Alliance for an Energy Efficient Economy

ANNUAL REPORT

2024-25

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List of Abbreviations

°C	Degree Celsius
AC	Air Conditioner
ADR	Automated Demand Response
AEEE	Alliance for an Energy Efficient Economy
AHEAD	Alleviating Heat Stress by Enhancing Production of Affordable Cooling Devices
BEE	Bureau of Energy Efficiency
BLDC	Brushless Direct Current
CCTS	Carbon Credit Trading Scheme
DCS	District Cooling Systems
DBC	Decarbonisation Business Charter
DISCOMs	Distribution Companies
DPR	Detailed Project Report
DREL	Decentralised Renewable Energy
DR-RACs	Demand Response-Ready Room ACs
DSM	Demand Side Management
ECBC	Energy Conservation Building Code
EESL	Energy Efficiency Services Limited
ESCO	Energy Service Company
EV	Electric Vehicle
EVO	Efficiency Valuation Organisation
EWS	Economically Weaker Section
FEED	Forum for Energy Efficiency and Decarbonisation
GW	Giga Watt
GWh	Giga Watt-hour
ICAP	India Cooling Action Plan
ICC	India Cooling Coalition
IIT	Indian Institute of Technology
IPMVP	International Performance Measurement and Verification Protocol
ISBT	Inter State Bus Terminals
IVCS	Integrated Village Cooperative Societies
LCA	Life Cycle Assessment
LRM	Lifecycle Refrigerant Management
M&V	Measurement and Verification
MoEFCC	Ministry of Environment, Forest and Climate Change
MoU	Memorandum of Understanding
MSME	Micro, Small, and Medium Enterprise
MT	Metric Ton
Mtoe	Million tonnes of oil equivalent
NDCs	Nationally Determined Contributions
OEM	Original Equipment Manufacturer
PAT	Profit After Tax
PMVA	Performance Measurement and Verification Analyst
PMAY-G	Pradhan Mantri Awas Yojana – Gramin
PMAY-U	Pradhan Mantri Awas Yojana – Urban
SANKALP	Sheetgrih Sashaktikaran Aur Navinikaran Ki Pehel
SECF	State Energy Conservation Fund
SEforALL	Sustainable Energy for All
SDA	State Designated Agency
SDGs	Sustainable Development Goals
SDI	Solar Decathlon India
SEEAP	State Energy Efficiency Action Plan
SEEI	State Energy Efficiency Index
SOP	Standard Operating Procedure
TWh	Terawatt-hour
ULB	Urban Local Body
UN	United Nations
UT	Union Territory
VICALP	Vernacular and Innovative Construction Alternatives for Low-carbon Development Practices for Buildings and Cities

Message from the Chairperson

It is a privilege to present the Annual Report 2024-25 of the Alliance for an Energy Efficient Economy (AEEE). At a time when the world is intensifying its pursuit of sustainable development and climate resilience, energy efficiency has emerged as one of the most critical tools for shaping a secure, inclusive, and low-carbon future. Notably, the International Energy Agency (IEA), a long-standing and synergistic partner of AEEE, reports that accelerating energy efficiency improvements can deliver over a third of all carbon dioxide emission reductions by 2030. A joint study by AEEE further highlights that the combination of energy efficiency, technology, behavioural change, and structural reforms can reduce India's energy demand by 28% and emissions by 32% by 2070 compared to a business-as-usual trajectory.

For India, this is a moment of unprecedented opportunity. Efficiency is not new to us – it is embedded in our culture, architecture, and how we have historically approached resource management. This tradition now meets a new imperative: as India positions itself as a global leader in the clean energy transition, the time is right to bring this ethos to the forefront – scaling investments, creating robust markets, and embedding efficiency into every major policy, infrastructure, and financing decision. In doing so, energy efficiency can also help reduce our reliance on energy imports, supporting India's long-term goal of energy independence.

Over the past year, AEEE has intensified its focus on enabling structural and scalable change. From strengthening sub-national implementation and advancing (Energy Service Company) ESCO-led solutions, to mainstreaming demand-side flexibility and supporting the decarbonisation of Micro, Small, and Medium Enterprises (MSMEs), we are proud of how our work has embedded energy efficiency into sectors that shape India's growth, delivering gains in cost savings, emissions reduction, and institutional capacity. These efforts are firmly anchored in India's national priorities – advancing climate goals, boosting industrial competitiveness, and enabling inclusive development.

This progress is made possible by the trusted partnerships we have nurtured – with ministries, state agencies, international organisations, industry leaders, and civil society peers. AEEE's strength lies in its ability to bring together diverse stakeholders, bridge research and action, and spark meaningful, future-ready collaboration. From policy development to programme implementation, we are proud to work alongside partners who share our vision and resolve.

The scale of what lies ahead demands transformation at the ecosystem level. We must mobilise green capital at scale, empower state institutions to drive implementation, deepen public-private collaboration, and activate instruments such as carbon markets to accelerate progress. AEEE remains committed to shaping this transition.

As we look ahead, we do so with both urgency and aspiration. The path to decarbonisation is not without challenges, but it offers a powerful opportunity – to create jobs, raise living standards, and shape a future that is both equitable and climate-aligned. I sincerely thank our members, supporters, and partners for their continued trust. I invite governments, businesses, financiers, researchers, and citizens to join us in making energy efficiency not just a priority, but a national imperative – and a global model.

Venkat Garimella

Message from the President and Executive Director

As the world enters a decisive decade for climate action, energy efficiency has moved from the sidelines to the centre of global and national strategies for decarbonisation. In 2022–23 alone, India's energy efficiency efforts resulted in energy savings of 50.81 million tonnes of oil equivalent (Mtoe), equivalent to 6.87% of the total primary energy supply, yielding INR 1.88 lakh crore in monetary savings and avoiding 306 million tonnes of CO_2 emissions, or 10.3% of the country's total emissions.

