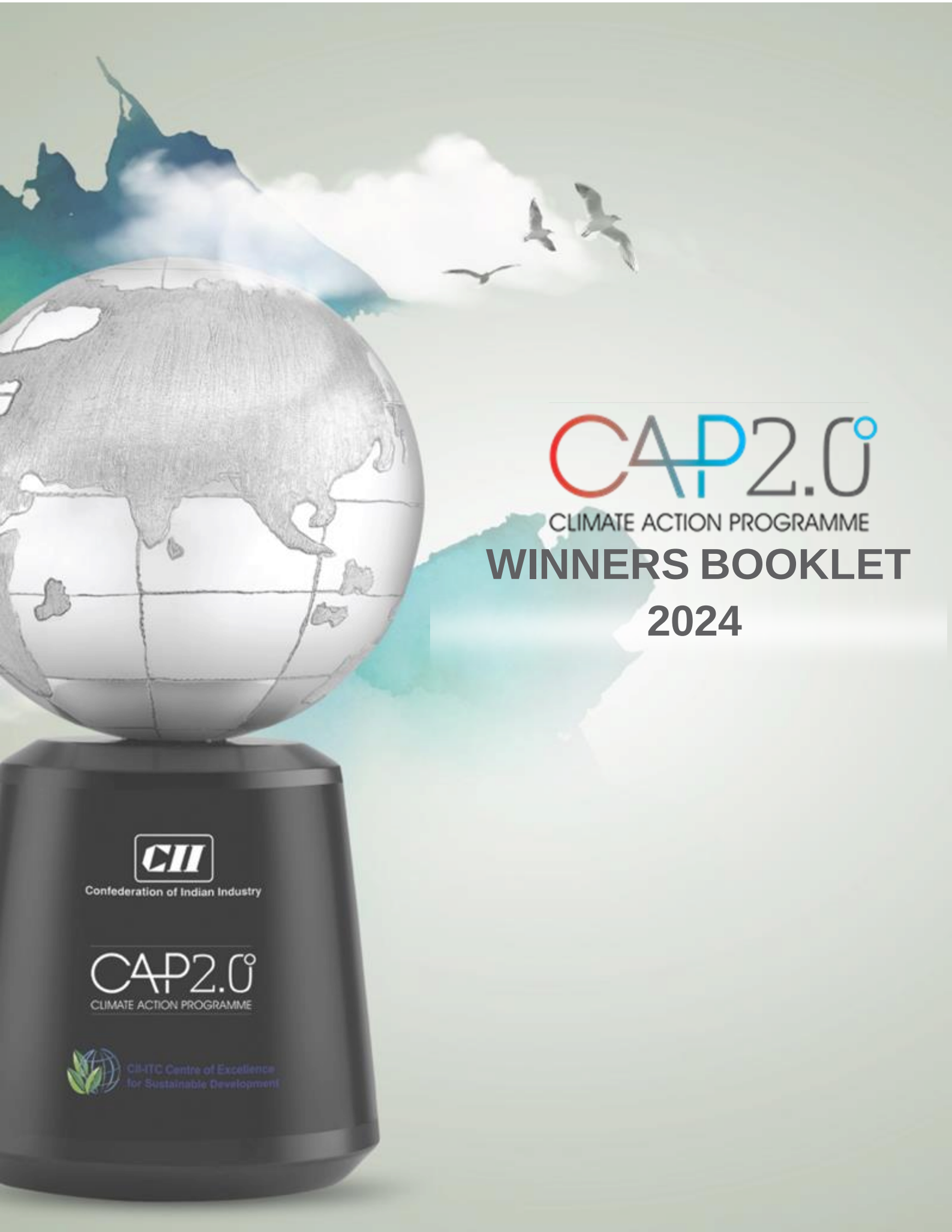
CII-ITC Centre of Excellence
for Sustainable Development

Confederation of Indian Industry



CAP2.0

CLIMATE ACTION PROGRAMME

WINNERS BOOKLET 2024

ABOUT CAP 2.0° AWARDS

The Award reflects the need for unity in this world. To sustain the environment, a broad-based alliance between industry and society is required globally. The CAP 2.0° Award is the first one in India to recognise Climate Action. The maturity level of different industries to tackle climate change risks and opportunities has been kept in consideration while planning the Award.

Launched in 2018, the Awards has received **110+ corporate nominations** till date and more than **60 organisations** have been recognized for their climate actions and best practices.

CAP2.0°
CLIMATE ACTION PROGRAMME

CONTENTS

ASSESSMENT METHODOLOGY

The Award adheres to transparent and rigorous assessment process and follows a three-dimensional methodology. All three models have equal weightage to the assessment criteria.

EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT (EFQM) MODEL	Based on the relationship between organisation's enablers and results. It takes into consideration the learning perspective
ACTIVITY MODEL	Based on the climate change mitigation and adaptation efforts of the organisation
CLIMATE MATURITY MODEL	Based on commitment, orientation and pioneering efforts of the organisation to assess the preparedness for proofing against climate change

The detailed questionnaire consists of about 100 questions, covering aspects of Governance & Leadership, Strategy, Targets, Risks & Opportunities and Disclosures, among others.

AWARD CATEGORIES

The award assessment process empowers organisations to create a roadmap and build employee capacity through easy-to-understand methods, dedicated handholding on climate action and by building maturity year-on-year.

CAP 2.0˚ RESILIENT

Organisation's strategy is aligned to mitigate climate risk. The adaptation projects are aligned to build resilience, the mitigation projects are devised & executed, and the organiation has futuristic and science-based targets and plans to reduce emissions.

CAP 2.0˚ ORIENTED

Organisation's strategy is aligned, and climate risk is part of it's Environmental Resource Management (ERM). A competent person is handling the portfolio and GHG targets are futuristic.

