ELCITA

CII National Award for Environmental Best Practices Award–2026

Decarbonizing Electronics City

through Renewable Energy, Clean Mobility and Smart Air Quality Management



Electronics City Industrial Township Authority (ELCITA)

1 | PROJECT OVERVIEW

DECARBONISING ELECTRONICS CITY

through Renewable Energy, Clean Mobility and Smart Air Quality Management

1. TRIGGER & LEVEL OF OPERATION

CONCEIVED AT

SENIOR MANAGEMENT / TOWNSHIP LEVEL

The vision was for **Electronics City to achieve Net Zero status by 2030.**

This triggered ELCITA to focus on:

1. Reducing electricity consumption
2. Replacing fossil-fuel-based transportation with EVs and addressing increasing mobility demand
3. Reducing industrial and traffic-related air-quality impacts

This aligns with ELCITA's long-term net-zero objectives.

2. UNIQUENESS

1. **Industries joining hands** with ELCITA towards the common Net Zero objective.
2. **Renewable energy integration** through rooftop solar, wheeling of green power and Green Tariff procurement.
3. **Free metro feeder/shuttle services** for last-mile connectivity and reduced dependence on private vehicles.
4. **High-density air-quality monitoring network** across Electronics City through strategically installed AQ sensors.

3. TIMELINE & ROAD MAP

FY 2023–26

- Resustain ESG platform provided to 73 industries for environmental data sharing.
- Engaged consultants such as DNV to support target achievement.
- Annual ESG Report published by ELCITA.
- Sustainability Awards introduced to recognise and incentivise industries

FY 2026–27

- Planned **100% EV penetration in ELCITA operations**.
- Support member industries in **procuring green power**.

FY 2027–30

- Bring **100% of industries** into the Net Zero journey.
- **Achieve Net Zero status for Electronics City by 2030.**

TANGIBLE BENEFITS

3,26,170
kWh
Solar generation
FY 2025–26

10,27,777
kWh
Green Tariff
Renewable procurement

53%
Renewable share
of total energy

961.30
tCO_2e
Avoided emissions
from renewable energy

17
sensors
AQ monitoring
16 stationary + 1 mobile

RENEWABLE ENERGY | ELCITA OPERATIONS

- 99% renewable electricity consumption in FY 2025–26
- 0 tCO_2e market-based Scope 2 emissions
- Scope 1 + Scope 2 (location-based) reduced ~15% YoY
- Directly supports the project's electricity decarbonisation layer

CLEAN MOBILITY | TOWNSHIP

- EV penetration increased from 34% to 42%*
- Metro feeder/shuttle ridership: 47,903 → 58,222 passengers per month
- CO_2 savings: 36.86 → 47.28 tCO_2e
- Supports shift from private vehicles to shared/public transport
- One way traffic flow implemented.

SMART AIR-QUALITY MANAGEMENT | TOWNSHIP

- 16 stationary + 1 mobile AQ monitoring stations
- Continuous $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO and O_3 monitoring
- Data supports trend/hotspot identification and mitigation

VEGETATIVE CARBON SINK | TOWNSHIP

- Tree canopy increased 68.2%: 6.22 → 10.46 lakh m^2 (2004–2024)
- Carbon storage increased 38.9%: 242 → 336 kg
- CO_2 sequestration potential: 344.4 kg CO_2e in 2024
- Method: Carbon Storage = AGB × 0.47 (ISO 14064 / IPCC)

INTANGIBLE BENEFITS

Industry engagement towards the common goal of climate change management.

Real-time, data-based decision-making for sustainability management.

Acceptance of energy-efficient practices across the township.

Stronger collaboration among ELCITA, member companies, commuters, service providers and other stakeholders.

Motivating employees with better quality of life

Culture of innovation and future readiness, while supporting employee well-being and quality of life.

REPLICATION POTENTIAL

Industrial townships

IT / Technology Parks

SEZs & large campuses

CROSS-FUNCTIONAL / MEMBER COMPANIES

Resustain™ ESG Platform supports sustainability data collection, management and analysis for 70 member companies.

Town halls, meetings and stakeholder forums support collective sustainability action.













BEFORE & AFTER SCENARIO

BEFORE	AFTER
1. High fossil-fuel operations	**1. Adoption of Renewable Energy & Green Power**
2. Traffic and dust pollution	**2. Better air-quality monitoring and reduced pollution levels**
3. Limited public and mass transport services	**3. Enhanced public transport and last-mile connectivity**
4. Solid waste sent to landfill	**4. Zero Waste to Landfill**
5. Inefficient recycling of wastewater	**5. Water Positive status**

REPLICATION POTENTIAL OF THE PROJECT WITHIN THE SECTOR

PLAN FOR FURTHER SCALEUP/SUCCESSION PLANNING

01 Increase Metro Rail Adoption

Strengthen first- and last-mile connectivity, targeting 200 metro feeder trips/day.

02 Support MSMEs in Green Power Procurement

Facilitate access to renewable energy and green power procurement mechanisms.

03 Explore Solar Farm Development

Evaluate the feasibility of a solar farm for wheeling of renewable power.

04 Increase Green Cover

Target a 30% increase in green cover every decade.

ACHIEVEMENT SHARING MODE

1 SUSTAINABILITY PARK

Live demonstrations and site visits showcasing sustainability initiatives.

2 ELCITA SUSTAINABILITY AWARDS

Platform for showcasing and recognizing sustainability practices across Bengaluru.

3 TOWN HALLS

Sharing initiatives, experiences and implementation learnings with member companies.

4 ESG REPORTS

Documenting sustainability initiatives, performance and learnings for stakeholders.