In 2024–25, AEEE intensified its efforts across sectors, technologies, and geographies to position energy efficiency as a core enabler of a modern, climate-resilient, and economically robust *Viksit Bharat.* Building on over 16 years of experience, AEEE remained a trusted partner for inclusive, evidence-based, and scalable energy solutions.

Our work remained grounded in systemic impact, strengthening state capacity to integrate energy efficiency across policies, programmes, and sectors. We continued to support data-driven planning, institutional readiness, and localised implementation through longstanding collaborations with state governments and institutions. Our ongoing work to embed efficiency into critical infrastructure includes advancing sustainability in India's fast-growing airport ecosystem. We deepened our commitment to sustainable cold chains as a pathway to reduce food loss and nurture farmer livelihoods, while also advancing climate resilience through sustainable cooling. The sixth phase of the India Cooling Coalition further enabled cross-sectoral collaboration on heat stress. At the same time, we expanded our engagement with academic institutions and young professionals, investing in the leadership and innovation that will shape India's net-zero future.

Anchored in this vision of future-readiness, we advanced key national priorities. With Artificial intelligence (AI) adoption accelerating and India's data centre capacity set to double by 2026, AEEE began charting pathways to ensure energy-efficient systems pre-empt tomorrow's stress points. Our district cooling roadmap, now underway, is designed to meet the country's growing cooling needs sustainably. In support of the national goal of housing for all, we contributed to the Pradhan Mantri Awas Yojana, demonstrating that energy efficiency can benefit every section of society. This work takes meaningful early steps to enhance construction quality, embed disaster resilience, and ensure thermal comfort and low-carbon design in affordable housing. Through initiatives such as electrifying rural last-mile logistics, we also fostered income generation, women's economic inclusion, and the growth of rural Electric Vehicle (EV) ecosystems.

Across all programmes, we remained rooted in partnerships and the belief that energy efficiency is the fastest, cleanest, and cheapest way to achieve climate and development goals.

As India charts its net-zero pathway, AEEE is proud to shape interventions that are practical, equitable, and future-ready. I extend my heartfelt gratitude to our team, members, and partners. Together, we can ensure that energy efficiency is not an afterthought, but a cornerstone of India's climate-resilient and energy-secure future.

Satish Kumar

About Us

Who We Are

Alliance for an Energy Efficient Economy (AEEE) supports policy implementation and enables the energy efficiency market with a not-for-profit motive. AEEE promotes energy efficiency as a resource and collaborates with industry and government to transform the market for energy-efficient products and services, thereby contributing toward meeting India's goals on energy security, clean energy, and climate change. AEEE collaborates with diverse stakeholders such as policymakers, government officials, business and industry, consumers, researchers, and civil society organisations. Respect, Integrity, Synergy, and Excellence are central to our efforts.

Our Vision

Catalyse Responsible Use of Energy for a Climate Resilient and Energy Secure Future

Our Mission

Foster a culture and market for energy efficiency by working across government, industry, and civil society organisations and assist with:

- Integrating energy efficiency into India's Climate Action, Sustainable Development, and Net-zero Goals
- Enabling equitable energy transition

Organisation Goals - 2030

Energy Savings: Enable 100 GW of demand offset through energy efficiency

Investments: Help create an ecosystem to facilitate INR 100,000 crore of green investment into energy efficiency interventions

Green Jobs: Undertake capacity-building programmes with partners to enable 500K+ green professionals to drive India's net-zero ambition

SDG Linkages

Contributing to 12 of the 17 SDGs

We accelerate impact as an ecosystem enabler through research, thought leadership, and implementation to meet India's 2030 Nationally Determined Contributions (NDCs) and the United Nations' Sustainable Development Goals (SDGs).

Our Core Values

Our values are rooted in principles of human rights and equity, inspired by the vision of a sustainable, energy-efficient future.

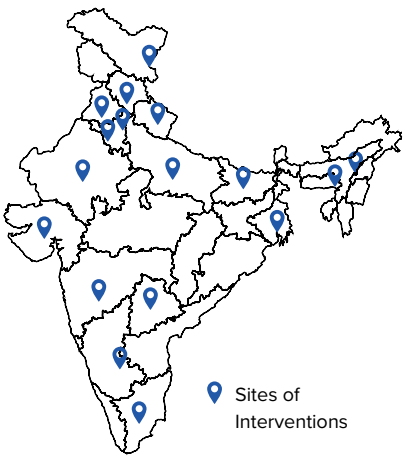
- **R** Respect for all
- Integrity at all times
- **S** Synergy within AEEE
- **E** Excellence at work

How AEEE Works

AEEE is a catalyst for India's energy efficiency transition—integrating systems thinking, strategic leadership, and multi-sectoral collaboration at its core. As a forward-looking organisation, AEEE moves beyond research and technical implementation to shape the broader ecosystem, championing the triple-sector leadership model that brings together government, industry, and civil society to co-create lasting impact.

At the heart of AEEE's work lies the Lean, Mean, Green, Seen (LMGS) framework—a strategic approach that integrates energy efficiency and renewable energy, particularly in construction and manufacturing, to deliver transparent, environmentally responsible, and economically viable outcomes at both societal and national scales, thereby, serving as the lynchpin for fostering a culture of energy efficiency and driving India towards an energy-efficient economy.

Activating the strategic levers through high-impact engagement methods and tools across focus areas, AEEE strengthens policies, platforms, and partnerships that generate green jobs, unlock investments, and accelerate sustainable energy outcomes for India.