CAP 2.0˚ COMMITTED

The organisation identifies climate as a primary risk. It has undertaken GHG management and decided on the target through a participatory approach.

RECOGNITION: COMMITTED

ATTERO

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Metal Mandi for trading of metals; Selsmart e-waste recycling from households; Consumer collection drive for products that can be recycled

Attero is an e-waste and lithium-ion battery recycler, with its efforts in sustainable waste management and resource recovery. The organisation's patented technologies enable the extraction of 22 green metals with >99.5% purity. It has achieved more than 98% efficiency in extracting e-waste and Lithium-ion batteries.

Metal Mandi is part of the organisation's resource conservation strategy. It is a digital marketplace that connects scrap dealers, manufacturers and recyclers to trade in recycled materials. The platform promotes transparency in pricing, allowing informal and formal players to sell recycled metals and plastics at global market rates. By connecting these sectors, Metal Mandi helps expand business opportunities, foster greater circularity, and integrate informal players into the formal recycling ecosystem.

The organisation has Selsmart, an e-waste recycling platform that incentivises consumers through cash rewards and works with logistics partners for door-stop pickup of e-waste and for delivering it to designated locations, similar to e-commerce logistics. This promotes the reach and efficiency of e-waste recycling across India. It also creates sustainable livelihoods; integrates consumers into the formal system and supports consumer inclusion into the sustainability story.

In partnership with leading institutions such as IIT Delhi and IIT Bombay, the organisation utilises materials such as extracted graphite, lithium, nickel, and cobalt from spent batteries. It develops and tests anodes and cathodes from recycled materials and reintegrates valuable resources into battery production. This approach helps it in resource efficiency; contributes towards sustainable battery manufacturing and reduces it's dependency on virgin resources.

To enhance energy efficiency, the organisation uses remaining charges in spent batteries to power plant processes and reduce the dependency on external electricity sources. It is transitioning to renewable energy by installing solar panels in facilities; the shift minimises grid reliance, lowers carbon emissions, and supports the commitment to an energy-efficient, sustainable future.

RECOGNITION: COMMITTED

CAP2.0 CLIMATE ACTION PROGRAMME

Versa Drives enabling motor control

VERSA DRIVES PRIVATE LTD

SECTOR: LIGHT MANUFACTURING

(L to R) Eco-friendly packaging of fans; Eco-friendly infrastructure and solar panels; Products in cloth Packaging; Easy recyclable design of fans

The core business of Versa Drives Pvt Ltd is to design and manufacture motor control products and motor drives that are customised to the desired application. Over the years, through various businesses, the organisation has developed the experience to control most types of motors (up to 20HP) with adherence to international industry standards.

The product 'Superfan' is India's first super-energy efficient BLDC ceiling fan. Innovation in the BLDC ceiling fan has increased efficiency in manufacturing. The efficient product design employs semi-manual processes to minimise energy consumption in manufacturing. Earlier, assembling BLDC ceiling fans was cumbersome as securing magnets in the motor required adhesives that emit harmful fumes and a longer curing time. Superfan has a mechanical method of securing magnets, leading to elimination of the use of hazardous chemicals and curing time.

Superfan ceiling fans are easily repairable by consumers, which extends the life span of the product. The fans are designed to last for 20 years, and most of the parts are recyclable, with provisions in place to properly dispose them with minimal environmental impact. For packaging, the organisation uses cloth, cardboard boxes & packaging paper, instead of bubble packs, cellophane, thermocol etc. This approach saves approximately 300 g of plastic/thermocol per fan and has been used reliably since its first sale on 1 January 2013. The focus on packaging extends to the manufacturing process as well. The component packaging from the suppliers is reusable or recyclable as they are packed with cloth bags instead of plastic covers, which saves energy and plastic waste during the manufacturing process.

The factory has strategically placed windows, atriums, and high ceilings to reduce lighting and cooling loads. Reduced amount of cement, sand and water has been used during construction. A full capacity solar plant has been installed for energy usage. The garden around the factory does not rely on synthetic fertilisers or pesticides and for watering, it relies on the rainwater catchment system. The capacity of the rainwater harvesting system is over a million liters. The factory has an organic vegetable garden that attracts over 95 species of birds and critters.

RECOGNITION: ORIENTED

TATA POWER-DDL

TATA POWER DELHI DISTRIBUTION LTD

SECTOR: SERVICE

(L to R) Cable drum recycling initiative; S6 Manometer; SF6 cylinders and Battery Energy Storage System (BESS)

Tata Power Delhi Distribution Limited (Tata Power-DDL) is a joint venture between Tata Power and the Government of NCT of Delhi. It is an electric utility serving the northern and western parts of Delhi.

The organisation has developed a Green Supply Chain model where the conventional supply chain in the context of its business has been segmented into 10 stages beginning from design till disposal and reuse. Different sustainability indicators are identified at each stage along with respective initiatives to make each step of the supply chain greener. Initiatives such as the introduction of REACH and RoHS-compliant materials in key electrical equipment, Ester Oil filled transformers, eco-friendly Envirogel compounds, among others have contributed to make the supply chain more sustainable by reducing the harmful impacts on environment and promoting re-use & safe disposal.

The organisation has taken a goal to reduce its Scope 1 emissions by 35% till FY'26 from FY'23 baseline. Extensive work has been done to reduce the leakage of SF6 gas (constituting 74% of the Scope 1 emissions in FY'23) from its switchgear. Using the TQM tool of 7-step QC Story approach, significant progress has been made in this aspect and the SF6 leakage are reduced by 49% (157 kg) in FY'24, leading to a remarkable decrease in Scope 1 emissions from 10,575 tCO2e in FY'23 to 7,198 tCO2e. These initiatives not only enhance operational efficiency but also contribute to global climate resilience, aligning with SDG 13: Climate Action. The organization is also exploring SF6 free switchgear and neutralisation of SF6 gas.

