residences for celebrating with their family members.



Promoting Health and Fitness

Physical health and fitness of an employee is essential for a happy and contented life. CESC undertakes several programmes including awareness programmes, annual health check-ups, free doctor counselling, gymnasiums and encourages investing time on sports at inhouse recreational clubs and facilities. The sports club accommodates facilities and infrastructure for hockey,

football, cricket, athletics, volleyball, badminton and indoor games.

A two-day Annual sports event promote health and fitness while providing an opportunity for employees to showcase talents. Additionally, inter-divisional cricket carnival, football carnival and indoor games are organized for employees. A separate event Sphuling which is the summer tournament for badminton, chess and table tennis is organized for the children of employees.

As an active member of the All India Electricity Sports Control Board (AIESCB), CESC hosts various sports tournaments that has established reputed national level players in cricket, football, hockey and volleyball.

Players of National and International repute who are part of CESC family include:



Cricketers

Wriddhiman Saha, Monoj Tewari, Ashok Dinda, Debabrata Das.



Footballers

Syed Rahim Nabi, Abinash Ruidas, Koushik Sarkar, Souvik Ghosh, Jewel Raja.



International Women's Day

An annual event celebrated to honour the achievements of women by inviting experts and celebrities from diverse background to deliberate about gender issues and share thought leadership messages. It also includes a slogan contest and a host of cultural events to celebrate the joy of womanhood.



CESC Mini Marathon

The annual 5 km marathon to promote fitness, safe usage of electricity in a fun filled environment which also creates local community connect.



CESC Shooters

Annual photography competition that enables employees to display their creative minds through photo frames.



Sit and Draw Competition

The annual competition encourages children of employees to showcase their artistic skills.



Manoj Tiwari



Wriddhiman Saha

Diversity, Inclusion and Equity

CESC embraces diversity and inclusion at workplace. Aspiring to become an equal opportunity employer it offers employment opportunities through a fair recruitment process and encourages the employees to overcome new challenges every day.

The workforce includes people from diverse cultures and geographies. The recruitment process implements a gender-neutral job description and

removes potential biases in screening and hiring new employees, consistent with applicable employment related legislations. The Company strives towards increasing women participation and ensures equality in all aspects.

Human Rights

CESC understands its fundamental responsibilities to respect and protect human rights in compliance with its

Labour Relations policy. The Company's commitment to human rights is based on:

- a. The United Nations Universal Declaration of Human Rights
- b. United Nations Convention on the Rights of the Child
- c. United Nations Convention on the Elimination of All Forms of Discrimination against Women
- d. The International Labour Organization (ILO) Conventions

The following table highlights the processes established at CESC to uphold its human rights commitment.



No Child Labour

There exists zero tolerance towards child labour and the minimum age standard is set at 18 years for employment opportunities. Essential documents are scrutinized to verify the age during the onboarding process of a new employee or providing entry to third party contractors.



No Forced Labour

CESC strictly prohibits employee recruitment based on individual bond, debt or obligations towards the Company or its representatives, and does not accept cash deposits or a recruitment fee to secure employment. Individuals are free to resign from employment at any time giving reasonable notice period.



Non- Discrimination

Recruitment and performance appraisal processes are consistent, transparent and unbiased towards any form of discrimination including but not limited to caste, race, religion or gender as prescribed under Indian regulations.



Working Hours and Fair Wages

Employees are provided fair and equal compensation based on skills and experience. Timely provision of wages and statutory benefits ensure social and economic security. Wage documentation, maintained for each employee, includes wage calculation based on working hours with transparency on bonuses, incentives and deductions for the

month. Some of the key elements covered under the compensation structure of an employee include provident fund, gratuity, festive bonuses and performance linked incentives. Employee's Deposit Link Insurance (EDLI), Group Term Insurance and medical facilities are provided to all employees. Coverage of medical benefits are extended post-retirement for self and family.

All employees are entitled to weekly offs and holidays based on local customs and days of national and international significance. No employee is encouraged to work beyond the prescribed working hours as per statutory policy.



Freedom of Speech

Top leadership team including the Managing Directors of CESC are approachable vide the online portal Leadership Connect as per an open-door policy, which

provide requisite opportunities to employees to directly voice their ideas and concerns. Coffee with MD is another such initiative to establish the connect on a weekly basis. A three-tier grievance redressal system enables satisfactory resolution of concerns through a designated channel.

The Company recognizes participation of INTTUC trade union as sole bargaining agent (based on election held in every 2 year as per statute) in the decision-making process for employee welfare. Around 87% of the permanent employees are members of recognized trade unions and are encouraged to voice their

concerns collectively vide the union representatives. The Industrial Relations team communicate and negotiate with trade union representatives to maintain harmony at workplace and ensure unhindered operations.

The employee grievance redressal process discussed in the next section details out a well-planned procedure to collect, review and address potential human right related violations.

Grievance Redressal Mechanism

CESC deploys a structured grievance redressal process, which is based on the principle of 'prevention is better than cure' to ensure a harmonious relationship with the employees and satisfactory resolution of grievances. All leaders in CESC, including the Managing Director, practice an "Open Door" policy whereby anybody can approach them to discuss issues and raise grievances. An online portal, Leadership Connect, is in place which provides a platform

for all Executives to directly interact with the members of the Top Leadership team, including MDs, regarding their queries, ideas and grievances.

Employee grievances for the non-covenanted staff are dealt with formally by the Trade Unions in conjunction with the Industrial Relations Department and the CESC Officers' Association is in place for taking up and resolving any issues with regard to the executives.

The personnel officers and labour welfare officers of the Industry Relations department are entrusted with the responsibility of managing all grievances including those pertaining to maintenance of hygiene at workplace, issues related to wage computation and statutory benefits including but not limited to retirement and pension. Issues related to medical insurance are managed by the Employee Relations department.



CESC's Grievance Redressal Mechanism: All complaints are managed by the IR personnel at respective sites. Complaints received undergo a three-tier process described below

01

Tier 1: Unit Level

- The line executive/supervisor aims at immediate resolution of grievances on sites.
- In case the grievance remains unresolved, the line manager and the respective IR officer at site jointly manages issue resolution. If the issue is a general concern for all employees, then it is dealt with by the Unit Head.

02

Tier 2: Divisional Level

- If the grievance resolution is found unsatisfactory by the complainant, it is escalated further to the Divisional Headquarter for resolution.

03

Tier 3: Corporate Level

- In case of the issue still remaining unresolved, it is referred to the Corporate IR headed by the GM, where the issue is discussed/negotiated with the central leadership of the sole bargaining union to arrive at an amicable resolution/settlement.

Issues related to sexual harassment are resolved through a separate Internal Complaint Committee (ICC), which is headed by a female executive director and comprises of six members from different functions of human resources and an external member.



Employee opinion Survey

Employee opinion related to workplace satisfaction helps in creating long term relations with the employees and ensures talent management through higher retention rates and less grievances that demand quick resolution.

CESC undertakes an annual online engagement survey covering all its Executives and Junior management Staff in collaboration with the Great Place to Work (GPTW) Institute as per their globally acclaimed model. A sample population of the non-covenanted staff is also included in this survey through

a written questionnaire. The overall Trust Index score for the survey conducted in 2020 is 83%. The results are shared with the employees, improvement areas are identified, and actions are taken which helps in progressive improvement of policies over the years.

To gauge the engagement level of non-covenanted employees, CESC conducts a customized opinion survey covering all the supervisors and workmen in collaboration with the Indian Institute of Social Welfare and Business Management (IISWBM) using a trilingual

written questionnaire. The survey scores for the year 2019 were 85.4% and 86.4%, for the supervisory staff and workmen, respectively. This survey could not be conducted during 2020 due to pandemic situation.

CESC also conducts an annual survey on its contractual workforce in collaboration with the Indian Institute of Social Welfare and Business Management (IISWBM). The survey score for the year 2019 was 88.64%. This survey could not be conducted during 2020 due to pandemic situation.

The annual survey conducted by GPTW is based on five major dimensions:



Credibility
Communication, Competence, Integrity



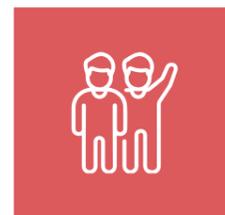
Pride
Support, Collaboration, Caring



Fairness
Equity, Impartiality, Justice



Respect
Personal Job, Team, Corporate Image



Camaraderie
Intimacy, Hospitality, Community

83.00%

(GPTW Trust Index- All Employees)

85.40%

(Survey Score-Supervisory Staff)

86.40%

(Survey Score-Workmen)

88.64%

(Survey Score-Contract Workers)

Employee Facilities and Benefits

The employee opinion surveys conducted has transpired into making CESC a great place to work. The numerous

facilities and benefits provided to employees contribute to the wellbeing of themselves and their immediate family

members while securing them from exigencies. Some of these benefits and facilities are listed below.

Benefits and Facilities for Permanent Employees

Provident Fund
Gratuity
Employee's Deposit Linked Insurance
Accident Compensation Scheme over and above statutory benefit of Employees Compensation Act
Co-operative credit society
In house medical facility
Post-retirement medical insurance up to 15 years including spouse
In case of unfortunate demise of a serving/retired employee, the spouse continues to get the medical insurance coverage
Hospitalization facility and medical insurance for officers and their family members

Benefits and Facilities for Contract Employees

Provident Fund
Gratuity
Employee's Deposit Linked Insurance
Employee's State Insurance/ Employees Compensation

Employee Health

CESC has a strong focus on health and well-being of its people. It operates 28 well-equipped dispensaries across the organisation with doctors and pharmacists. Best-in-class medical facilities including major super-speciality hospitals, nursing homes and diagnostic clinics are available to the employees through tie-ups. It also conducts regular health check-up for all employees as a part of its occupational health initiative. It publishes a quarterly medical bulletin called 'Mediflash' for its employees. To emphasise wellness over the curative approach, CESC has

developed several platforms for building awareness and better lifestyle management for its employees: monthly 'Unit-wise Awareness' sessions, periodic 'Special Awareness' sessions, annual 'Macro Health' sessions for female employees and a 'Mega Health Awareness Programme' for all employees and their families.

However, with the arrival of COVID Pandemic, CESC experienced a rise in COVID positive cases across the organization and actions were taken for COVID control on priority basis.

A COVID 19 Support Policy was instituted to enable families of the deceased employees to lead a sustainable life.

The Company lends support to the family in either of the two ways:-

- 1. Employment:** Providing suitable employment to either the spouse or children based on qualification, experience
- 2. Financial Benefit:** The family will receive the last drawn Basic Pay till the date of notional retirement of the deceased employee on

monthly basis in addition to medical hospitalization/ insurance policy coverage for the spouse and 2 children till retirement age of the deceased employee.

The family will be compensated the Full & final settlement on immediate basis covering the Gratuity, Leave encashment, PF and insurance amount.

Awareness on COVID-19 was built through web meetings, leaflets and special issue of inhouse medical journal

Mediflash. Protection gear was made available for frontline workers and employees at risk. The Medical Department stressed on staggered work schedule and spacing, sanitization and implementation of COVID guidelines at workplace. Screening of those affected and quarantine for those in contact were meticulously ensured so that there is no panic during the Pandemic. A mammoth task to arrange for COVID isolation beds was undertaken throughout

the year. The department has been in constant touch with the health department of West Bengal for intimation of new cases and quarantine list on a day-to-day basis. It successfully arranged for prompt treatment for all affected employees in this moment of crisis where hospital beds were not available easily. The Company also initiated vaccination for employees as per eligibility guidelines from the Government of India in collaboration with various hospitals in the city.