STEP 1

LEAN

Minimise energy demand through first-principle design

STEP 2

MEAN

Responsible application, right-sizing and adoption of efficient technologies

STEP 3

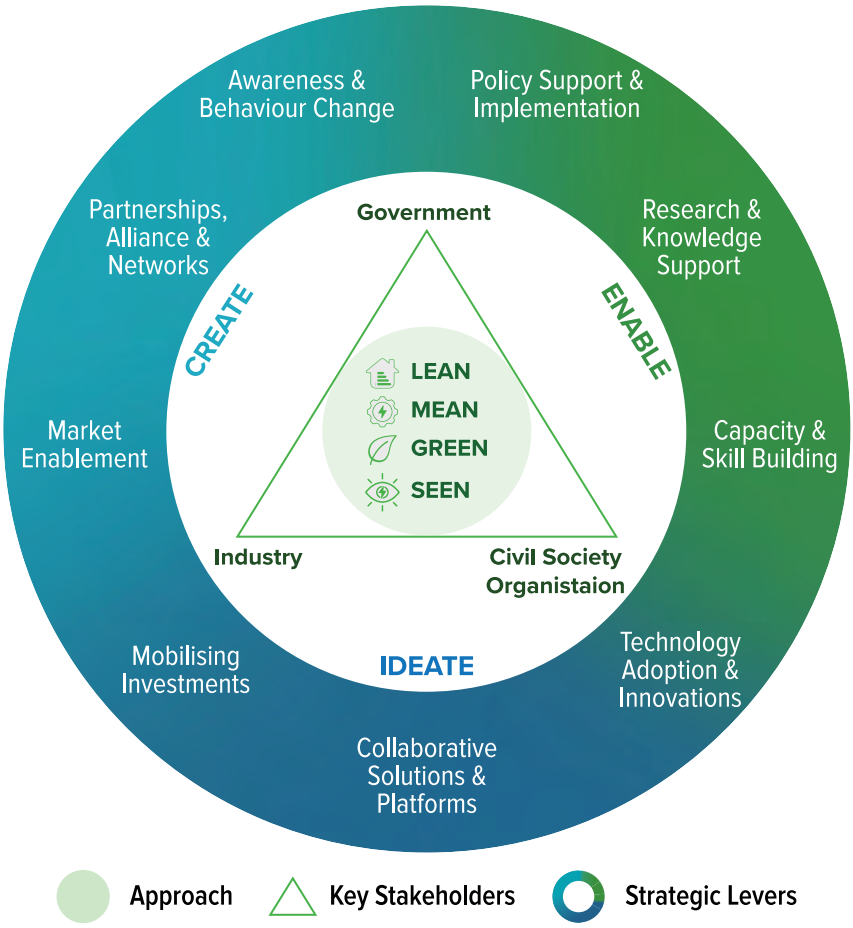
GREEN

Meet residual demand with renewable energy

STEP 4

SEEN

Showcase superior performance and impact for transparency and accountability



Our Focus Areas

Low-Carbon Built Environment

Enable decarbonisation and enhance climate resilience of India's rapidly growing built environment

Sustainable Cooling and Cold Chain

Advance sustainable space cooling and refrigeration for thermal comfort and food security

Smart and Resilient Power and Mobility

Facilitate a clean energy transition through strategic demand-side interventions

Decarbonisation Catalysts

Leverage cross-cutting strategies to decarbonise priority sectors

Global and Local Action

Position energy efficiency as the first fuel at the global and local levels

Impact and Research Landscape

Accelerating Ambition: Global Call to Double Energy Efficiency

Energy efficiency is increasingly recognised as the cornerstone of global climate and development strategies. The international commitment to double the rate of energy efficiency improvement by 2030, first elevated at the 2021 Global Dialogue on Energy and reinforced by the IEA's Versailles Statement (2022), gained unprecedented momentum with its formal endorsement by the G20 Leaders' Declaration in New Delhi (2023). For the first time, the world's largest economies collectively agreed to advance policies and actions to double energy efficiency progress this decade, underscoring its centrality to energy security, climate resilience, and economic productivity.

This goal is ambitious but essential. Achieving it would deliver nearly one-third of the emissions reductions needed by 2030 to stay on the net-zero pathway. Yet, as of March 2025, global progress remains insufficient: the energy efficiency improvement rate reached only 2.3% in 2023, well short of the 4% target. The gap is even wider in the Global South, where challenges related to access, finance, infrastructure, and awareness persist.

As a policy enabler and thought leader from the Global South, AEEE is making dynamic contributions to shaping and advancing the global energy efficiency discourse. In 2024-25, AEEE actively participated in high-impact international platforms and working groups, aligning its contributions with global goals. From tracking progress to enabling behavioural change and policy enablement, AEEE continues to champion energy efficiency as a vital development solution, one that balances ambition with equity and climate leadership with local relevance.

Global Collaboration for Energy Efficiency Leadership

In 2024-25, AEEE continued to engage with leading international and multi-stakeholder platforms to advance energy efficiency across key themes such as sustainable cooling, buildings and sectoral decarbonisation, and public-private collaboration. Through these alliances, AEEE contributes to shaping global and national agendas by promoting energy efficiency as the first fuel, supporting people-centric approaches, and enhancing visibility through strategic communications. These engagements also play a pivotal role in mobilising private sector investment and support for scalable, high-impact solutions, reinforcing India's position in the global energy efficiency landscape.

Global Network Partners

Cool Coalition

Mission Efficiency

Energy Efficiency Movement

Strategic Partnership Between AEEE and the Energy Efficiency Movement Association

AEEE signed a strategic partnership with the Energy Efficiency Movement Association (EEMA) with the objective to promote energy-efficient technologies and practices in industries through communications campaigns, alongside conducting training and capacity-building activities to support the development of professionals.