It has also established South Asia's largest grid-connected 10 MW battery energy storage system which is utilised to support the grid at the time of 'peak loading conditions'. The organisation promotes energy conservation by reducing its electricity consumption through LED lighting and through 12 grid-connected solar plants at different locations with the highest one having a capacity of 1 MWP. The renewable energy contribution has increased to 26% of the total energy purchased by Tata Power-DDL for onward distribution to its customers.

RECOGNITION: ORIENTED

ADANI TOTAL GAS LTD

SECTOR: SERVICE

(L to R) Adani Total Gas Fleet Decarbonization; Methane Leak Detection; Solarisation Plant & Greenmosphere park

Adani Total Gas Limited (ATGL) is a city gas distribution company in India that sells and distributes natural gas to residential, commercial, industrial and vehicle users.

The organisation focuses on improving operational efficiency and addresses potential methane loss in piped gas distribution networks. Implementing a proactive strategy, it created a Leak Detection & Repair (LDAR) programme, which uses advanced technologies such as lock pressure checks to repair leaks. In the reporting period, the organisation has conducted LUAG assessments for over 1000 km, including Lock Pressure Test assessments across the four gases, reinforcing dedication to mitigating methane losses.

The organisation has converted the complete fleet, including Light Commercial Vehicles (LCVs) and Heavy Commercial Vehicles (HCVs), from diesel to compressed natural gas. Maintaining a 100% conversion rate, it has utilised CNG and strengthened efforts to promote greener mobility. Harnessing renewable energy as part of its comprehensive solar commissioning initiative, the organisation has installed solar rooftop panels across 51 sites, including CNG stations and offices with the provision of PV panels, generating almost 900kw per day. There is an online monitoring system that provides real-time data updates every five minutes, while automated cleaning devices ensure dust-free panels for optimal performance, contributing to a reduced carbon footprint and cost-effective operations, reflected in reduced energy bills.

Greenmosphere, an initiative by the organisation, fosters a ‘Low Carbon Society’ that aligns with the national ambition of net zero emissions by 2070. Further, afforestation drives by the organisation focuses on creating a biodiversity park that promotes flora and fauna on land and water, simultaneously attracting a diverse variety of visitors who participate in activities such as yoga, forest walks, jogging, etc.

RECOGNITION: ORIENTED

ARCELORMITTAL NIPPON STEEL INDIA LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Blast furnace gas utilisation; Steel slag road in Hazira, Surat; Solar panel installation

AM/NS India is a joint venture between ArcelorMittal and Nippon Steel, two leading steel companies. With a vision to create 'Smarter Steels, Brighter Futures', the organisation manufactures flat steel products, from iron ore to ready-to-market products. Inspired by ArcelorMittal's XCarb program and Nippon Steel's Zero Carbon initiative, the organisation prioritizes health and safety.

The organisation's Hot Briquetted Iron (HBI) plant's Module 4 operated with the lowest catalyst volume per metric ton of production, which increased the likelihood of carbon deposition and hindered its ability to achieve rated capacity. The 20-year-old plant also encountered challenges such as suboptimal oxide quality, constraints in high-temperature operations, and productivity losses during the monsoon season.

The organisation has established a strategic partnership with Greenko Group, India's leading energy transition company, to develop a 'round-the-clock' renewable energy project with a nominal capacity of 975 MW. This USD 0.7 billion project, is expected to combine solar and wind power, supported by Greenko's hydro-pumped storage to ensure reliable power output.

The organisation plans to procure 250 MW of renewable electricity from the project annually, allowing more than 20% of AM/NS India's Hazira plant's electricity needs to be met by renewable sources. This shift is expected to reduce carbon emissions by approximately 1.5 million tonnes annually while offering AM/NS India the benefits of lower electricity costs and reduced CO_2 emissions.

It also constructed India's first all-steel slag road in Hazira, Surat, using 100% processed Electric Arc Furnace (EAF) steel slag aggregates as a substitute for natural aggregates. Built under the guidance of CSIR-Central Road Research Institute (CRRI), this 1-kilometer, six-lane road connects NH-6 to Hazira Port, supporting heavy commercial traffic with loads of 30 to 40 tonnes daily.

RECOGNITION: ORIENTED

TATA MOTORS

TATA MOTORS LTD, DHARWAD

SECTOR: LIGHT MANUFACTURING

(L to R) Water Storage Lake and Water Positive Plant

Tata Motors Ltd, Dharwad, is a prominent automobile manufacturer renowned for its diverse portfolio of smarter, integrated, and safer mobility solutions. The plant specializes in production of small, light, medium and electric commercial vehicles. Some notable models manufactured at this plant include the Ace Gold, 407, 709, 909, and EV buses.

The organisation has launched the TATVA framework, an operating system that systematically embeds the principles of circularity across all parts of the business along four pathways: Energy, Material, Lifetime, and Utilisation.

The organisation has been certified as a Water Positive plant for its efforts towards water augmentation in the region. It diverts rainwater through a dedicated storm water line network to three storage lakes constructed on the premises. The stored water is utilised for manufacturing activities and plays a crucial role in recharging groundwater and supporting wetlands.

It is committed to achieving net zero emissions by 2045. To accomplish this goal, it has adopted the Science Based Targets initiative (SBTi) framework for reducing greenhouse gas emissions. The plant at Dharwad has already achieved RE100 status by sourcing all its electricity needs from renewable sources.

The organisation has adopted measures to reduce its negative footprint while delivering sustainable solutions to customers. It's strategy to improve resilience is interconnected with the organisation's efforts to drive impactful change for people and communities, and an emphasis on ethical governance.