HR Initiatives across Subsidiaries of CESC

The Human Resource policies of all subsidiaries are aligned with the Core Values of RP Sanjiv Goenka Group. The Human Resource strategy across the subsidiaries is focussed on being

recognized as the most preferred employer. The processes aim to manage and develop employee performance holistically, give regular feedback, and take appropriate actions

with a balanced approach to talent acquisition that relies on leveraging the skills and experience available with the organization.

The total employee strength across CESC Subsidiaries is 1,495 employees as on 31st March 2021.

Employee Classification	NPCL	CESC Rajasthan	MPSL	HEL	DIL	SVL	CPL
Gender	470	295	56	192	165	17	300
Male	432	258	56	190	161	17	298
Female	38	37	0	2	4	0	2

The numerous HR initiatives of the subsidiaries are discussed in the subsequent sub sections.

Employee Hiring and Induction Programmes

Aligned with CESC, its Subsidiaries endeavour to attract the best talents from premier institutes. The candidates selected to join the organization undergo a weeklong induction programme combining

classroom training, outbound programme and visit to various functions of the Subsidiary and are briefed of the Group Overview, the Core Values and about the facilities. Freshers undergo a 4 to 6 weeklong

induction and are assigned a mentor to support their learnings. The new employees hired and inducted and the corresponding turnover rate for the last 3 years are provided below.

Subsidiary Name	Employees Hired			Turn Over rate		
	FY 18-19	FY 19-20	FY 20-21	FY 18-19	FY 19-20	FY 20-21
NPCL	87	69	35	7.69%	6.64%	6.36%
CESC Rajasthan	34	69	70	1.42%	2.65%	1.01%
MPSL	NA*	30	20	NA*	3.33%	6.00%
HEL	22	22	24	3.20%	3.35%	8.33%
DIL	12	12	13	6.70%	2.68%	15.38%
SVL	0	5	1	0.00%	12.00%	4.00%
CPL	0	0	0	0.00%	0.00%	0.00%

* Data is not available

Talent Development Programmes

At CESC Subsidiaries, training initiatives for development of requisite knowledge, skill and behaviour of people are need based, curriculum based and based on specific interventions and are undertaken both online and offline. A comprehensive training plan covers all categories of employees with details about the training programmes to be covered across the year. The training plan is made considering Individual, divisional and organizational level training needs. The modes of training are both online and

offline. Few initiatives that have enhanced organizational capabilities are listed below.

- Assessment & Development Centre- CESC Rajasthan in collaboration with Thomas Assessments Pvt. Ltd., setup the centre to identify free spirited entrepreneurship by developing a robust talent pool of adroit personnel.
- Webinars and e- learning- CESC Rajasthan and NPCL offer e-learning courses to its people on behavioural and management areas through globally recognised Percipio

platform from M/s Skillsoft which offers the flexibility to learn at one's own place, time and space. E-learning courses on technical areas are being delivered in collaboration with SNTI.

- Simulator Training- Simulation based training facilities at Bikaner, a distribution licensee area of CESC Rajasthan prepare employees with various real-world scenarios to perform certain tasks or activities.

The number of man days invested by the Subsidiaries per employee are shown below.

Subsidiary Name	Training Man Day/Employee		
	FY 18-19	FY 19-20	FY 20-21
NPCL	NA*	NA*	2.00
CESC Rajasthan	NA*	0.55	0.37
MPSL	NA*	NA*	0.20
HEL	2.80	2.00	2.10
DIL	3.00	2.74	1.70
CPL	0.19	0.23	0.10

*Data is not available

Rewards and Recognitions

A rewards and recognition system encourage people for their performance in intrinsic or extrinsic ways. It brings about employee happiness, promotes loyalty and team culture and creates a strong employer brand.

The rewards include appropriate and regular financial compensation, as well as employee or team celebrations, recognition of years served, and/or milestones reached. All employees part of the CESC

Subsidiaries are eligible and an integral part of the corporate rewards and recognition celebrations on the RP-Sanjiv Goenka Group Foundation Day. Other rewards and recognition programmes are listed below.

HEL and DIL	CESC Rajasthan
<ul style="list-style-type: none"> • Aaditya- Employee of the year • Dhruv- Employee of the month • Ulka- Spot Award • Outstanding Teamwork Achievement Award 	<ul style="list-style-type: none"> • Aspirations • Metre Reader of the Month • Vigilance Performer of the Month • Best Sub Divisional Officer of the Month • Rewards for theft lead



Rewards and Recognition at RPSG Foundation Day

Employee Engagement Programmes

Employee engagements are scheduled throughout the year to engage employees through

competitions, tournaments, sports events and celebrate special days with them and their

family members. Some of these initiatives are shared below.

<p>Birthday Celebrations</p>	<p>Employees of Subsidiaries are greeted with cards, cakes, snacks and goodies on their birthday.</p>
<p>MDs Townhalls, Plant Head Communication Meetings, HR Committee Meeting</p>	<p>These forums, foster healthy two-way communication amongst the employees and the Senior Leadership Team at HEL and DIL, wherein most of the employee's issues and concerns get sorted out.</p>
<p>Global Corporate Virtual Walkathon 2021</p>	<p>HEL and DIL partnered with Vantage Circle to participate in the Global Corporate Virtual Walkathon 2021 held between 30th Jan 2021 to 1st March 2021, to promote physical fitness as well as emotional, psychological, and social well-being. The month-long initiative engaged employees in walking to sensitize about the positively impacts of walking on health. Two teams participated in the Walkathon to compete against 74 other teams globally from 24 countries and finished on 2nd and 3rd positions respectively.</p>
<p>Employees' Recreation Club</p>	<p>CESC Rajasthan invests on employees' mental and physical well-being through a recreation club for employees and their family members.</p>



Birthday Celebration

Employee Opinion Survey

The employee culture within CESC Subsidiaries promote an environment that is transparent, flexible, fulfilling, and purposeful. A host of customized events

and employee initiatives based on a deep understanding of individual needs and aspirations, backed by surveys and various communication platforms, have

helped the organization emerge as a progressive workplace that allows individuals to realize and build their potential.



The next chapter entails about the health and safety governance, procedures and engagements that influence safety culture within CESC.



Occupational Health and Safety

CESC with its vision of 'Zero Incident' recognizes its responsibility to provide and maintain a safe and healthy working environment that has an impact on the personnel and the society at large. The Company believes that every accident is avoidable and excellence in safety practices is an outcome of creating a safety culture within the organization. This is

communicated by an inherent belief that 'Good Safety is Good Business' through its Safety Vision, Safety Principle, Safety Policy and Safety Pledge Statements. In an endeavour towards 'Zero Incident', CESC commits towards maintaining the highest standards of industrial safety across its operations. The Corporate Safety Manual and the Corporate Safety

Policy along with the seven sets of Internal Safety Standards namely 'Confined Space Entry', 'Contractor Safety Management', 'Electrical Safety', 'Incident Investigation', 'Permit to Work', 'Safety Observation' and 'Working at Height' are applicable to both generation and distribution functions. The internal standards

recognize, evaluate and control any work-related hazards	save lives and protect employees from job related injuries and illnesses	promote safe and effective work practices	comply with laid down procedures and practices	comply with applicable regulatory requirement
--	--	---	--	---

Further the Corporate Safety Policy provides guidance to the organization in its' strive to:

- maintain and proactively enhance management systems to mitigate Occupational Health and Safety hazards of employees and stakeholders within control and influence
- ensure compliance to all applicable legal and other requirements, which the organization subscribes
- integrate Occupational Health and Safety standards, procedures and adapt best practices into every operational activity with assigned authority,

responsibilities and accountability at all levels for improving and sustaining safety performance

- involve all employees in maintaining a safe workplace environment through periodic review of operational procedures and safe methods of work
- develop a culture of safety through active leadership and provide appropriate competence building at all levels to enable employees in meeting Safety objectives

- incorporate appropriate safety criteria into business decisions for selection of plant, technology and performance appraisal
- ensure availability of adequate resources on time to implement the Safety Standards of the Company
- communicate policy to all personnel including all stakeholders by effective means and periodically review its relevance in line with business need of the organization



Standard Operating Procedures (SOPs) which are derived from safety policies are available for each job functions that are conducted within the operating boundary. Hazard Identification and Risk Assessments (HIRA) are undertaken for these activities, based on which risks

are assessed and classified as high, moderate and acceptable, after which risk control and minimization measures are defined to bring down the risk index within the acceptable limit. The integration of the safety precautions and procedures into the standard operating

procedure ultimately leads to the preparation of the Safe Work Procedures (SWPs) by the respective line functions in consultation with the Safety Cell. Designated line function officers approve these SWPs and put them in force. Implementation of SWP is ensured through:

- release of work permits, as applicable, based on the derived Safe Work Procedures
- corrective and preventive action against safety observations
- identification of gap in SWP implementation through

internal safety audit and corrective and preventive action by line functions department against the observations

- adherence to the Safety Consequence Management Policy against serious violation of SWP and

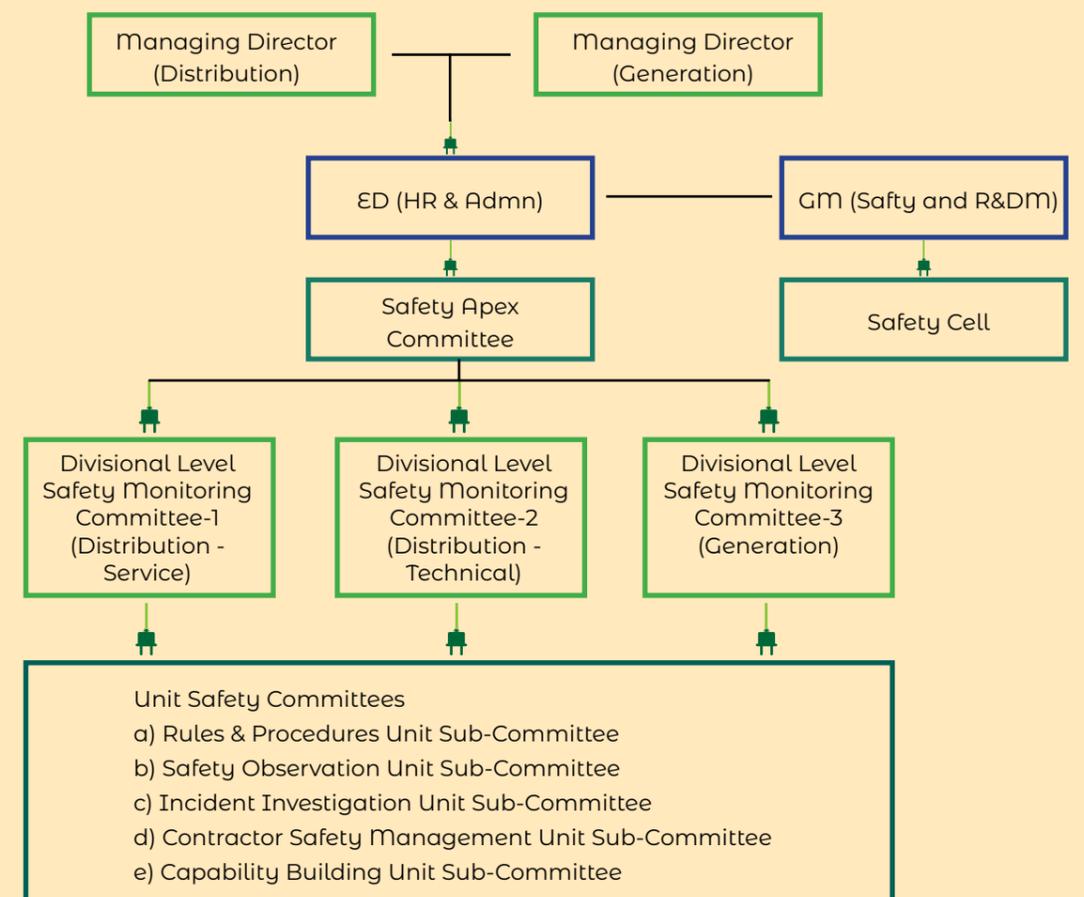
Incidents due to violation of SWP

- identification of training needs for the employees for new introductions or any change, as above, and refer the requirement to Capability Building Sub-Committee

These policies and procedures provide guidance in implementing safe work procedures, promoting a safety culture, monitoring and controlling unsafe work condition in the journey towards 'Zero Incident'.