Global Taskforces and Working Groups

- Global Food Cold Chain Council
- Oversight Committee, Centre of Excellence for Building Decarbonization, ASHRAE
- Cool Coalition Steering Committee
- United for Efficiency Model Regulations Guidelines Working Group
- Mission Efficiency Global Ambition Taskforce
- Mission Efficiency Narrative Taskforce
- Cool Coalition Communications and Advocacy Working Group

Showcasing India's Energy Efficiency Leadership at Global Platforms

In 2024-25, AEEE strengthened India's global presence by actively participating in high-impact international forums, highlighting its thought leadership in energy efficiency and sustainable cooling. Across conferences, side events, and strategic dialogues, AEEE shared policy insights, sectoral expertise, and research outcomes to support global climate goals. AEEE led discussions on strengthening levers for accelerating energy efficiency progress, scaling finance, advancing market transformation, fostering inclusive partnerships, and embedding communications as a catalyst for change, reinforcing energy efficiency as central to equitable and sustainable development.

IEA's 9th Annual Global Conference on Energy Efficiency

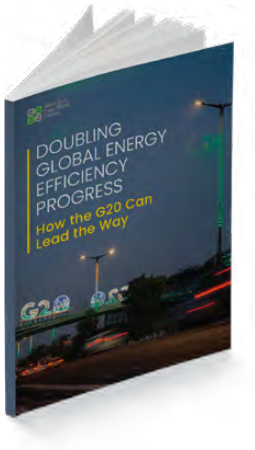
21-22 May 2024, Nairobi

AEEE emphasised scaling industrial energy efficiency and building decarbonisation, focusing on enabling finance, strengthening MSME participation, and aligning energy performance incentives with actual outcomes.

'From Pledge to Action: Energy Efficiency in the Asia Pacific,' A Pre-forum Event at the Asia Clean Energy Forum

3 June 2024, Manila

AEEE facilitated a high-level roundtable with Sustainable Energy for All (SEforALL), CLASP, and Mission Efficiency, emphasising collaborative models to double energy efficiency progress across Asia. At this roundtable, AEEE highlighted progress in advancing energy efficiency across G20 countries and stressed the need to double the global rate of energy efficiency progress by 2030 to meet international climate goals. Focus was brought on impactful partnerships and on exploring avenues for collaboration among governments, industry, financial institutions, and other stakeholders to identify drivers for achieving energy efficiency targets.



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World Cold Chain Symposium

26 October 2024, Bangkok

AEEE underscored the role of energy-efficient cold chains in transforming rural economies, spotlighting India's cold storage modernisation needs and capacity-building priorities.

36th Meeting of Parties to the Montreal Protocol (MOP 36)

28 October - 1 November 2024, Bangkok

AEEE explored market transformation for efficient cooling and the adoption of natural refrigerants, providing insights on policy, technician training, and sustainable market development in emerging economies at MOP 36.

Side Event, 'Cooling with Purpose: Transforming Consumer Choices for Room Air Conditioner Efficiency'

This dynamic panel and roundtable discussion organised by AEEE, Clinton Health Access Initiative (CHAI), and CLASP spotlighted the unique challenges and opportunities in emerging markets, where a combination of policy interventions and market development programmes is essential to address the surging demand for cooling. The discussion emphasised that market development programmes and behavioural insights can complement policy measures, paving the way for a sustainable cooling future.

Side Event, 'Overcoming Barriers to Natural Refrigerant Adoption in Developing Countries: Policy and Technological Pathways'

At the side event organised by the International Institute of Refrigeration, AEEE shared insights on the adoption of natural refrigerants amidst the rapid growth of the supermarket sector, as well as capacity-building initiatives for technicians in India.

UNFCCC 29th Conference of Parties (COP 29)

11-22 November 2024, Baku

AEEE delivered strong messaging for advancing energy efficiency progress and building a narrative-driven movement at UNFCCC COP 29.

Side Event, 'Tracking Efficiency Progress in the Global South'

AEEE, CLASP, International Institute of Refrigeration, and SEforALL co-organised a side event focused on building effective frameworks to track energy efficiency progress, sharing best practices, and identifying strategies for rapid improvement. It explored actionable tools and insights to accelerate the doubling of energy efficiency progress while ensuring measurable outcomes and inspiring further action.

Roundtable Discussion, 'The Efficiency Buzz: Leveraging Communications to Power Climate Wins'

AEEE and SEforALL, under the aegis of the Mission Efficiency Narrative Task Force, sparked the push for mainstreaming communications as a key driver of energy efficiency progress. The discussion emphasised that human-centric and positive messaging, tailored to specific contexts, alongside capacity building and resources for communications activities, are crucial to embedding energy efficiency as an essential part of the climate conversation.

Side Event, 'Financing the Adoption of Passive Cooling Strategies for a Cooler, Sustainable Future'

At this side event organised by Cool Coalition and Global Alliance for Buildings and Construction, AEEE, shared insights on the pivotal role of adopting a Lean-Mean-Green approach to reducing cooling demand, and the need to prioritise passive cooling strategies by focusing on building envelopes, which can significantly cut energy requirements while ensuring thermal comfort for all.

Side Event, 'Incentivising Low-Carbon Cities: Digital Tools for Sustainable Urban Development'

Organised by the UN Climate Change Global Innovation Hub and World Green Economy Organisation, this side event focused on the potential of digital technologies to advance low-carbon cities. AEEE shared insights on the critical role of enhancing energy efficiency in transforming urban environments to become more resilient, sustainable, and inclusive.