RECOGNITION: ORIENTED

JSW CEMENT LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Co-processing waste as alternative fuel; Solar Power Plant; Alternate raw material (red mud); Green Belt

JSW Cement is a division of the JSW Group, which operates across a wide range of sectors including steel, energy, maritime, infrastructure, defence, business-to-business e-commerce, real estate, paints, sports, and venture capital. JSW Cement specialises in green cement production, with a strong emphasis on eco-friendly products such as Ground Granulated Blast Furnace Slag.

The organisation is dedicated to the Global Cement and Concrete Association's (GCCA) roadmap to achieve net-zero concrete by 2050. It aims to reduce the net CO_2 emission intensity by 15%, from 262 kg of CO_2 per tonne of cementitious material in FY 2021 to 223 kg of CO2 by FY 2026. To achieve this, it plans to utilise 30% alternative fuels and raw materials by 2030, integrate solar power and Waste Heat Recovery Systems (WHRS), and achieve 50% renewable energy by 2030.

At the Nandyal plant, the organisation has innovatively used alumina-rich steel-making slag as a cost-effective and sustainable replacement for aluminium laterite in the clinker-making process. It utilises AOD slag during cement grinding, maximising resource efficiency throughout the production chain. In FY 2024, the alternative raw material consumption was 8.9 million tonnes. Both the Nandyal and Salem facilities prioritize sustainability through the utilisation of waste heat for slag drying.

In FY 2024, approximately 15% of the power was sourced from clean energy, with a target of over 50% by 2030. The solar power capacity across the Nandyal, Vijayanagar, and Salboni units, managed by JSW Energy, stands at 26.5 MW, complemented by WHRS of 21.3 MW (with 12.3 MW at Nandyal and 9.0 MW at Shiva cement units, respectively). This has resulted in an aggregate non-fossil energy capacity of nearly 48 MW, with plans for further expansion. This initiative avoided 64,396 MT of CO_2 emissions in FY 2023-24.

The organisation has implemented a biodiversity management policy at all plants, aiming for 'No Net Loss' on biodiversity by 2030. It also plants native species annually and maintains a green belt as per regulations. The active mines in Nandyal and Khatkurbahal have wildlife conservation plans due to the proximity of species and sanctuaries.

RECOGNITION: ORIENTED

BHARAT PETROLEUM CORPORATION LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Water harvested in Kochi refinery and solar power plants at different locations

Bharat Petroleum Corporation Limited (BPCL) is a public sector oil and gas company in India, engaged in refining of crude oil and distribution of petroleum products. The organisation's extensive business operations encompass fuels and services; aviation and services; gas; industrial and commercial sectors; international trade; proficiency testing and pipeline management.

The organisation is establishing an integrated 1G and 2G Ethanol Project in Odisha. Both will produce 100 KLPD of bioethanol from bio-waste (6.6 crore liters per annum). This is expected to reduce CO_2 emissions by approximately 1.1 lakh MT annually, aligning with it's commitment to sustainable energy and reducing environmental impact through biofuel production.

The organisation also initiated a seed bombing project in Maharashtra, dispersing 5 lakh seed bombs across various areas, including BPCL operational locations. This eco-friendly and cost-effective method, costing around INR 30 per tree, aims to restore green cover and promote biodiversity. The project includes three years of monitoring growth, survival rates, and carbon sequestration impact. Currently, the survival rate stands at approximately 20%, with Neem trees, showing the highest rate of survival. This initiative reflects BPCL's commitment to environmental stewardship through innovative and sustainable reforestation techniques.

The organisation is committed to reducing environmental impacts by implementing renewable energy projects, primarily through solar power initiatives. Over the past year, it's renewable energy capacity has surged to 94.9 MW, marking a significant increase of 52%. Notable projects include an 18 MW solar project commissioned at Bina Refinery and a 4.6 MW floating solar installation at Kochi Refinery, with an additional 8.4 MWp floating solar setup near completion at the same location.

The organisation has increased rainwater harvesting capacity at all its refineries and marketing locations. It engages actively in expanding its rainwater harvesting (RWH) capacity as part of its commitment to reduce reliance on external water sources. The organisation reported an increase of 12.8% in the catchment area and a 5.28% increase in rainwater harvesting over the previous year (FY'23: 607 TKL, FY'24: 639 TKL). Rainwater harvesting initiatives have also been implemented, with the Kochi Refinery (KR) generating around 1.7% of its water needs through harvested rainwater.

RECOGNITION: ORIENTED

CAP2.0 CLIMATE ACTION PROGRAMME

Godrej | PROPERTIES

GODREJ PROPERTIES LTD

SECTOR: INFRASTRUCTURE

(L to R) Godrej Solar City; Solar Panels; Waste segregation and Storage

Godrej Properties, a subsidiary of the Godrej Group, is a prominent real estate development company. They have developed properties across residential, commercial, retail and IT sectors. Some of the notable residential projects include Godrej 101, Godrej 24, Godrej Central, Godrej Azure, and Godrej Aqua.

The organisation recycles or reuses 98% of the waste generated at its sites and is also a 'Net Zero Waste' organization, which it achieves through offsets, diverting 2.5 times the amount of waste away from landfill.

The organisation prioritises sustainable water consumption practices by promoting water-efficient homes from the design phase. This includes features such as low-flow fixtures; use of native plants in landscaping and creating provisions for rainwater harvesting. These water management initiatives help conserve resources, reduce pollution, enhance public health and empower communities.

The organisation supports sustainable manufacturing processes by selecting materials with minimal environmental impact, such as FSC-certified wood and recycled metal. This approach not only decreases waste but also lowers energy consumption in the production process, significantly reducing carbon footprint. By incorporating sustainable materials, the organisation aims to lead the industry towards a more responsible and resilient construction model.