Safety Governance

The policies and procedures are implemented by the robust safety governance structure of CESC across the power value chain as showcased in the diagram below.



The roles and responsibilities of the safety committees are provided below.

 Apex Committee	The Apex Committee comprising of the Managing Director (Generation), Managing Director (Distribution), Executive Directors/ Vice Presidents from all concerned departments and General Manager (Safety and R&DM) spearhead safety at the corporate level and are responsible for developing the overall governance structure and channels of communication, fixation of accountability and responsibility at all levels, effective implementation of the consequence management policy, assign key responsible areas to line function executives, budgeting safety initiatives, evaluate performance reports
 Safety Cell	Major role of the Safety Cell is to ensure (a) Knowledge acquisition and competency enhancement, (b) Employee involvement and employee coverage, (c) Safety system development, (d) Innovation and technology adaptation and (e) Development of standard processes. The Safety Cell is responsible for providing support to the safety committees in terms of undertaking training, capacity building on risk assessment methodology and apprise new development on risk management, encouraging employees for safety orientation through workshops, safety day celebration, slogan competition, suggestion competition, staging safety related drama, reviewing work procedures, analyse and recommend corrective and preventive actions based on analysis of incidents occurred and through gear audits and site safety audits, maintaining an updated list or having access to applicable legal requirements including regulations, rules, permits, and other requirements to Company's activities, record keeping and document management, conducting various surveys and audits through external experts and communicate policy, standards and safety performances to all personnel including all stakeholders by effective means and periodically review its relevance in line with business need of the Organization
 Divisional Level Safety Monitoring Committees	Implement recommendations of the Apex committee and provide guidance to unit level sub committees, monitor safety performances of respective departments including the implementation status of the corrective and preventive actions recommended, ensure all measurable key responsibility areas with proper weightage is allocated to line function executives. Individual divisional level safety monitoring committees for distribution (services), distribution (technical) and generation liaise with the safety cell on their respective unit level performances
 Unit Safety Committee	Permanent employees and the line function officers represent the unit safety committee for each generation station and operational wing of distribution division. The nodal line function officers are responsible for preparation of SWPs and ensuring adherence to SWPs, availability of adequate and tested personal protective equipment, safety gadgets and well stocked firefighting and first aid essentials, identifying training needs, developing a safety culture, conducting routine safety observations and implementing the recommended corrective and preventive actions identified through analysis of incidents occurred and audits by Safety Cell. The line function officers liaise with the safety cell periodically to take guidance on safety related issues and report on progress against the annual key responsibility areas

 Rules & Procedures Unit Safety Committees	Provide necessary guidance how to develop Standard Operating Procedures, Safe Work Procedures, checklist and hazard risk assessment, amend rules on basis of the analysis of incidents and ensure communication regarding the changes in work processes to the concerned teams based on which the employees are provided refresher trainings
 Safety Observation Unit Sub Committee	Facilitate/ plan for training and coaching for the safety observation process and field observation techniques for officers, data entry of the observations, including non-compliance, ensure that relevant corrective and preventive action is recommended for unsafe acts and unsafe conditions observed as well as encouraging reporting of near misses and unsafe conditions amongst employees
 Incident Investigation Unit Sub Committee	Monitor that safety incidents are reported and recorded according to the incident classification, viz. near miss, fatalities, first aid cases, lost workdays; train line managers on the investigation methodology; identify high severity high potential incidents, undertake root cause analysis of events and document procedures to investigate, prevent, minimize, eliminate and respond to potential risks and ensure subsequent implementation of the Safety Consequence Management Policy
 Contractor Safety Management Unit Sub Committee	Monitor and ensure all contractor personnel adhere to safe work procedures and use appropriate PPEs (Personal Protective Equipment) at job site, ensure all workers are provided safety training and monitor effective implementation of recommendations; corrective and preventive actions based on internal and external audit and reports from the safety cell and proper implementation of the Safety Consequence Management Policy
 Capacity Building Unit Sub Committee	Identify training needs for the employees in consultation with the human resource department, receive nominations for training needs from the line manager, facilitate review of existing safety training modules and development of new modules in consultation with Safety Cell, develop a comprehensive training calendar and arrange to provide training to all employees on the SOPs(Standard Operating Procedures) and SWPs (Safe Work Procedures) developed from time to time as well as facilitate training for the Safety Sub-committees to perform their respective roles

Supervisors leading a team of contract workers or the senior most person leading a team on behalf of the Company are part of the extended safety

organization structure of CESC. They are responsible for monitoring and ensuring all activities including electrical installation, maintenance and

repair work at public spaces, adhering to the Safe Work Procedures.

Contractor Safety Management

The contractor supervisors are overall managed and monitored by the Line Function officers; together both are responsible for implementing the scope of

work under the internal safety standard 'Contractor Safety Management'. CESC follows a six-step procedure to select contracts, manage contractor

safety and embraces the approach of 'self-aware, 'self-monitor' and 'self-manage', these are represented below.



Some enlisted contractors are already on board who are acquainted with all the procedures prevailing in CESC

and work on rate contract basis at various departments/ sections. The first three steps relating to contractor selection, contract

preparation and contract award are not applicable for them.



PPE Distribution



Fall Protection



Demonstration of Safety Gadgets



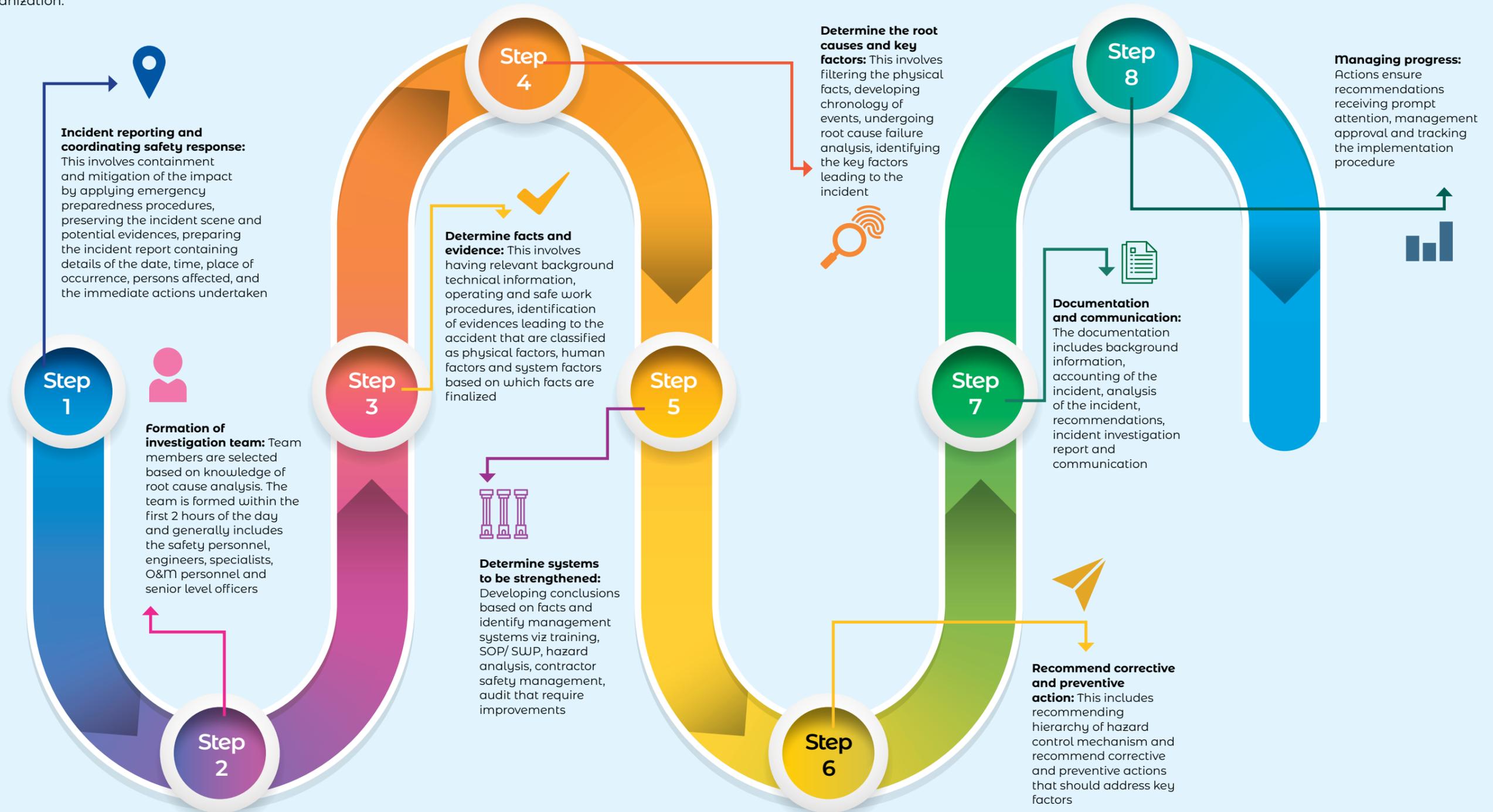
Tool box meeting for Contract workers and safety programme



Safety Demonstration

Incident Investigation Process

CESC has procedures in place to learn from past incidents and experiences. Staff trained to undertake investigation procedures as per the 'Incident Investigation Standard' carry out the 8-step process with the related department in the occurrence of an incident for the identification of the root cause and subsequent review of the SWP. Proposed corrective and preventive actions are implemented within a stipulated timeframe, and the entire procedure documented becomes of a part of the learning curve for the organization.



Health and Safety Performance

All lost time incidents and fatalities are timely reported by the concerned department to the statutory authorities and other concerned stakeholders including the top management. The 'Safety Observation

Standard' establishes the internal safety standard that guides the Safety Observation Unit sub-committee, line function officers and plant safety officers to identify and capture unsafe acts in reference to the outlined

SWPs and unsafe conditions at the workplace. Employees are encouraged to report near misses and unsafe conditions on the "click to safety" online portal and the suggestion box.