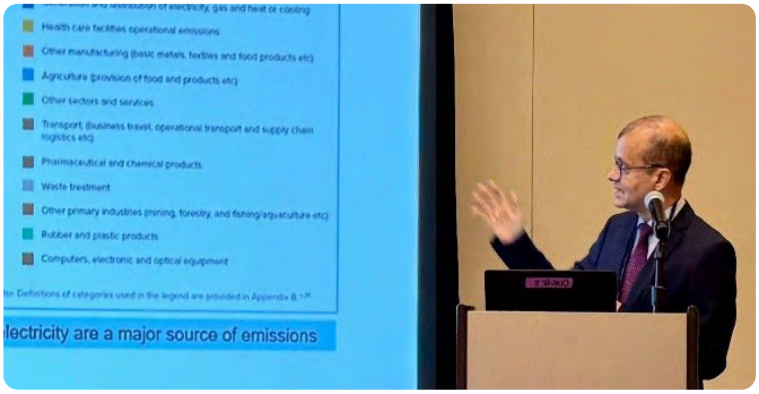
Side Event, 'Integrated Heat and Cooling Action Plan for Cities'

Organised by iForest, the side event brought together experts from various countries to address the twin challenges of rising extreme temperatures and the growing demand for cooling. The discussions highlighted the urgent need for a global programme to support cities in tackling these issues. AEEE shared insights into India's evolving requirements and the complexities of integrating heating and cooling action plans, offering lessons from the ground on strategies to overcome implementation challenges.

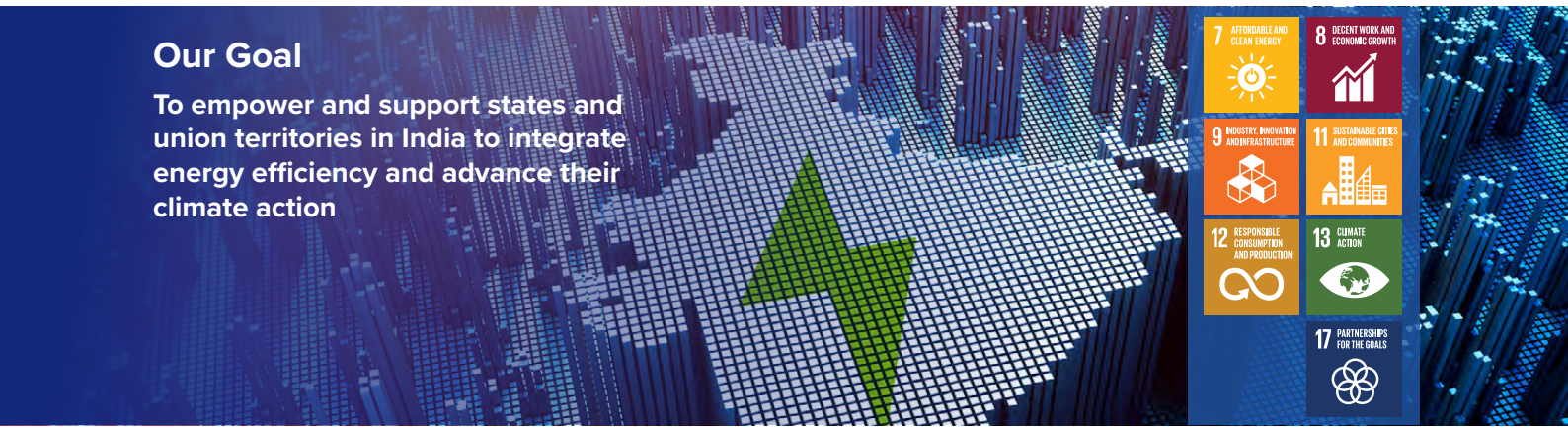
ASHRAE 2025 Winter Conference

8-12 February 2025, Orlando

AEEE shared insights on its benchmark research on hospital energy performance and airport terminal decarbonisation, and contributed to expert panels on climate-resilient infrastructure and the future of the built environment, emphasising the need for affordable, low-carbon building materials with superior heat transfer properties.



Empowering India's States and Union Territories to Lead Sub-National Climate Action



Our Goal

To empower and support states and union territories in India to integrate energy efficiency and advance their climate action

India's path to becoming a *Viksit Bharat* by 2047 hinges on placing energy efficiency at the heart of its development agenda, crucial for cutting emissions, strengthening energy security and productivity, and ensuring inclusive growth. As national energy demand is projected to nearly double from 620 Mtoe in 2019 to 1,100 Mtoe by 2040 (India Energy Outlook 2021, IEA), energy efficiency is recognised as a critical lever, alongside clean energy solutions, for driving the country's sustainable energy transition. This requires states and union territories to take the lead through robust energy data systems, coordinated governance, innovative financing mechanisms, and alignment with emerging frameworks like the national Carbon Credit Trading Scheme (CCTS). Through the strategic deployment of instruments like the State Energy Conservation Fund (SECF), states can scale implementation and unlock new financial pathways for sustained energy efficiency action.

AEEE supports this transformation by enabling implementation of State Energy Efficiency Action Plans (SEEAPs). AEEE takes a data-driven approach to uncover consumption patterns, identify high-impact areas, and monitor interventions. We strengthen State Designated Agencies (SDAs), facilitate cross-departmental platforms, and promote convergence with climate and renewable agendas.