As part of the Net Zero commitment, the organisation has announced its first pre-certified Net Zero Energy project under the IGBC framework. This project reflects a forward-thinking approach, integrating renewable energy sources; high-efficiency HVAC and lighting systems, and advanced energy management technologies to minimise energy demand.

RECOGNITION: ORIENTED

GODREJ AGROVET LTD

SECTOR: LIGHT MANUFACTURING

(L to R) Solar rooftops; Watershed management; Agro farming land

Godrej Agrovet is a research and development-focused agri-business company committed to enhancing the productivity of Indian farmers. It achieves this goal by innovating products and services that sustainably increase crop and livestock yields. The crop protection portfolio includes plant growth regulators, organic manures, generic agrochemicals and specialized herbicides.

The organisation has committed to a GHG emissions reduction target aligned with the WB2DS scenario, validated by SBTi. It aims to reduce Scope-1 and Scope-2 GHG emissions by 37.5% from the baseline year of 2020 to the target year of 2035. As of March 2024, it has made significant progress towards achieving the SBTi target, reducing Scope-1 and Scope-2 GHG emissions by 9%.

The organisation uses 80% renewable energy to meet the energy requirements of it's manufacturing operations in India, and it has installed solar PV panels at over 20 manufacturing facilities with a cumulative capacity of 13.4 MW. Over 90% of it's thermal energy requirements are fulfilled through the use of agricultural biomass in boilers. The palm oil business consumes 99.5% of its energy through a biomass-operated co-generation plant.

The organisation has adopted the 4R principles for managing waste generated in manufacturing operations. Approximately 95% of the total generated waste is either sent to authorised recyclers or pre-processing platforms, thus shifting from conventional waste disposal methods such as landfilling.

Through the watershed projects in Barwani, Madhya Pradesh, and Magadi, Karnataka, it has become a 16-times water-positive company, i.e. for every litre of water consumed in operations, the organisation gives back 16 litres to the ecosystem. It has also developed watershed areas covering 5,900 hectares and with over 4.7 lakh native saplings.

RECOGNITION: RESILIENT

TATA STEEL LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Green fuel commercial vehicles; Launch of Carbon Bank; Hydrogen injection plant

Tata Steel is a renowned global steel company with its largest plant located in Jamshedpur, Jharkhand. The company produces a diverse range of steel products, including coils, sheets, plates, bars, and tubing.

Tata Steel has launched India's first Carbon Bank, a virtual repository through which carbon dioxide will become a value-creating asset for future usage. The Carbon Bank aims to measure and manage carbon dioxide savings generated from various sustainability projects.

During the year, the organisation received it's first batch of next-generation, green-fuel-powered commercial vehicles from Tata Motors. This initiative aligns with Tata Group's "Aalingana Project" for a greener, cleaner, more sustainable, and equitable future for the planet. The organisation's commitment to net-zero emissions underscores its dedication to adopting innovative solutions for cleaner operations, ensuring a responsible supply chain.

Following the Life Cycle Assessment (LCA) methodology to accelerate its efforts in becoming a leader in product sustainability, the organisation strives to use the LCA tool effectively in its products. During the year under review, the company has undertaken LCA studies based on the world steel LCA methodology guided by ISO 14040 and ISO 14044.

The organisation finalised an agreement with Tata Power Renewable Energy Limited to set up solar and wind hybrid power, thereby replacing 379 MW of Tata Steel's fossil fuel-based power consumption. It plans to execute a fixed-tariff long-term agreement with TPVSL to source 379 MW of captive renewable power, which will save 50 million tonnes of carbon emissions over the contract period of 25 years.

RECOGNITION: RESILIENT

RENEW ENERGY GLOBAL PLC

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Centre of Excellence at IIT Delhi; Condition Based Module Cleaning; R&D and Technology team

ReNew Energy Global Plc is a renewable energy company that generates power in India and provides decarbonisation solutions.

The organisation's Clean Cooking Initiative, distributed over 175,000 cookstoves, reducing annual emissions by 600,000 tCO_2e and benefiting 700,000 people. Innovations include IoT-based sensors and geo-location tracking for enhanced monitoring, significantly reducing local fuelwood usage. The Condition-Based Module Cleaning model, a predictive cleaning approach, has led to a 48% improvement in water savings in FY 2023-24, conserving 358,746 KL of water.

The organisation has taken steps to promote pro-climate actions and sustainable behavior among students. It has developed a sustainability and climate focussed curriculum that's delivered through a school-based program. The program is delivered in multiple schools across Rajasthan, Gujarat and Karnataka. The curriculum is also delivered through the online mode to 9,000 students, via the Learning Management System (LMS). Additionally, a collaboration with an ed-tech organisation has taken forward the program to over 5,000 schools in Uttar Pradesh.

The organisation has established a Centre of Excellence at IIT-Delhi to foster business-academia partnerships for solving real-world business challenges. The Sumant Sinha Sustainability Leadership Award recognises students for significant contributions to research in areas such as sustainability, energy, waste management, environment, and climate change.

RECOGNITION: RESILIENT

DP WORLD

DP WORLD

SECTOR: INFRASTRUCTURE

(L to R) Solar rooftop; Logo of the 'Move to -15 degree' initiative; Emission calculator initiative

DP World specialises in cargo logistics, port terminal operations, maritime services, and free trade zones. The organisation handles approximately 70 million containers annually, brought in by around 70,000 vessels.

The organisation is committed to reducing Scope 1 and Scope 2 GHG emissions by 42% and absolute Scope 3 emissions by 28% by 2030. This progress is based on the 2022 baseline and aligned with the 1.5°C pathway. It has installed 7,100 KWP of onsite solar capacity and has an additional 2,200 KWP in the pipeline. The decarbonization strategy also emphasizes equipment electrification, including RTGs, forklifts, LMVs, and trucks. This has led to significant reduction in Scope 1 emissions across operations.