Major Cases				Minor Cases			
Name of Generation Unit	FY 18-19	FY 19-20	FY 20-21	Name of Generation Unit	FY 18-19	FY 19-20	FY 20-21
BBGS	1	1	1	BBGS	22	4	6
SGS	1	0	0	SGS	9	5	0
HEL	0	0	1	HEL	35	19	9
DIL	1	0	1	DIL	13	19	5
CPL	2	0	1	CPL	2	0	0

Major Cases				Minor Cases			
Name of Distribution Unit	FY 18-19	FY 19-20	FY 20-21	Name of Distribution Unit	FY 18-19	FY 19-20	FY 20-21
CESC Kolkata	0	0	0	CESC Kolkata	33	17	16
NPCL	1	0	0	NPCL	0	0	0
CESC Rajasthan	0	4	3	CESC Rajasthan	3	14	5
MPSL	NA*	NA*	0	MPSL	NA*	NA*	0

* Data is not available



ICC Occupational Health and Safety Award - Champion 2020

The dedicated and synergized efforts focused on improving the safety performance by the safety committees and the robust safety systems in place is demonstrated through the numerous awards and recognitions received over the years.

Award



BBGS

- ICC National Occupational Health & Safety Awards 2020 (2nd Prize)
- ICC Innovation Award on Prevention Strategy for COVID-19 at Workplaces (2nd Prize)
- Fame Safety Excellence Award 2020-21 (Platinum)
- FICCI Safety System Excellence Award, 2019(Gold)
- Institution of Engineers (India) Safety Innovation Award 2019
- CII SHE Certificate of Appreciation, 2019-20
- Apex India OHS Gold Award, 2019-20
- Fame OHS Award (Platinum), 2019-20
- Apex India OHS Award 2018-19

SGS

- ICC Innovation Contest on Prevention Strategy for COVID-19 at Workplaces – Best Workplace Practices – Special Jury Appreciation (in the year 2020)
- ICC National Occupational Health & Safety Awards 2020 – Silver Award Winner
- ICC National Occupational Health & Safety Awards 2019 – Silver Award Winner
- CII ER SHE Excellence Awards 2018 – Certificate of Appreciation
- Greentech Safety Award – Platinum Award in the year 2017
- Greentech Safety Award – Gold Award in the year of 2018, 2016, 2015

HEL

- Winner of ICC Innovation Contest on Prevention Strategy for COVID-19 at Workplace- 2020
- National Safety council award 2019
- ICC national OHS awards 2018

DIL

- Apex India Excellence Award, 2018
- Grow Care India 4th Annual Excellence Award 2020
- ICC Innovation Contest, 2020

Health and Safety Training

Though the safety teams have made significant improvements in the health and safety performance through execution of their roles and responsibilities and adopting the DuPont Safety Management Systems, however, it is imperative to have Behaviour Based Safety programmes to penetrate at the grassroots level

for the generation stations and distribution units.

The purpose of training is to ensure building competence of personnel working at the Company on safety norms, processes and practices so that they perform jobs effectively along with safety

compliance. The scope of training covers all categories of personnel (own employees, contractors' employees and/ or any other person engaged in the Company's job) across generation and distribution functions. Safety training process has the following steps:



Behaviour Based Safety trainings form an essential part of the overall safety process with the objective to provide a safety

orientation at individual level based on the principle of safe process and safe action. In addition to behaviour-based

trainings, job safety trainings based on the Safe Work Procedures (SWPs) are also demonstrated, some of which are

 First Aid	 Fire Safety	 Near Miss Reporting and Safety Observations	 Personal Protective Equipment	 Emergency and Disaster Preparedness
 Fall Protection	 Confined space	 Hot Work	 Lock Out Tag Out and Permit System	 Road and Vehicular Safety
 Scaffolding	 Machine Guarding	 Electrical Safety	 Hazardous Chemicals Management	 Ergonomics
 Tool Box Meeting	 Underground cable jointing and laying	 Overhead installation practices for distribution network	 Cable termination at Pillar Boxes and service cut-outs	 Meter installation and replacement

During FY 2020-21, considering the restrictions in protecting the employees from the coronavirus by abiding

guidelines established by the World Health Organization and the Government of India, the trainings have been limited in

comparison to previous financial years. Summarized below is the safety training performances:

Health and Safety Training Man Days- permanent Employees*			
Name of Generation Station	FY 20-21	Name of Distribution Unit	FY 20-21
BBGS	72.00	CESC Kolkata	1389.00
SGS	14.00	MPSL	91.00
HEL	27.75	NPCL	58.16
DIL	8.00	CESC Rajasthan	24.00
CPL	30.00		

*Note: Due to the pandemic situation in 2020-21, safety training programs were restricted in all stations.

One such safety initiative of DIL that promotes safety culture and builds safety awareness is showcased below.



Inauguration of the Safety Park at DIL

A "Safety Park" was inaugurated at DIL to train and make aware the employees and visitors about the safe working practices at various work locations. This includes models of scaffolding, railing, platforms, staircases to name a few developed as per standards of DIL.

Safety Initiatives

'Prevention is better than cure', it is with this thought CESC implements innovative safety practices through internal brainstorming and national benchmarking. Benchmarking visits have been made at various reputed organizations within the country, with the aim to assess other companies' safety procedures and practices. CESC adopted the best practices and procedures, re-engineered them to suit in its own environment and implemented for enhanced job and process safety. Some new initiatives for safety devices, tools, practices and innovations are as follows: -

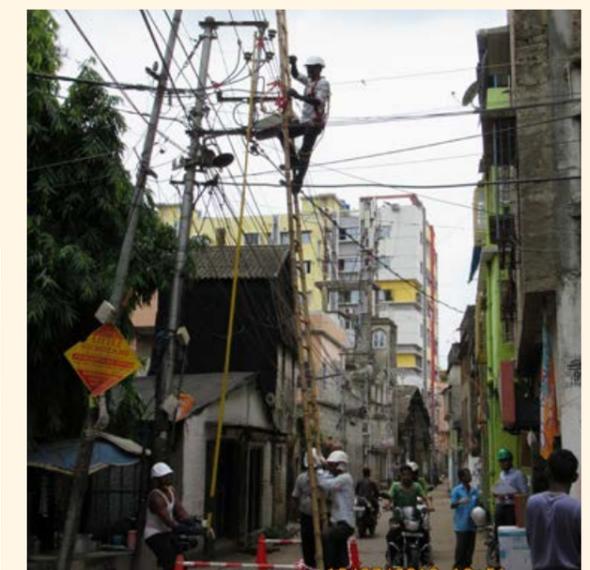
- Unmanned level crossing alarm system in generation stations
- Automated Fire Ball in unmanned areas in generation stations
- Hydrogen Leakage Detector in generation stations
- Static electricity discharge plate at entrance of hydrogen storage room in generation stations
- Insulated 6.6 KV floor paint in generation stations
- Polypropylene Hydrazine transfer pump in generation stations
- Audio system at track Hopper Area in generation stations
- Dip lorry trolley in generation stations
- Oil barrel shifter in generation stations
- Cable termination guard in distribution units
- Flash test equipment in distribution units



Physical safe zone with hard barricading

- 5-way and 6-way shorting clips in distribution units
- Telescopic OH line earthing cum testing rod in distribution units
- 400v test lamp with probes in distribution units
- Insulated crowbar in distribution units
- Safe Zone creation with hard barricading in distribution units

The Safety Cell publishes half-yearly safety magazine - Surakshabarta in a vernacular distributed to all workmen including the contractual personnel and the web based monthly safety newsletter - Spotlight which is available in the Safety Portal on the CESC intranet. These publications include new events and incidents related to safety issues that have taken place in CESC, site audit scores, new initiatives, learning from incidents, good practices and other safety related information. In addition, various departments/ sections/ units publish their own safety newsletter highlighting all safety related information related to them. All these activities essentially contribute to creating a safety culture.



Use of Telescopic Voltage Testing cum Earthing Rod and 6-Way Shorting Clip at Site

Creating a Safety Culture

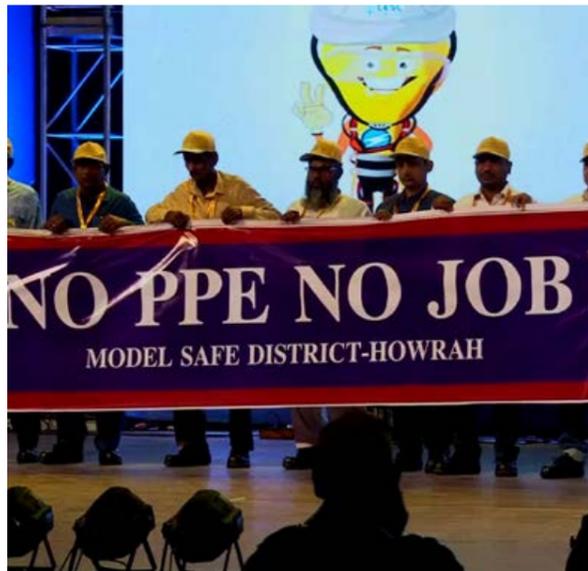
Various signages, posters and standees at prominent locations in all offices, generation stations and distribution units create awareness on safety actions amongst employees. Large Format Displays (LFDs) have been set up at strategic locations at various site offices, stations and plants for knowledge and information sharing. The safety culture is imbibed within every employee, through various behaviour-based safety programmes such as but not limited to slogan competitions, safety suggestion competitions, poster competitions, safety quiz, rallies and drama competitions with motivational reward programmes for exemplary safety behaviour and safety performance, through unit safety

days at various departments/ sections and on special days like World Environment day, World safety day and National Safety Week.

The Safety Cell organises the Central Safety Day celebrated annually at Science City Auditorium as a two-day event. It propagates safety awareness amongst the permanent and contractual employees. External distinguished guests including state ministers, representatives from the office of the Power Department and Electricity Regulatory Commission, Factory Inspector, Chief Electrical Inspector, Fire & Emergency Services personnel representatives from other electrical utility services (like

WBSEDCL, WBSETCL and DVC) and eminent professors from educational institutions grace the occasion. The Gala event has lot of attractions listed as follows:

- Stalls are set up to showcase safety initiatives of different departments
- Past incidents are analysed and lessons learned are shared
- Films on Safety are screened
- Dramas on Safety are staged
- Safety related slogan & suggestion contest winners are awarded
- Identified teams/ gangs from both distribution and generation divisions, who had best safety performance throughout the year, are awarded



Safety Day Celebration



Safety Rally



Employee Spot Award



Fire Safety Week



Oath Taking on Central Safety Day



Prize Distribution on Central Safety Day



Safety Quiz



Stall at Exhibition on Central Safety Day

Annual health check-ups are mandatory for all employees and this forms the basis of the health register maintained containing potential occupation related illnesses and threats for employees based on

which protective measures are developed and the roles and responsibilities of the employee is determined. CESC has an elaborate medical facility for its employees and even for their family members through its

medical department and takes utmost priority by abiding the government norms to overcome an unprecedented pandemic in the form of COVID-19. The interventions implemented at the premises are as follows: -



CESC expects these learnings transcend its employees to the members of their society, resulting in stronger communities that can overcome the virus. The next chapter showcases the numerous

social initiatives that the CSR team have implemented for the community. CESC's social initiatives is considered to be a two pronged sword, the initiatives not only aided the local community to alleviate

from societal evils but also ensured that CESC's operation is conducted in a harmonious way by reducing distribution losses, benefitting both the Company and the community around the area of operation.

Strengthening Communities





CESC believes that strong communities are the underpinning of a successful and responsible business. Multi-pronged interventions in partnership with non-governmental organizations (“NGOs”) results in creating a long-term sustainable impact. CESC upholds its brand equity, builds trust and harmonizes its relationship with the communities in which it operates by listening to their voices, responding to their needs and actively participating through engagements that are designed to facilitate the provision of these needs and are in the purview of the Corporate Social Responsibility (“CSR”) policy.