Key Highlights

Facilitated the development of the State Energy Efficiency Index (SEEI) 2024, establishing a unified, actionable roadmap for sub-national energy efficiency implementation and targeted capacity building across state	**Forged partnerships with four states – Haryana, Kerala, Maharashtra, and Uttar Pradesh for enabling implementation of SEEAPs and collectively achieve 6-7 GWh of energy savings by 2030**	**Sensitisation and capacity building of states for mandatory procurement of energy-efficient appliances including ceiling fans**	**Support in the incorporation of energy conservation building codes in the Uttar Pradesh building bylaws 2025 and its integration in Uttar Pradesh Online Building Plan Approval System (UPOBPAS)**

Our Levers

Policy Enablement and Implementation: Drive policy design and execution by supporting state and local governments in formulating actionable plans, aligning with national priorities, and embedding energy efficiency into broader climate strategies.

Market Enablement and Stakeholder Engagement: Foster inclusive stakeholder ecosystems by facilitating cross-sector collaboration and promoting knowledge exchange across government, industry, and civil society.

Strengthening Institutional Capacity: Enhance institutional capacities across departments by improving data systems, enabling governance structures, and strengthening implementation capabilities for long-term impact.

Mobilising Investments for Sub-National Energy Efficiency Action: Catalyse financial innovation to scale sub-national energy efficiency interventions through strategic use of public funds, risk-sharing models, and alignment with emerging carbon markets.

Key Project and Activities

State Energy Efficiency Index 2024

Developed by the Bureau of Energy Efficiency (BEE) with support from AEEE, the State Energy Efficiency Index (SEEI) continues to serve as a strategic tool for driving sub-national action on energy efficiency. The sixth edition adopts a stronger implementation lens, tracking 66 indicators across seven sectors – Buildings, Industry, Municipal Services, Transport, Agriculture, Distribution Companies (DISCOMs), and Cross-Sector initiatives. With data sourced from BEE, SDAs, the Central Electricity Authority, Energy Efficiency Services Limited, and others, SEEI 2024 will support states and union territories to identify gaps, benchmark progress, and prioritise high-impact measures. The Index is strengthening institutional accountability, enhancing data-driven decision-making, and fostering policy convergence across departments. States are using SEEI to inform investments, accelerate policy reforms, and mainstream energy efficiency into broader climate and development agendas.

Key Highlights From SEEI 2024:

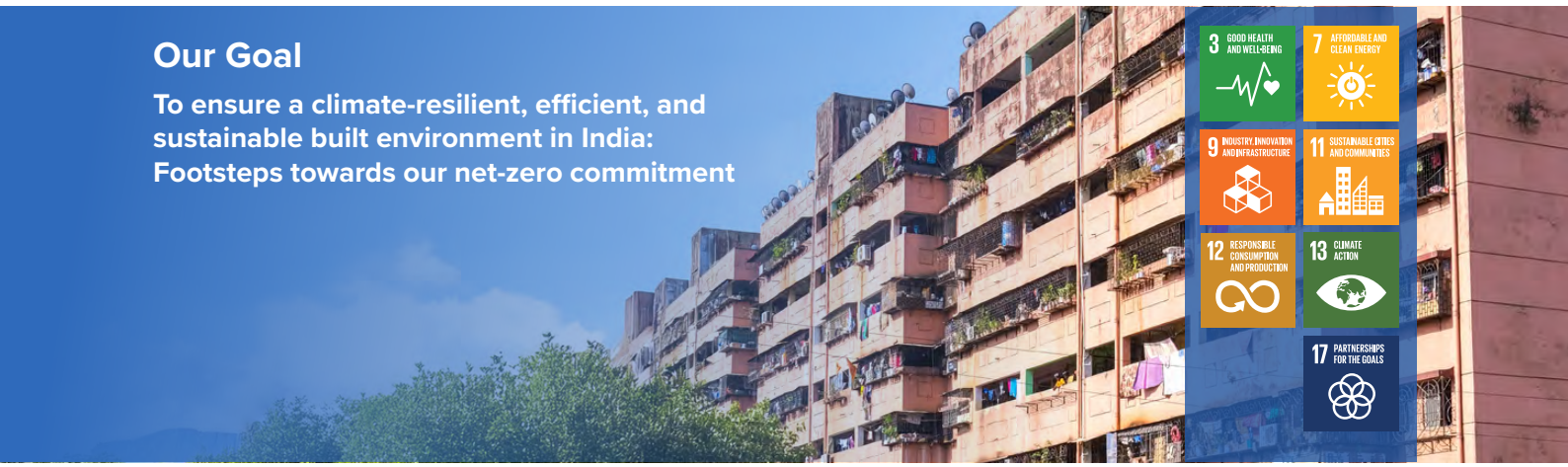
- 24 states have notified the Energy Conservation Building Code (ECBC); 20 have integrated it into municipal bylaws.
- 13 states are drafting residential energy efficiency policies.
- 10 states embedded energy efficiency in MSME/industrial policies; 7 implemented Mandatory Energy Audits for non-PAT sectors.
- 25 states developed Climate Action, Net-zero, or Heat Action Plans, reflecting progress on urban energy resilience.
- 31 states adopted electric mobility policies, promoting clean and efficient transportation.
- 13 states launched agriculture energy efficiency policies focused on cold storage, water use, and farm equipment.
- 11 states approved Demand Side Management (DSM) plans within Aggregate Revenue Requirements (ARRs).
- 35 states/UTs have developed SEEAPs, aligning sub-national action with national targets.

Scan to know more

State-Level Energy Efficiency Implementation in India

The State-Level Energy Efficiency Implementation in India Program, under the Mission Efficiency India Initiative led by SEforALL in collaboration with the AEEE, aims to accelerate the implementation of SEEAPs to drive measurable impact at the sub-national level. Following extensive consultations with the BEE, SDAs, and relevant line departments, scalable, high-impact energy efficiency interventions have been identified under the programme in three target states – Kerala, Maharashtra, and Haryana, with the objective of achieving a cumulative energy savings potential of 6-7 GWh by 2030.