The "Move to -15°C" is an industry-wide campaign launched by DP World at COP28. It aims to reduce the global frozen food storage and transport temperature standard from -18°C to -15°C. In partnership with the International Institute of Refrigeration, the University of Birmingham, and London Southbank University, the campaign aims to redefine temperature standards, targeting the 2050 net-zero goal.

The organisation has developed an emission calculator as per the GLEC framework, which is also accredited by the Smart Freight Centre, facilitating environmentally conscious decisions in freight management. In collaboration with various partners, it conducted a study that examined three climate scenarios (low to high carbon) and assessed the potential impact of weather hazards across 50 global ports and terminals.

RECOGNITION: RESILIENT

AMARA RAJA
Gotta be a better way

AMARA RAJA ENERGY & MOBILITY LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Zero Liquid Discharge; Lead management system; Renewable energy initiatives

Amara Raja Energy & Mobility is a manufacturer of lead-acid batteries for industrial and automotive applications, with products being distributed across India. A few of the products such as Amaron, Powerzone, and Quanta are exported to over 50 countries.

The organisation has implemented zero-liquid discharge facilities at both manufacturing sites to recycle treated wastewater, resulting in a reduction of the water footprint by approximately 20% from the baseline. It has adopted rainwater harvesting programs, including construction of 23 check dams, creation of rainwater harvesting bodies with a 75,000m³ capacity at operating units and a 6,500m³ stormwater collection pond for runoff water collection.

The organization has adopted a systematic approach to lead management, from procurement through processing and waste generation to recovery, resulting in 94% of the processed waste generated either reused or recycled. Additionally, ARCS, which is a subsidiary company of the organization, is setting up a 1.5 lakh MTPA lead recycling facility in Chayyar, Tamil Nadu.

The organization has a mechanism to refurbish and reuse old batteries and participate in the BWMR (Battery Waste Management Rules) Project, initiated by the Government of India. Currently, 83% of the lead used in manufacturing comes from recycled sources, and the organisations aims to increase this figure by setting up more used battery collection mechanisms.

It has also implemented several energy-saving initiatives, such as installation of energy-efficient equipment, effective scheduling of equipment for increased capacity utilisation, automation of chargers' cooling fans during idle running, and optimal utilisation of DE System through timing control. It also implemented an efficient LPG consumption reduction in the Zero Liquid Discharge Plant. In this process, steam generated by the boiler is utilised in the Multiple Effect Evaporator (MEE) for the evaporation of effluent. The MEE steam condensate now leads to a notable reduction in LPG consumption within the boiler system. The existing heat within the condensate significantly aids the steam generation process, thereby reducing LPG consumption.

RECOGNITION: RESILIENT

SHREE CEMENT LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) windmill farm; watershed management; solar panels for renewable energy.

Shree Cement is a cement producer with a total production capacity of 50.9 million tonnes per year, including overseas operations. The product range includes Ordinary Portland Cement (OPC), Portland Pozzolana Cement (PPC), Composite Cement (CC), bagged cement, loose cement, and Autoclaved Aerated Concrete (AAC) blocks.

The organisation's green electricity sources include solar, wind, and Waste Heat Recovery (WHR). The green electricity capacity stood at 480 MW during FY 2023-24, marking a 24.6% increase from FY 2022-23. This resulted in green electricity contributing to 55.9% of total power consumption, leading to an emission avoidance of 0.94 million tonnes of CO_2 in FY 2023-24. It is also committed to achieving 100% renewable electricity within it's operations by 2050.

The blended cement products are certified under the GreenPro Ecolabel by the Confederation of Indian Industry (CII). In FY 2023-24, blended cement accounted for 73.52% of the total cement production, contributing to the avoidance of 7.2 million tonnes of CO_2 emissions.

The organisation is increasingly substituting conventional fuels with alternate fuels such as Refuse Derived Fuels (RDF) from municipal solid waste; hazardous waste from industries, and agricultural waste (crop residue). In FY 2023-24, the organisation utilised a total of 1.24 lakh tonnes of agricultural waste, up from 1.19 lakh tonnes in FY 2022-23. This resulted in the avoidance of approximately 1.4 lakh tonnes of CO_2 emissions, up from 1.2 lakh tonnes in the previous year. It has successfully established systems to replace use of coal (100%) with biofuel in all the grinding units.

RECOGNITION: RESILIENT

CONSUMER PRODUCTS

GODREJ CONSUMER PRODUCTS LTD

SECTOR: LIGHT MANUFACTURING

(L to R) Watershed location; Solar power plant at Malanpur; Biodiversity project (seed collection and plantation)

Godrej Consumer Products Ltd (GCPL) is a manufacturer, distributor, and marketer of fast-moving consumer goods. Its product portfolio includes household and personal care products.

The organisation's integrated watershed development project is dedicated to restoring the ecological balance in the drought-prone district of Siddipet in Telangana. It has successfully treated 2,950 hectares of land, covering the entire project area, and distributed over 8.5 lakh saplings for direct planting and seed dibbling. Additionally, the project has established 39 pandals and installed 25 drip irrigation systems on farmers' land, with 30% contribution coming from the beneficiary farmers. With an aim to improve farmers' income, the organisation has trained over 100 farmers in alternate agricultural practices.

The organisation utilises over 30% renewable energy in its operations and uses briquette-fired boilers and microturbines for steam. It invests in solar PV and applies for green tariffs wherever available. During FY 2023-24, the organisation completed 65 energy efficiency projects. It also committed to the Climate Organisation EP100 initiative to double its energy productivity by 2030 compared to the 2018 baseline. It is on track meet the Net Zero goal by 2035. The organisation has also developed a plan to strengthen the renewable energy portfolio. It recently set up a 1.5 MW biomass-based cogeneration power project in Malanpur, Gwalior to replace natural gas.