The CSR policy delineates its social commitment towards creating long term sustainable value, and this forms the guidelines in defining CESC’s programme designs and focus areas for the CSR committee, the same have been listed below:

- to be a socially responsible Indian Company empowering lives by providing access to education, healthcare, art facilities, skill development, livelihood opportunities to improve the overall quality of life
- to actively contribute to the social and economic development of the communities in which the Company operates. It wishes

to build a better, safer and sustainable way of life for the weaker sections of society and contribute to the overall human development

- to promote inclusive growth fired by free-spirited entrepreneurship and community development
- to be recognized for the Company’s strong commitment towards the community and
- to uphold the values of community service

Focus Areas

Pursuant with its social commitment and in alignment with the United Nations Sustainable Development Goals (UNSDGs), and the national development missions, the following programmes has been identified for implementation during FY 2020-21.



Theme 1: Education and Child Protection

Programmes

- Roshni
- Hamari Awaaz
- School Build

Focus Areas

- Facilitating underprivileged children in urban slums to acquire quality education
- Creating awareness on child protection and child rights and prevention of child abuse and violence
- Provision of access to basic healthcare services/facilities
- Providing conducive and child-friendly environment for learning and development by improving school infrastructure



Theme 2: Health

Programmes

- Suswasthya
- Upgradation of Public Health Facilities

Focus Areas

- Emphasizes on improvement of maternal and child health care in urban slums
- Improving health related infrastructure in public health facilities



Theme 3: Environment

Programmes

- City Beautification Project

Focus Areas

- Maintenance of green verge on some of the major arterial roads of Kolkata in its commitment to protect the environment of the city



Theme 4: Skill Development

Programmes

- Saksham
- Prayas
- Udaan

Focus Areas

- Undertaking Skill Development and Employment Generation programmes



Theme 5: Access to Clean Drinking Water, Sanitation and Hygiene

Programmes

- Nirmal Abhiyan
- Nirmal Sankalp
- Nirmal Kolkata

Focus Areas

- Creating a child-friendly environment in government schools by providing safe drinking water and sanitation facilities
- Providing access to safe drinking water and sanitation and conducting health awareness camps
- Providing access to hygienic sanitation facilities through its Community sanitation projects

Corporate Social Responsibility Strategy and Procedures

The corporate CSR strategy and procedures of CESC are well defined and aligned to the vision of the organization. The steps showcased below maps out the approach while selecting and engaging with stakeholders and implementing various CSR projects.

 <p>Step 1: Stakeholder Identification</p>	<p>Stakeholder identification involves the use of independency, responsibility, prioritization of diverse perspectives and alignment of community tensions to thematic areas defined by the CSR policy. The community programmes focus on vulnerable populations comprising of children, youth and women from the slum population of the project location.</p> <p>CESC regularly interacts with government officials, local administrators, non-government agencies, and communities to identify the needs.</p>
 <p>Step 2: Need Assessment</p>	<p>The need assessment studies, and research help in defining clear objectives out of societal needs. In addition to the stakeholders benefitting from the project CESC also engages with local councillors, clubs, and other community members on monthly basis before project initiation and during mobilization to define the thematic areas of intervention and design the long-term plan with the NGO partner.</p>
 <p>Step 3: Partner Selection</p>	<p>CESC evaluates NGO partners based on parameters inclusive of but not limited to</p> <ul style="list-style-type: none"> • Geographical presence and social sector expertise • Financial stability • Governance and Control • Feedback from beneficiaries and stakeholders • Half yearly programme and financial review system <p>Based on the suitability of the partner for a given programme approval from the CSR committee and the Board is sought for before signing the memorandum of understanding and subsequently deployment of funds. During FY 2020-21, the Company partnered with the following NGOs</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div data-bbox="460 1522 667 1837" style="text-align: center;">  <p>CINI Child In Need Institute</p> <p>Initiatives- Roshni, Hamari Awaaz</p> </div> <div data-bbox="742 1522 1023 1848" style="text-align: center;">  <p>CLPOA support for children</p> <p>Initiative- Suswasthya, Nirmal Abhiyan, Nirmal Sankalp and Skill Development Initiative Prayas</p> </div> <div data-bbox="1083 1564 1320 1816" style="text-align: center;">  <p>NSHM Udaan SKILLS FOUNDATION</p> <p>Initiative under Skill Development- Saksham and Udaan</p> </div> </div>

 <p>Step 4: Baseline Survey</p>	<p>The purpose of the survey is to derive basic information about the project, develop a database of the target beneficiaries for creating linkages with the intended services and facilities, and formulate a prioritized plan of action based on the findings.</p> <p>Systematic random sampling of the households residing in the slum communities located at Howrah, Tiljala, Kamarhati and Titagarh are undertaken to approximately reflect the various demographic representations. The sample size varies between 10% to 25% of the target beneficiary groups depending on the size of the programme.</p> <p>The respective project staff are trained to undertake interactions door to door and vide focussed group discussions to collect data and information on various parameters including but not limited to the demographics, literacy level, enrolments and dropouts at local schools and anganwadis, practices of availing healthcare services like antenatal check-ups, postnatal check-ups, vaccination and immunization, and institutional deliveries.</p> <p>Survey enumerations also involve observation of activities like hygiene practices, availability of adequate sanitary and drinking water facilities.</p>
 <p>Step 5: Monitoring and Evaluation</p>	<p>Each programme has defined targets, timelines and measurable indicators. NGO partners provide monthly activity reports and half yearly monitoring reports to CESC along with photographs, videos and financial statements. Regular monitoring and evaluation are carried out through home visits and assessments especially for skill development initiatives.</p>
 <p>Step 6: Exit Strategy: End Line Assessment</p>	<p>The end line assessment involves the same stakeholder group and same set of parameters on basis of which CESC evaluates baseline results to measure impact on completion of the project duration. These are undertaken through third party. Some key achievements of projects undergoing end line assessment during FY 2020-21, has been the significant improvement in the effective functioning of the anganwadis and linkages to healthcare facilities to the community of Topsisia Tiljala area in the Roshni programme and improvement in the overall hygiene practices at the Titagarh municipality as part of the Nirmal Sankalp programme.</p>
 <p>Step 7: Communication</p>	<p>CESC engages in constant dialogue with the community and collaboratively design interventions to address concerns. The Company has a sound grievance redressal process. It involves the process of systematically receiving, investigating, addressing and closing out complaints from affected communities in a timely, fair, transparent and consistent manner.</p> <p>CESC releases quarterly newsletters, annual reports and undertakes press release on important developments to keep its stakeholders informed.</p>

Theme 1: Education and Child Protection

Project: Roshni

CESC views maternal undernourishment and education of children are two factors that are key to a child's overall growth and development. Maternal undernourishment has a detrimental consequence on the health and survival of the mother and the new-born child. Stunting and low weight (wasting) of children have been a pressing challenge nationally. Adequate nutrition and prenatal care have the potential to overcome short-term and long-term health and nutrition criteria of both the mother and the child. CESC's alignment to ICDS programmes at local anganwadis are key enablers to bridging the nutrition gap and providing the necessary pre-schooling to children.

As per the Global Nutrition Report 2020, "many forms of malnutrition affect the most socially and politically powerless groups: women, children, ethnic minorities and those less educated or living in poverty. Exposure to these inequity determinants and their impact on people's wellbeing is often long term and cumulative, rather than episodic." Hence for CESC reducing inequalities through enrolment of these children to the formal education system and continued learning beyond secondary education is vital to the long-term plans

in addressing nutrition and healthcare issues.

CESC in collaboration with the Child in Need Institute had launched the programme Roshni in 2015 with the purpose of addressing maternal and new-born child health, and nutrition.

Additionally, the beneficiaries are also sensitised on scientific aspects of rituals such as baby showers, weaning ceremonies, Haate Khori (initiation ceremony) to name a few. Children who had dropped out have been mainstreamed into formal education.

A population of over 24,000 people from 4,917 households are covered under the programme, that has linked them with government hospitals and Urban Primary Health Centres (UPHCs). Children and mothers have been linked with Integrated Child Development Scheme ('ICDS'), Janani Suraksha Yojana ('JSY') and other services.



Haate Khodi

As next steps going forward the programme aims to benefit 4,700 children between 0 to 18 years by

- 1** ensuring early childhood care and education for 60 to 70 children between 3 to 6 years age and linking them with formal education
- 2** enhancing scholastic skills of 40 to 50 children studying between 2nd to 5th standard in the areas of reading, writing and arithmetic in primary level
- 3** improving retention of children in school system by providing remedial support towards 80 to 100 vulnerable children studying between 8th to 10th standard
- 4** ensuring safe motherhood for 3,500 women and childcare to 1,050 children by facilitating safe delivery, complete immunization and monitoring nutrition level of pregnant and lactating mothers, and children below 5 years
- 5** improving mental health of mothers, children and adolescents

Outcomes Achieved in FY 2020-21:

- 52%** Children from ICDS enrolled in nearby schools
- 90%** children of 6 to 14 years attend fulltime formal school.
- 90%** children continue formal education after completion of secondary levels
- 90%** of community members avail health services from service providers
- >96%** women receive available services of mother and child health issues from hospital
- 78%** women avail 4 Antenatal checkups
- 80%** women practice learning from baby shower, weaning ceremony, nutrition Camps, ECED Day
- 98%** community members exhibit practice of hospital registration, institutional delivery, immunization of pregnant women and children and consuming nutritious diet
- 45%** of community members enabled to procure all relevant documents for JSY scheme



Matriyo Boron

Matriyo Boron was organized on 3rd December 2020 to create awareness on the duties of pregnant women, their husbands and care givers of the family during the first trimester of pregnancy. 15 pregnant women along with their husbands were sensitized on safe motherhood



Nutrition Camp

ICDS workers collaborated with Roshni initiative to demonstrate the process of cooking nutritious food using locally and economically available ingredients through nutrition camps. The event was observed by 20 mothers and 19 adolescent girls

Stories of Change

CESC is proud to disclose some enthralling stories about the community welfare intervention.



Md. Gulam Mustafa, a 11-year-old boy living with his mother and grandmother was referred by the local Counsellor to the Roshni Project, amidst concerns of the family financial issues resulting in Gulam dropping out of school. He was enrolled to the Social Welfare Organization Primary School where he was admitted to an age-appropriate grade. On receiving education support, Gulam has set education as his goal in life to support his family.

Project: Hamari Awaaz

CESC understands that children belonging to economically weaker sections of the society are vulnerable to exploitation and harassment of various

forms including but not limited to abuse, trafficking, child labour, child marriage, undernourishment and deprived education.