Low-Carbon, Smart, and Climate-Resilient Built Environment



Our Goal

To ensure a climate-resilient, efficient, and sustainable built environment in India: Footsteps towards our net-zero commitment

India's buildings already account for ~25% of total GHG emissions, and the share is only going up. With residential floor space set to nearly triple by 2050, from 16.1 to 41.9 billion m^2, how we build today will define our emissions tomorrow. The shift to modern materials and construction techniques has raised embodied carbon by 4-7x. Meanwhile, rising appliance use continues to push up operational energy demand. Despite this, policies still focus mainly on operations, while embodied carbon now makes up 42% of total building emissions. If nothing changes, India could become the world's largest emitter of embodied carbon from buildings by 2070. At AEEE, we see a turning point. We are working to flip the script by promoting climate-responsive design, low-carbon construction, and appliance efficiency to cut both embodied and operational emissions. We foster shaping buildings that are not just structures, but solutions.

Key Highlights

Advancing passive design and low-carbon materials for energy-efficient climate-responsive buildings, rooted in local context and traditional knowledge in Uttarakhand, Maharashtra, and Meghalaya

Supported the Building Materials and Technology Promotion Council (BMTPC) to make improvements in the specifications of buildings, leading to a BMTPC circular advising inclusion of thermal performance and energy efficiency criteria in residential building tendering processes

Empowering communities and identifying improvement opportunities to mainstream climate-resilient, low-carbon homes for self-built affordable housing in six cities (Lucknow, Guwahati, Bhopal, Visakhapatnam, Surat, and Jodhpur) across three climatic zones

110+ signatories onboard the Decarbonisation Business Charter, driving a value-chain approach to reducing emissions in the building sector

Sensitised 500+ government and private stakeholders to advance action on embodied carbon, building codes, life cycle thinking, and resilient design principles

Our Levers

Policy Enablement and Implementation: Supporting national and state-level adoption of ECBC and Eco-Niwas Samhita (ENS), advancing building codes for heat resiliency and thermal comfort for all, and enabling on-ground compliance through technical advisory and engagement.

Strategic Intervention and Integrative Building Design Solutions: Improving building performance by addressing both embodied and operational carbon, driving passive design, energy-efficient retrofits, and performance data disclosure across public and private buildings.

Business and Financial Models: Driving sustainable choices through partnerships across the building value chain, while developing innovative financing models and scaling ESCO for large-scale low-carbon transitions for the built environment.

Awareness and Skill Development: Building sector-wide capacity through workshops, academic collaborations, and immersive programs like Solar Decathlon India to prepare the next generation and create an ecosystem of climate-resilient building professionals.

Key Project and Activities

VICALP (Vernacular and Innovative Construction Alternatives for Low-carbon Development Practices for Buildings and Cities)

Project VICALP is revitalising local economies in Dehradun, Shillong, and Pune by promoting the adoption of low-carbon, locally grounded building solutions tailored to each city's unique climatic and ecological context. Through a bottom-up approach, city-specific building stock and emissions models were developed to inform evidence-based policymaking in the building sector. The project assessed traditional and local knowledge-based construction methods, creating a matrix of viable low-carbon options, which were further validated through case studies and analyses for pilot demonstrations to enhance stakeholder awareness. Collaborations with state and local institutions are helping to drive the uptake of low-embodied carbon materials across the sector. To build institutional capacity and close knowledge gaps, stakeholder consultations, surveys, and workshops involving senior government officials were also conducted. By combining data-driven modelling, applied research, and engagement, the project is fostering a more resilient and climate-responsive urban development pathway.

Di-Carb: Development of Integrated Carbon Assessment (Embodied and Operational) Framework for Reducing Building's Carbon Footprint

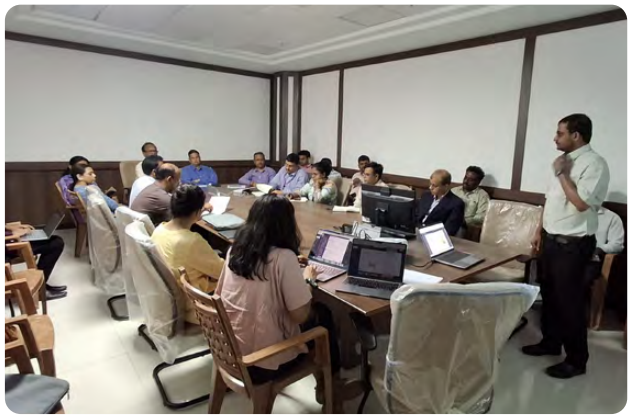
Project Di-Carb is advancing low-carbon development in the commercial building sector by analysing emissions through a Life Cycle Assessment (LCA) lens, encompassing both embodied and operational carbon. By linking emissions to thermal comfort and energy use, the project evaluates alternative materials and construction techniques that can significantly influence carbon reduction targets among end-users. Di-Carb has developed India-specific LCA guidelines to support building professionals, students, and academicians in integrating carbon-conscious decision-making into practice. Through stakeholder consultations involving LCA experts, developers, and academicians, the study's findings have been validated and refined. The project continues to assess impactful strategies and identify key drivers enabling developer communities to adopt low-carbon solutions at scale.

Developing Net-Zero Municipal Buildings Action Plans in Maharashtra focusing on Clean Energy Transition

To advance the net-zero transition of municipal buildings in Maharashtra, AEEE partnered with the municipal corporations of Brihanmumbai, Panvel, Pimpri Chinchwad, and Pune. In Brihanmumbai and Panvel, with support from C40 Cities, AEEE supported in the development of Net-zero Action Plans incorporating strategies such as energy-efficient retrofits, procurement of efficient appliances, and rooftop solar integration. As part of this effort, AEEE conducted stakeholder consultations at the Brihanmumbai Municipal Corporation and Panvel Municipal Corporation headquarters, presenting key findings from baseline energy and carbon assessments of municipal buildings.