In 2024, the organisation embarked on a Biodiversity Ecological Restoration initiative across the states of Maharashtra, Karnataka and Tamil Nadu. The primary objective is to restore native habitats by reintroducing endangered plant species across more than 30 hectares of land. The selection of these plants is meticulously guided by comprehensive research on endangered native species.

RECOGNITION: RESILIENT

GODREJ INDUSTRIES LTD

SECTOR: LIGHT MANUFACTURING

(L to R) Cogeneration power plant; Biomass briquette boiler; Direct high-pressure gas system

Godrej Industries Ltd is a subsidiary of Godrej Group. It is a manufacturer and marketer of consumer goods and other related products. The company offers a wide range of products including oleo chemicals and surfactants.

The organisation operates a cogeneration plant, powered by bio briquettes. This eliminates the use of conventional non-renewable fuels and at the same time, feeds into the organisation's energy requirements. The bio-based power plant generates 56% of the organisation's total energy needs, contributing to a completely renewable energy source and eliminating Scope-1 emissions from power plants. This effort supports the greening of the energy mix and increases renewable energy usage.

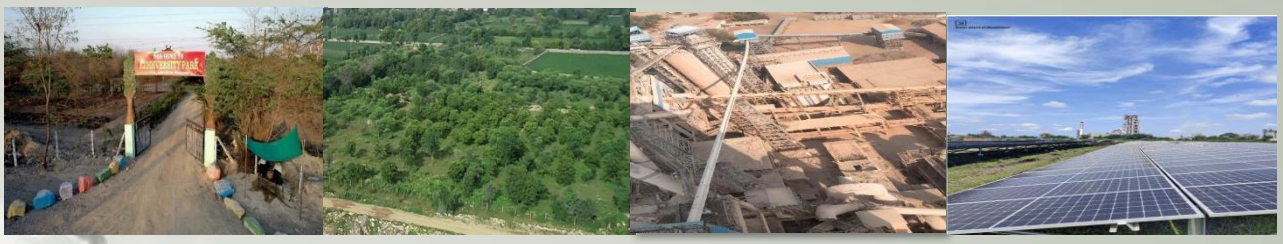
The organisation has implemented a high-pressure compressor to increase natural gas pressure in collaboration with GSPC, securing a direct supply of high-pressure natural gas. This has significantly enhanced the organisation's efficiency and reduced energy consumption by 29% from the baseline.

Additionally, the organisation has adopted an advanced system that transfers heat from condensate to the CPP feed water, effectively repurposing the cooled condensate as raw water. This initiative enhances resource efficiency, reinforcing the organisation's dedication to sustainable operations.

RECOGNITION: RESILIENT

JK CEMENT LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING



(L to R) Biodiversity Park at Ahirpura; Plantation at Maliakhera Mines; Solid AFR system; 7 MW Solar Power Plant

J.K. Cement Ltd manufactures a wide range of cement products and building materials. The portfolio of grey cement includes Ordinary Portland Cement (OPC), Portland Slag Cement (PSC), Portland Pozzolana Cement (PPC), JK Super Strong, and JK Super Strong Weather Shield Cement.

The organisation maximises the utilisation of Alternative Fuels and Raw Materials (AFR) and biomass to reduce reliance on conventional fuels such as coal and pet coke. It has also signed long-term agreements with several municipal corporations to collect, sort, and pre-process Refuse-derived Fuel (RDF) and Municipal Solid Waste (MSW) before repurposing them in the cement kilns.

The diverse energy portfolio includes 82.3 MW of Waste Heat Recovery Systems (WHRS) and 100.64 MW of renewable power from Captive Solar plants and Power Purchase Agreements (PPAs). It further plans to expand the WHRS capacity and renewable power capacity by an additional 190.22 MW and have already achieved a 51% green power mix as of FY 2023-24, with further plans to achieve a 75% green power mix by FY 2029-30.

Since 2024, the organisation has planted over 1.5 million saplings with an impressive 80-85% survival rate. The biodiversity park developed at Ahirpura Mines, Nimbahera, spans 100 acres and utilises the Miyawaki Plantation technique.

The initiative focuses on process optimization, energy-efficient equipment installation, in-house kaizens, equipment downsizing, and improving thermal and operational efficiencies. Additionally, six plants - Nimbahera ICP, Mangrol ICP, Muddapur ICP, Jharli GU, Gotan (White) ICP, and Aligarh GU, are recognized as Designated Consumers under the PAT Scheme and have successfully met their energy targets.

RECOGNITION: RESILIENT

ADANI ENERGY SOLUTIONS LTD

SECTOR: ENERGY, MINING AND HEAVY MANUFACTURING

(L to R) Zero Waste to Landfill initiative; Water Neutrality initiative; Energy Network Operation Center

Adani Energy Solutions Ltd, formerly known as Adani Transmission Ltd, is an electric power transmission company headquartered in Ahmedabad. AESL owns and operates high voltage AC and DC transmission lines and substations across India. It has a transmission network of over 21,100 Circuit Kilometers (CKM) and a power transformation capacity of around 57,000 Mega Volt Amps (MVA).

The organisation has undertaken various measures to mitigate pollution concerns, such as particulate matter generated from coal burning. It utilises Electrostatic Precipitators (ESP) with four passes and six fields, achieving an efficiency of over 99.91% to collect fly ash. To control sulphur dioxide (SO2) emissions, a Flue Gas Desulphurisation (FGD) unit with an efficiency of more than 90% was commissioned in October 2007.