CESC conducted focussed group discussion with club members, Integrated Child Development Service ("ICDS") workers, health workers,

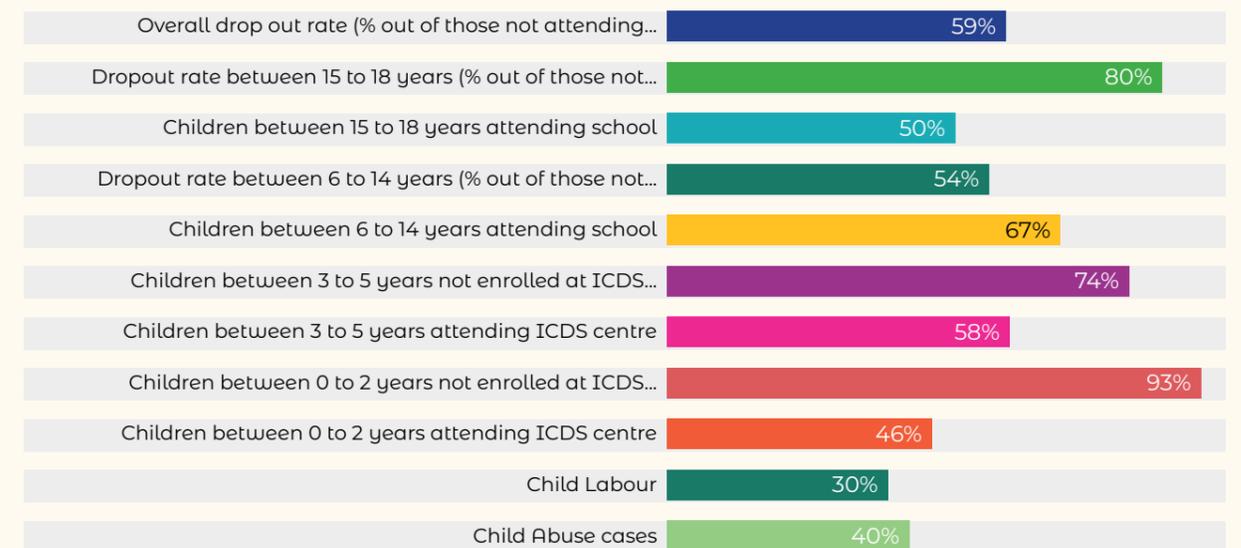
adolescent group members and community women. The targeted area consists of a population that faces challenges in the form of dropouts, low skill, unemployment, underemployment and atrocious working conditions. Due to lack of adequate livelihood

opportunities and guidance, the adolescents and the youths are again forced to join the tide of informal sector as hawker, sweeper, and tea stall worker to name a few. Hence, the Hamari Awaaz programme was conceived to contribute towards community safety net and

making children resilient through inclusive and sustainable education and child protection programme intervention.

The baseline survey undertaken in 2016 establishes the current status in the Tiljala area of the Kolkata Municipal Corporation.

Baseline Status



In response to the survey findings and in alignment with the Integrated Child Protection Scheme ("ICPS"), CESC launched Hamari Awaaz in 2016 in collaboration with NGO partner Child in Need Institute to voice for the protection of the rights of children on behalf of 9,580 slum dwelling households at Ward No 66 of the Topsis Tiljala area of Kolkata Municipal Corporation.

The initiative aims at achieving its vision to make Kolkata a child friendly city, by

- designing household level identification and referral systems within households to establish community

level early identification and migration framework.

- reducing child vulnerability issues like child labour, child marriage, child abuse, school dropout rate in the community through public and social media awareness campaigns (like observing the Child Rights Convention Week) driven with the support of leaders of children's Community Watch Group and organizing training programmes for employers
- enrolling dropout children from 7-10 years from Special Training Camp through Bridge Course method

- promoting community and adolescent health through facilitation of the practice of availing basic health care services and generating awareness
- ensuring community participation in designing child protection strategies (in the form of imparting life skills training, celebrating issue based events and introducing child rights and protection as part of school curriculum) through involvement of local government, local clubs / CBOs, service providers, employers, educational as well as vocational institutions and other essential services.



CRC Week 2020 - Children participated in 'Fun with Colours'

Observing Child Rights Convention (CRC) Week

CRC Week is celebrated between 14th and 20th November 2020 to support children in the continuity of their learning process as well as keep the children protected from anxiety and stress. CESC engaged with 235 children through various activities such as self-defence training, art and craft and cultural programmes.

A mass awareness programme was organized on child rights and protection issues through mobile vans that reached out to 6,000 people.

Outcomes achieved in FY 2020-21

90%

of children enrolled through Bridge course mainstreamed into formal education

40%

children have reduced learning gap

80%

adolescents learnt about their rights and entitlement

100%

of referred child labour cases have been rehabilitated, and the same has been ensured through Vigilance Committees and Children's Groups

6

Children's groups consisting of 120 members strengthened

Stories of Change

CESC is proud to disclose a heart-warming story from this community welfare intervention.



Zarina, aged 12 years lives with her parents and siblings. Due to financial insecurity she was forced to take up work in cutting straps for slippers despite her keenness towards education. Being identified as a dropout by the Hamari Awaaz team, Zarina was once again able to live her dream and desire of completing formal education.

Project: School Build

CESC understands that providing conducive and child-friendly environment for learning and development is essential for ensuring 100% enrolment in schools and low dropout rate. This has been facilitated through various renovation and repair activities for government schools while upgrading existing infrastructure through development of playgrounds, bicycle stands, libraries, drinking water facilities, benches and computer facilities in 8 schools. During FY 2020-21, CESC has also undertaken renovation and repair activities to reconstruct

the Satish Chandra Memorial School in Budge Budge which had been damaged by the super

cyclone Amphan. **Through such initiatives more than 9,000 children have been benefitted.**



Upgradation of School Library

Theme 2: Health

Suswasthya

Safe motherhood and child survival programme integration are essential for overcoming the high infant & child mortality as well as maternal mortality. Suswasthya is an initiative of CESC in collaboration with City Level Programme of Action for Street and Working Children focussing on improving the

health and nutrition status for pregnant women, lactating mothers, and children in 0-6 age group residing in urban slums of Kamarhati municipality. The programme emphasises on improvement of maternal and child health care by generating awareness on ante-natal care, intra-natal care, post-natal care,

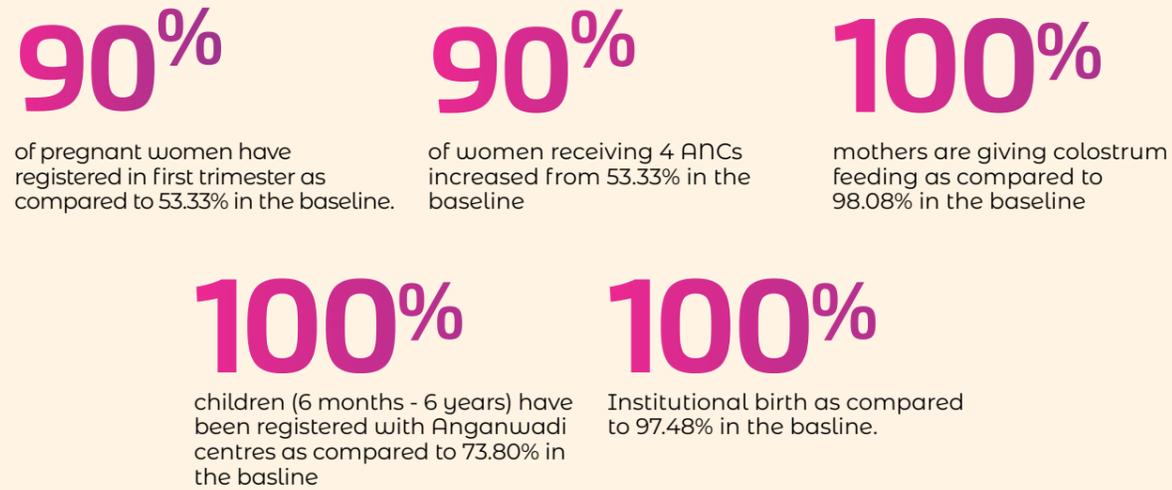
immunisation, ORS distribution, institutional delivery, nutrition, hygiene and strengthening linkages between government health services and communities. **Since inception the programme has benefited more than 5,500 beneficiaries.**



Intensified Diarrhoea Fortnight

Between July 11, 2020 to July 23, 2020 under the Suswasthya Project. CESC and City Level Programme of Action for Street and Working Children in partnership with the Health Department of Kamarhati Municipality, distributed ORS to the community residing at Ward No 1, 3, 4, 5 and 6 vide home visits.

Outcomes Achieved in FY 20-21:



Stories of Change

CESC is proud to disclose an inspirational story about the community welfare intervention.



Guria Fatima, a resident of the Balu Talab slum of the Kamarhati municipality is an active member of the Mahila Samity formed under the Suswasthya programme. Becoming aware on health and nutrition, mother and child health and the available government schemes, she has been a catalyst for many in her neighbourhood at times of emergency. She has accompanied more than 20 beneficiaries suffering from health problems to Sagor Dutta Medical College and Hospital.



Orientation of Anganwadi workers under Suswasthya Programme

Upgradation of Public Health Facilities

CESC understands the importance of having available and accessible healthcare facilities. In support of Birajlakshmi Subsidiary health centre located at Budge Budge, CESC has facilitated construction of pathology lab in the health centre. CESC has also provided

grants for procuring basic infrastructure to provide comfort to patients and preserving medicines in addition to renovation of rooms.

CESC has been long term supporter to the Titagarh Maternity Home and Hospital

and has over the years facilitated in improving the maternity ward and operation theatre, setting up ENT, ophthalmology, dialysis and neo natal intensive care unit.

Theme 3: Environment

Project: City Beautification

The Fountain of Joy is a special initiative of CESC inaugurated in 1991 during the Calcutta- 300 celebrations. at the Maidan which is in close proximity to the Victoria Memorial.

The concept of the three-tier cascading fountain pool with a musical fountain in the upper pool, between the architectural and dynamic fountains is unique to the city that rejuvenates the residents at the city including

tourists. The musical fountain uses Digital Multiplex protocol by a computer with embedded software that allows integration of musical choreography with water features, light and sound, with 26 pumps of different capabilities. The average water display is approximately 15,800 litres per minute, with the central nozzle spraying water to a height of 25 m. Different colours dance to the tunes of the musical beats which is a spectacle that can only be compared to the Brindavan Gardens in Mysore.

This piece of art is listed amongst the top 26 incredible water displays in the World by a travel portal loveexploring.com.

CESC has continued its efforts to beautify the city of Kolkata even today by maintaining green verge on some of the major arterial roads of Kolkata in collaboration with the Kolkata Municipal Corporation, in addition to which a children's park was developed in the Calcutta Medical College and Hospitals for children afflicted with thalassemia.



Fountain of Joy

Theme 4: Skill Development

CESC understands that empowerment of the marginalized youth will unlock economic growth potential within a nation. In pursuit of bridging the current skill gap on basis of local industry requirements and improving the quality of life for these individuals and their families, CESC is partnering with NGOs - City Level Programme of Action for Street and Working Children and NSHM Udaan Skills Foundation.

CESC in partnership with City Level Programme of Action for Street and Working Children, has been driving training centres under the skill development

programme called Prayas in the municipalities of Howrah and Kamarhati. In addition, CESC in partnership with NSHM Udaan Skills Foundation runs separate training centres under the skill development programmes - Saksham and Udaan - in Tiljala, Garden Reach and Khidderpore to provide multiple skill offerings.

In FY 2020-21, 910 youth in Howrah, Tiljala, Kamarhati Garden Reach and Khidderpore enrolled for various skill training programmes. These programmes are supplemented with career counselling sessions and personality development sessions that include goal

setting, time management, leadership and honing to English communication. The Company expects that the programme will increase confidence within the youth and empower their families.

Aligned with the National Skill India Mission, the livelihood programmes focus on providing vocational training courses including tailoring, beautician and AC repair to 8th pass candidates, computer and advanced excel to 10th pass candidates while driver training course is offered for youth not completing their 10th grade. Details of the skill training offerings are listed below.