OTHER KNOWLEDGE-SHARING PLATFORMS

PROPOSED CENTRE FOR EXCELLENCE IN SUSTAINABLE DEVELOPMENT

Platform for:

- Training
- Demonstrations
- Knowledge exchange
- Research
- Collaboration

CHALLENGES FACED & COUNTERMEASURES

ELCITA

CHALLENGE	COUNTERMEASURE
TECHNICAL Difficulty in obtaining consistent energy and emissions consumption data from all member companies to establish a comprehensive township-level Net-Zero baseline.	**COUNTERMEASURE** Strengthen the common ESG Platform, standardize data formats and periodicity, and improve member-company participation and data validation.
ADMINISTRATIVE Statutory empowerment Regulatory compliance	**COUNTERMEASURE** Work with government and other authorities for better policies and empowerment for local authorities and industries.

ACHIEVING NATIONAL BENCHMARKS / STANDARDS

ELCITA

STANDARDS GHG Protocol | GRI Standards | ISO 14001:2015 | Applicable AQ / Emission Requirements

PARAMETER	ELCITA FY 2025–26	EMBASSY REIT	DLF CYBER CITY DEVELOPERS	MAHINDRA WORLD CITY	CAPITALAND / ITPS
ENERGY	53% RE share 99% RE electricity 326,170 kWh solar	55% RE use Open-access + solar	Energy intensity Efficient systems RE where feasible	High on-site RE + green power	Intensity tracking RE uptake 2030 targets
WATER	117.59% Water Positive Reuse + recharge	Water use + reuse Net Zero Water assets	100% sewage treated Reuse applications	High recycling Water intensity + trends	Water intensity Reuse + certified assets
CARBON / GHG	Scope 1: 321.25 Scope 2 loc.: 729.72 Scope 2 mb.: 0	Scope 1–3 Intensity + Net Zero 2040	Scope 1–2 Climate risk + Scope 3	63% absolute S1+2 reduction by 2033; SBTi	Portfolio targets Net-zero pathway
AIR / EMISSIONS	17 AQ sensors 16 fixed + 1 mobile Key criteria pollutants	Continuous AQ Green mobility	Real-time AQ NAAQS alignment	Township AQ Traffic + green cover	Real-time AQ WHO + local standards
TOXICITY / POLLUTANTS	Pollutant monitoring Authorised hazardous-waste handling	Environmental monitoring Regulatory controls	Statutory environmental compliance reporting	Integrated environmental controls at city scale	Portfolio environmental performance + assurance

PRIORITY PLANS

+1 YEAR | PRIORITY EXECUTION

CLIMATE / GHG	Achieve carbon neutrality for ELCITA by 2027; maintain Scope 1 & 2 inventory and expand selected Scope 3 reporting.
RENEWABLE ENERGY	Move towards the 60% renewable-energy target for ELCITA through on-site generation and renewable procurement.
ENERGY EFFICIENCY	Target 5% reduction in ELCITA energy intensity and strengthen efficiency disclosure.
MOBILITY & AIR	Increase metro adoption towards 20% of employee commute; continue EV transition; continuous AQ monitoring and pollutant disclosure.
WATER & CIRCULARITY	Target 125% Water Positive for ELCITA; reduce groundwater extraction 10–15% vs baseline; strengthen circular recovery and plastic-free zones.

+2 YEARS | SCALE-UP PRIORITIES

NET-ZERO PATHWAY	Progress toward Net Zero for ELCITA by 31 March 2030 and the member-company Scope 2 zero-emission pathway.
RENEWABLE ENERGY	Scale PPAs and on-site renewable energy towards 100% renewable energy for ELCITA.
CLEAN MOBILITY	Scale towards 40% metro mode share and 50% EV shuttle buses for last-mile commuting by the FY2028–30 horizon.
AIR QUALITY	Strengthen continuous monitoring and progress towards WHO air-quality guideline levels across the township.
WATER	Scale towards 2× Water Positive; reduce groundwater extraction towards 20% and increase recharge capacity by 10%.

TOP TEN BEST PRACTICES

01 **Adoption of Net- Zero target for a township- First of its kind initiative.**

02 **Measure and validate data**
Implementation of Resustain ESG Platform for entire community. ELCITA's I-CONNECT platform for real time monitoring and integration of applications.

03 **Combine on-site solar with renewable electricity procurement and progressively increase renewable share.**

04 **Phased EV transition**
Replace fossil-fuel vehicles progressively, aligned with operational requirements and charging readiness.

05 **Strengthen shared mobility**
Use metro feeder / shuttle services to improve last-mile connectivity and reduce private-vehicle dependence.

06 **Link AQ with mobility data**
Use environmental and mobility data together to identify trends, hotspots and mitigation opportunities.

07 **Implementation of One-way traffic system**
Implemented one-way system to congestion and pollution on internal roads. Resulted in removal of several traffic signals to improve flow.

08 **Common ESG data platform**
Use a common digital platform for sustainability data collection, validation, monitoring and reporting.

09 **Cross-functional ownership**
Align Sustainability, Infrastructure, Mobility/Traffic, Smart City and Operations around common targets.

10 **Assure, learn and replicate**
Review performance, document learnings, engage stakeholders and transfer the model through knowledge platforms.

MAJOR LEARNINGS FROM PROJECT IMPLEMENTATION

ELCITA

01

Collaboration between authority and industry yields desired results.

02

Capturing of data and review helps to take better decisions.

03

Continuous monitoring helps identify issues early and supports corrective action.

04

Mitigation measures help to combat climate change issues.

IMPLEMENTATION LOOP

Please visit www.elcita.in to learn more about ELCITA's Environmental Initiatives.

THANK YOU