The organisation has invested in plantation activities in and around its operations to enhance carbon sequestration. Over the past 20 years, it has planted 2,48,71,217 trees covering 374.95 hectares, including mature forests aged 10 to 20 years, grass with a 0.5-meter subsurface root system, and mangroves (10 to 20 years). The total carbon sequestration of the organisation is 737 tonnes/hectare annually, with a total CO_2 uptake of 2,704 tonnes/year.

The organisation has implemented a Zero Waste to Landfill initiative, resulting in the certification of all the assets as Zero Waste to Landfill (ZWL). The initiative focuses on reducing waste generation and promoting recycling and reuse, thereby minimizing environmental impact and contributing to a circular economy. It has also set a goal to become a single-use plastic-free company at 100% of the sites. This initiative, certified by CII, aims to reduce plastic waste, promote sustainable practices, and support environmental conservation.

The organisation aims to become 'net water neutral' for its transmission business. It has successfully reduced its water intensity (kL/Million INR revenue) by 26% in FY 2022-23 compared to FY 2020-21.

RECOGNITION: RESILIENT

DR. REDDY'S LABORATORIES LTD

SECTOR: LIGHT MANUFACTURING

(L to R) Low temperature evaporator; Solar panels; Solar Power Plant

Dr Reddy Laboratories Ltd manufactures and markets a wide range of pharmaceuticals in India and overseas. The organisation produces over 190 medications, and 60 Active Pharmaceutical Ingredients (APIs) for drug manufacture, diagnostic kits, critical care and biotechnology.

The organisation is generating and purchasing power through renewable sources, with a strategy to achieve 100% renewable power by 2030. The strategy includes maximising the Capacity Utilisation Factor (CUF) of renewable power supplies, developing new projects through joint ventures, and switching from fossil fuels to biomass in boilers and cogeneration plants.

As part of the Green Fuel Switchover (an initiative that supports the transition to green fuels), the company aims to reduce Scope 1 emissions. It is also developing alternate biomass fuel sources such as rice husk and sawdust briquettes; ensuring strategic forward contracts with biomass fuel suppliers, and adopting the latest green technologies.

In FY 2024, the organisation implemented 105 energy efficiency projects, with 56% of the power sourced from renewable sources. It also achieved 48% carbon neutrality and reduced Scope 3 emissions by 3% in FY 2024 compared to FY 2021.

The organisation installed 6 MW of rooftop solar capacity and 15 MW of captive solar power plants through joint ventures. It also has 59 MW of third-party Power Purchase Agreements (PPAs) for solar and hydroelectric power. The integrated plantation initiative by the organization has the potential to sequester an estimated 194,241 tonnes of CO_2 emissions.

48% of the onsite discharged water is either reused or recycled. The organisation has reduced the annual freshwater intake by 102,582 KL through the use of harvested rainwater. Additionally, 44.8 million KL of water has been saved through agricultural water-saving techniques.

RECOGNITION: RESILIENT

SHESH ENVIRO INFRA PRIVATE LTD

SECTOR: SERVICE

(L to R) Pradhan Mantri Awas Yojna STPs; Biodiversity Park Surat; Envirolife Podcast

SHESH Enviro Infra Private Ltd is dedicated to exploring innovative technologies and solutions to address climate change across various projects, including an upcoming hazardous waste treatment plant; Storage, and Disposal Facility (TSDF) and the executed four Sewage Treatment Plant (STP) projects of 250 KLD under the Pradhan Mantri Awas Yojna.

By integrating advanced treatment technologies, SHESH recycles wastewater, significantly reducing freshwater usage and overall resource consumption. This process not only minimizes the environmental footprint but also ensures a sustainable water supply for various applications, benefiting local ecosystems.

The organisation's STPs under the PM Awas Yojana supply 100% treated water to Government buildings, significantly contributing to water sustainability. The initiative aligns with national conservation goals and promotes responsible water management, reducing reliance on freshwater sources.

It has implemented a Biodiversity Park in Surat city that supports local flora and fauna and promotes ecological balance. Additionally, the park serves as an educational platform for raising environmental awareness and encourages the community to engage in sustainability efforts.

The Envirolife Podcast serves as an educational platform dedicated to discussing climate change and sustainability. Through episodes featuring experts and thought leaders, the podcast explores crucial topics such as renewable energy, waste management, and environmental policy, aiming to raise public awareness and inspire action.

CAP2.0
CLIMATE ACTION PROGRAMME

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TATA MOTORS

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brighter farming

Godrej | PROPERTIES

Bharat Petroleum
energising lives

TATA POWER-DDL

COMMITTED

Versa Drives
enabling motor control

CII-ITC Centre of Excellence for Sustainable Development

The CII Centre of Excellence for Sustainable Development (CESD), now in its 20th year, drives sustainable, environmental, inclusive and climate-friendly transformation among stakeholders. It is the ecosystem creator for sustainable development in India and builds collaborative initiatives for enhancing actions; designs data-driven digital tools and frameworks for capacity development and advocates for policy reforms to advance responsible business practices.

CESD works towards bringing local and global macro challenges to the centerstage; building policy consensus on critical issues; strengthening stakeholders' awareness and representation on policy & regulatory reforms and enabling actions that positively impact the environment, nature and communities.

With a vision to drive transformation towards sustainable development, CESD continues to play a focal role in Government-Industry dialogues on national regulations; articulating stakeholders' discourse on global policies; putting forth Indian Industry's stand on macro-economic issues and accentuating the need for sustainable and inclusive transformation.

CESD focuses on six transformational pathways: Advancing Creation of a Circular Economy; Facilitating an Enabling Ecosystem for ESG Reporting; Accelerating Nature Positive Actions; Enhancing Solutions for Clean Air; Building Climate Resilience and Low-Carbon Economy and Fostering Dialogues, Engagements & Knowledge Exchange.

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