Aligned with the National Skill India Mission, the livelihood programmes focus on providing vocational training courses including tailoring, beautician and AC repair to 8th pass candidates, computer and advanced excel to 10th pass candidates while driver training course is offered for youth not completing their 10th grade. Details of the skill training offerings are listed below.

Beautician Duration : 120 hours	Tailoring Duration : 120 Hours	AC Repair Duration : 120 Hours	Retail Management/ Computer Skills and Advanced Excel Duration : 120 Hours
<ul style="list-style-type: none"> ✓ Prepare and Maintain Work Area ✓ Provide Basic Skin Care Treatment ✓ Carry out Basic Epilation Services ✓ Provide Manicure & Pedicure Services ✓ Assist the Beautician Performing Beauty Services ✓ Maintain Health and Safety at the workplace 	<ul style="list-style-type: none"> ✓ Common tools and Workshop rules ✓ Hand Sewing ✓ Techniques of Measurement and Shaping ✓ Patterns ✓ Garment Making ✓ Estimate of Materials & Costing of Finished Products ✓ Product Quality in Stitching ✓ Maintain Work Area, Tools and Machines ✓ Maintain Health Safety and Security at Workplace 	<ul style="list-style-type: none"> ✓ Basic Principles and Laws of Refrigeration and Air Conditioning ✓ Basic Workshop Calculation ✓ Basic Function, Types and Classification of Compressor, Condenser ✓ Ventilation System ✓ Gas Charging and Recovery ✓ Electric Wiring ✓ Refrigeration Service Tools ✓ Servicing Refrigerant Control Device 	<ul style="list-style-type: none"> ✓ Fundamentals of Computer ✓ Basic Computer Knowledge ✓ Basic and Advanced Applications of MS Word ✓ Basic and Advanced Applications of MS Excel ✓ MS Power Point ✓ Live Project/Exposure visit

Stories of Change

Some of the heart-warming stories of the youth benefitted under the programme have been shared in the section below.



Farheen resides in the slums of Howrah along with her family comprising of five members. Her father, a street vendor earns a meagre income which is insufficient to fulfil family needs including that of Farheen who has completed her higher secondary education and aspired to study further. On successfully completing her course at the Prayas skill centre in Howrah, Farheen feels confident and motivated of her abilities. She currently works as a tele-caller at Vishnu Solutions earning Rs 8,000/- per month



Danish completed his graduation B.Com and dreamt of working in a corporate office. He was unable to get a decent job and wanted to support his family of six members financially. He joined the Basic Computer with Tally and GST course at the Saksham centre. He currently works with Netscribes Pvt. Ltd earning Rs 11,200/ month.



Students Receiving their Certificates under Saksham Programme

Theme 5: Access to Clean Drinking Water, Sanitation and Hygiene

CESC understands that access to safe and affordable drinking water and improved sanitation is essential for humans to lead a healthy, dignified and productive life. Through Nirmal Sankalp, Nirmal Abhiyan and Nirmal Kolkata programmes the Company seeks to advocate a need based and community driven approach to address emerging challenges pertaining to water quality and provision of sanitation and hygiene facilities.

Project: Nirmal Sankalp

Aligned with the Swachh Bharat Mission and the Nirmal Bangla Mission, Nirmal Sankalp programme was launched in 2014 by CESC focussing on improving the availability, usage, quality and sustainability of water and sanitation facilities in 6 wards under the Titagarh municipality covering 28,608

people with the objective of making the municipality 100% open defecation free. **So far 5,958 households have benefited from the 12 'Pay and Use' sanitary complexes built under the programme alongside which several activities are conducted to increase awareness on**

sanitation and hygiene thereby leading to a behavioural change.

An Impact Assessment was carried out in August 2019 for five Wards (Ward Nos 1, 2, 3, 10 and 13) of the Titagarh municipality. Some of the significant changes are shown below.

97%

and more population have been using the toilet facilities

98%

or more of the total population across the five wards have been reached to meet the desired objective of Zero Open Defecation free communities

70%

decrease in cases on diseases due to poor hygiene and sanitation, considering improvement in hygiene practices and limited open defecation

98%

users are happy with the electricity supply in the toilet blocks along with the audio-based information on health and hygiene issues

90%

of the women and adolescent girls have expressed their positive reactions to incinerator placed in the toilet blocks

98%

and above users are satisfied with the ease of access and operation timing of the toilet blocks

Nirmal Abhiyan

CESC and City Level Programme of Action for Street and Working Children through the Nirmal Abhiyan programme also works towards addressing WASH (water, sanitation and hygiene) issues at government schools in Kolkata and its neighbouring areas by:-



Toilet Block under Nirmal Sankalp Programme



Activities under the Programme

- | | | | |
|---|---|--|---|
| <p>1</p> <p>Supply and storage of water for drinking and hand washing purposes</p> | <p>2</p> <p>Provision of water treatment utility</p> | <p>3</p> <p>Construction and upgradation of adequate, safe, hygienic and inclusive sanitary facilities separately for boys and the girls</p> | <p>4</p> <p>Provision of convenient handwashing facilities to ensure personal hygiene practices are followed</p> |
| <p>5</p> <p>Responsible management and disposal of human and sanitary waste</p> | <p>6</p> <p>Health and safety consideration through renovation and repair of school infrastructure</p> | <p>7</p> <p>Conduct water sample testing and undertake site visits for monitoring maintenance, involving the municipality and Sarva Siksha Mission (SSM).</p> | <p>8</p> <p>Institutionalizing WASH planning and implementation practices through training of teachers, the Child Cabinet (comprising of 21 children per school) and parents</p> |



Improving Sanitation Facilities under Nirmal Abhiyan



Bio-Toilets Installed under Nirmal Kolkata Programme

World Menstrual Hygiene Day

On May 28 2020, an online orientation programme was organized for adolescent girls where the significance of Red Dot International

Campaign was shared. The attendees were sensitized on the importance of providing a change room in the community toilet block and the

use and disposal of sanitary napkins. The use of sanitary napkins in some communities around HEL have improved from 55% in 2015 to 85% in 2021.

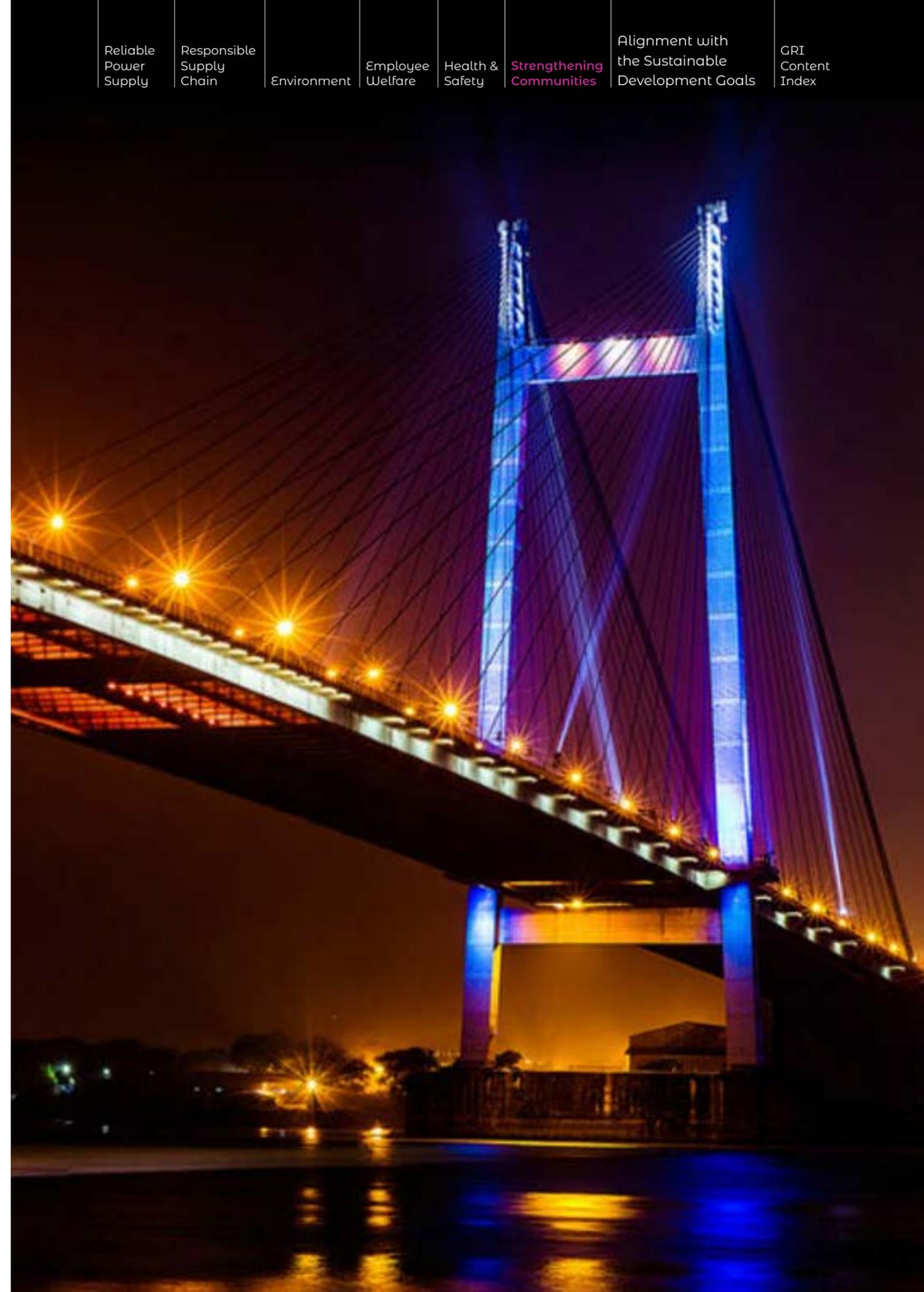
Amongst other initiatives Nirmal Kolkata project facilitates provision of bio-toilets to the slum dwellers in the Chetla area, thereby ensuring hygienic and eco-friendly communities.

Stories of Change

CESC is proud to share an encouraging story about the community welfare intervention.

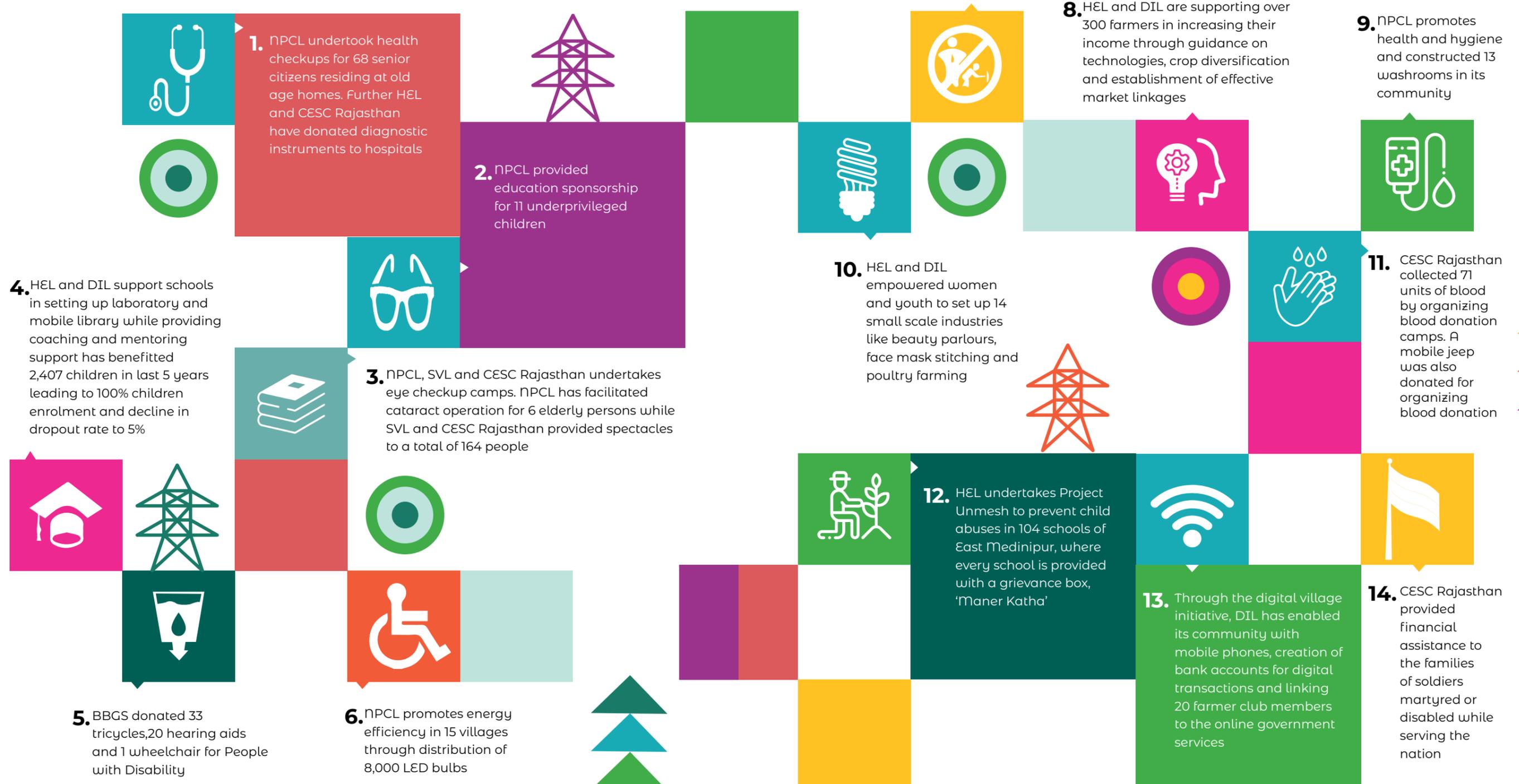


Arka Saha, a student of class IV and a child cabinet member of Bijayagarh Shiksha Niketan would face frequent stomach problems and would remain absent from school. Later it was found that Arka did not care to wash his hands with soap prior to eating his meal. Under the Nirmal Abhiyan Programme Arka became aware of the importance of personal hygiene and hand washing. On being able to practice the learnings on daily basis Arka has stopped having stomach pains and is being able to attend school regularly.



Facility Driven Initiatives

CESC generation stations and distribution units proactively addresses basic needs of the community it operates in by setting aside a portion of its corpus and dedicating resources for volunteering activities. Some of the initiatives undertaken include the following.



- 1.** NPCL undertook health checkups for 68 senior citizens residing at old age homes. Further HEL and CESC Rajasthan have donated diagnostic instruments to hospitals
- 2.** NPCL provided education sponsorship for 11 underprivileged children
- 3.** NPCL, SVL and CESC Rajasthan undertakes eye checkup camps. NPCL has facilitated cataract operation for 6 elderly persons while SVL and CESC Rajasthan provided spectacles to a total of 164 people
- 4.** HEL and DIL support schools in setting up laboratory and mobile library while providing coaching and mentoring support has benefitted 2,407 children in last 5 years leading to 100% children enrolment and decline in dropout rate to 5%
- 5.** BBGS donated 33 tricycles, 20 hearing aids and 1 wheelchair for People with Disability
- 6.** NPCL promotes energy efficiency in 15 villages through distribution of 8,000 LED bulbs
- 7.** DIL has been a catalyst in the declaration of seven villages as Open defecation free benefiting 938 households with provision of sanitary toilets and organizing various awareness sessions
- 8.** HEL and DIL are supporting over 300 farmers in increasing their income through guidance on technologies, crop diversification and establishment of effective market linkages
- 9.** NPCL promotes health and hygiene and constructed 13 washrooms in its community
- 10.** HEL and DIL empowered women and youth to set up 14 small scale industries like beauty parlours, face mask stitching and poultry farming
- 11.** CESC Rajasthan collected 71 units of blood by organizing blood donation camps. A mobile jeep was also donated for organizing blood donation
- 12.** HEL undertakes Project Unmesh to prevent child abuses in 104 schools of East Medinipur, where every school is provided with a grievance box, 'Maner Katha'
- 13.** Through the digital village initiative, DIL has enabled its community with mobile phones, creation of bank accounts for digital transactions and linking 20 farmer club members to the online government services
- 14.** CESC Rajasthan provided financial assistance to the families of soldiers martyred or disabled while serving the nation



School Plantation



Interacting with a Cotton Growing Farmer



Laboratory Setup in Schools



School Plantation



Eye Check Up Camp Organized by CESC Rajasthan



Seed Distribution to SHG Women

Humanitarian Relief

The coronavirus pandemic marks an unprecedented situation in the current times in terms of health and economic crisis. This requires humaneness amongst everyone to overcome the crisis.

CESC and its subsidiaries is committed to assist India in overcoming its toughest challenge by contributing a total of INR 25.76 lakhs to relief funds operated under the central and state governments.

In 2019, CESC Rajasthan has also helped Kota city overcome flood like situations by facilitating drinking water through tankers for 10 days and provision of blankets to homeless people.

Employee Volunteering

CESC encourages its employees passionate about serving its communities with empathy to dedicate time off to volunteer for a project of their choice and showcasing their commitment towards supporting the disadvantaged. Through these opportunities, they showcase their humaneness towards benefiting the organization's social initiatives. Employees have participated in baby showers,

'annaprashan' and 'hate khori' activities under Roshni Project, in child cabinet meetings under Nirmal Abhiyan Project, in hygiene awareness campaigns and cleanliness drives under Nirmal Sankalp and Nirmal Abhiyan projects, and in anti-plastic campaigns in several areas across the city of Kolkata.

Employees contribute towards the cause through donations in kind, monetary grants and

imparting life skills. Employees visit local schools and villages on quarterly basis to create awareness on the thematic areas, some of which include domestic first aid, women and child rights, career planning, environment development under the initiative 'Kiron'.



Employee Engagement - Ghat Cleaning Campaign



Employee Engagement - Puppuppet show

Initiatives undertaken voluntarily by employees include



Celebrating local festivals like Diwali and Durga Puja



Donation of school kits comprising of books, stationery and bag



Gifting chocolates to underprivileged children during Christmas



Donation of groceries, masks and sanitizers to financially impacted houses during pandemic



Anti-plastic campaigns in several areas across the city of Kolkata



Participate in awareness rallies conducted under Nirmal Abhiyan and Nirmal Sankalp Projects



Participating in child cabinet meetings for schools under Nirmal Abhiyan Project



Participating in hygiene awareness programmes and cleanliness drives in schools and communities conducted under Nirmal Sankalp and Nirmal Abhiyan Projects



Participating in baby showers, Annaprashan and Hate Khori events under Roshni Project

Such contributions of employees towards the society are appreciated and celebrated by felicitating them during the Foundation Day. Mr. Satyajit

Ganguly, an employee of HEL was honored with the Core Value Champions Award for his contributions in protecting child rights and preventing a marriage

of a girl child through continuous education and awareness in East Mednipur.

Through such initiatives illustrated above CESC received numerous awards and accolades.

Certificates and Awards

2019
CESC

- Golden Peacock Award
- ICC Social Impact Award



Golden Peacock Award 2019

DIL

- Award for best sanitation practices & digital village, 2019
- FAME Award 2019
- Golden Peacock Award, 2014



Golden Peacock award, 2014 received by DIL



Award for Best Sanitation Practices & Digital Village, 2019 received by DIL

2020

CESC

- FAME Excellence Award
- ICC Social Impact Award



ICC Social Impact Award 2020

Alignment with the Sustainable Development Goals



The following section showcases CESC's actions aligned with United Nations Sustainable Development Goals.

SDG 1: No Poverty



- Empowering underprivileged youth and women Self Help Group members through skill development initiatives

- All employees covered under medical insurance and undergo annual health check-up

SDG 4: Quality Education



- Ensuring formal education to underprivileged children under Roshni Programme
- Protecting child rights and ensuring 100% enrolment of children in formal education institutions under Hamari Awaaz Programme
- Promoting sustainable development is the curriculum of schools under the Urja Chetna Programme
- Repair and renovation of government school infrastructure
- Provision of benches, playgrounds and setting up libraries and laboratories at schools
- Empowering underprivileged youth through skill development initiatives under Saksham, Prayas, Udaan

SDG 2: Zero Hunger



- Addressing maternal and newborn child health under Roshni Programme

SDG 3: Good Health and Well-Being



- Addressing maternal and newborn child health under Roshni Programme
- Upgradation of public health facilities

SDG 5: Gender Equality



- Empowering women to set up small scale industries with the support of National Skill Development Corporation
- Rewards and recognizes women entrepreneurs
- Protection of rights of girl child in Hamari Awaaz Programme

SDG 6: Clean Water and Sanitation



- Supply and storage of water for drinking and handwashing purpose at government schools under Nirmal Abhiyan Programme
- Provision of water treatment utility to government schools under Nirmal Abhiyan Programme
- Construction and upgradation of adequate, safe, hygienic and inclusive sanitary facilities separately for boys and the girls within communities under Nirmal Sankalp and Nirmal Sankalp Programme

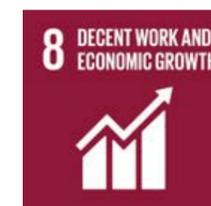
- Reduces specific freshwater intensity through rainwater harvesting, reuse and recycle of water and addressing water leakage
- Conserves the aquatic ecosystem around its facility which is rich in flora and fauna

SDG 7: Affordable and Clean Energy



- Renewable energy augmentation in auxiliary consumption
- Promoting green building concepts and benefits through certifications by USGBC and IGBC
- Promotes safe and optimal usage of electricity
- Ensuring reliable power supply to all consumers and reducing distribution losses

SDG 8: Decent Work and Economic Growth



- Providing local employment
- Adheres to human right principles

- Adequate mechanisms are deployed to ensure zero tolerance towards non discrimination
- Empowering underprivileged youth and women Self Help Group members through skill development initiatives
- Protecting child rights and ensuring 100% enrolment of children in formal education institutions under Hamari Awaaz Programme

SDG 9: Innovation and Infrastructure



- Integrating renewable energy in distribution and transmission network by adding new capacities through PPAs and piloting Battery Energy Storage System (BESS) technology
- Promoting green building concepts and benefits through certifications by USGBC and IGBC
- Installation of up to date technologies to minimize impact of air emissions

SDG 11: Sustainable Cities and Communities



- Integrating renewable energy in distribution and transmission network by adding new capacities through PPAs and piloting Battery Energy Storage System (BESS) technology
- Promoting green building concepts and benefits through certifications by USGBC and IGBC
- Promoting the use of Electric Vehicles (EVs) through installation of vehicle charging points
- Promoting e-cooking amongst the consumers as a clean technology
- Installation of up to date technologies to minimize impact of air emissions
- Enabling digital ecosystem and abiding COVID prevention norms in workplace

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