In Pimpri Chinchwad and Pune, AEEE formalised its engagement by signing MoUs with Pimpri Chinchwad Municipal Corporation and Pune Municipal Corporation, to support a wide range of initiatives, including energy benchmarking, support for energy-efficient procurement, and building retrofit.

These initiatives collectively aim to accelerate clean energy adoption in municipal governance, contribute to Maharashtra's climate targets, and promote a sustainable, energy-efficient urban future.



Decarbonisation Business Charter

The Decarbonisation Business Charter (DBC) is catalysing collective action to reduce emissions across India's building and construction sector by uniting key industry stakeholders under a common platform. Launched by AEEE, WRI India, Mahindra Lifespace Developers Limited, and EcoCollab with support from Bloomberg Philanthropies, and the Swiss Agency for Development and Cooperation (SDC), the Charter outlines a shared framework to prioritise critical climate actions.

With over 110 signatories, including developers, consultants, manufacturers, and asset owners, the DBC drives commitment across six priority areas: designing for net-zero, adopting science-based targets, improving operational efficiency, mainstreaming climate-aligned building codes, and enabling performance monitoring of net-zero buildings. The unique ability of the DBC to bring together stakeholders across the building construction value chain on a single platform has gained significant recognition. This has led to the signing of an MoU with the Global Building Performance Network (GBPN) and the initiation of a strategic partnership on passive cooling strategies with United Nations Environment Programme. By facilitating regional dialogues in Delhi, Bengaluru, Mumbai, and Pune with participation from over 200 stakeholders, the Charter is helping stakeholders address sectoral barriers such as high material costs, limited circularity, and the need for integrated value chain solutions.

Catalysing Sub-National Climate Action in Maharashtra and Uttar Pradesh

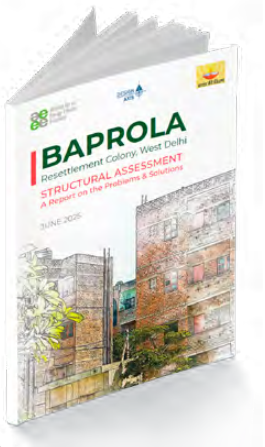
Aligned with India's net-zero targets, the project is advancing a low-carbon, energy-efficient built environment in Maharashtra and Uttar Pradesh by driving energy data disclosure, benchmarking, and effective implementation of building energy codes. It supports the development of Standard Operating Procedures (SOPs) and guidelines for state departments, mobilises green investments, and strengthens supply chain resilience and cost competitiveness across the building sector. Emphasising capacity building and skill development, the project aims to accelerate the design and construction of net-zero buildings with long-term climate benefits. In Uttar Pradesh, AEEE co-organised a stakeholder roundtable on ECBC implementation, submitted formal recommendations for ECBC integration into the 2025 draft building bylaws, and initiated a thermal performance study on aluminium formwork construction. In Maharashtra, a formal MoU was signed with Pune Municipal Corporation, followed by a consultation and action planning workshop on energy efficiency to embed sustainable practices at the city level.

Climate and Disaster Resilient and Net-Zero Green Housing under PMAY-G

The project supports the Ministry of Rural Development in embedding disaster resilience, thermal comfort, and net-zero principles into the Pradhan Mantri Awas Yojana – Gramin (PMAY-G) programme. As part of a World Bank initiative, AEEE in partnership with Indian Institute for Human Settlements (IIHS) conducted a comprehensive assessment of PMAY-G to inform future phases. By integrating energy simulations, cost analysis, and climate-specific design strategies, the project delivered actionable recommendations for housing design, programme management, monitoring and evaluation to support effective implementation. These efforts aim to improve the resilience, health, and comfort of rural homes, aligning PMAY-G with India's sustainable development and climate adaptation goals.

Strengthening Climate-Responsive Affordable Housing in India - Baprola EWS Housing Pilot

India's affordable housing push under schemes like Pradhan Mantri Awas Yojana – Urban (PMAY-U) and Jawaharlal Nehru National Urban Renewal Mission has added millions of housing units in urban areas – but many remain uninhabited, under-maintained, or rapidly deteriorating. The Baprola EWS housing pilot, led by AEEE and Design Axis, assessed structural and environmental challenges in Baprola, a West Delhi housing colony. The findings highlight critical lessons on construction quality, material performance, disaster resilience, and thermal comfort. The project aims to engage key stakeholders in Delhi's affordable housing ecosystem to embed resilience, thermal comfort, and low-carbon materials at the core of future housing for the most vulnerable sections of our society affected by rising temperatures.



Scan to read report

Scan to watch video

Addressing Food-Energy-Climate Change Nexus and Boosting Farmers' Livelihood

Our Goal

To develop sustainable, climate-friendly, and tailored cold chain in India to reduce post-harvest loss, ensure food security, and augment farmers' welfare

India's agricultural cold chain is a critical enabler of food security, yet it remains deeply underdeveloped. When it comes to large cold storages, over 75% of the ~8,200 existing cold stores are more than a decade old, relying on outdated technologies. These systems consume an estimated 10-12 TWh of electricity annually. While it is important to develop new cold chains, modernising the existing ones is also essential to reduce food waste, lower emissions, and improve farmer incomes. AEEE addresses this challenge through a systems approach, combining technical innovation, policy integration, capacity building, and financial enablement, thereby catalysing a future-ready cold chain ecosystem that is resilient, decentralised, and inclusive, serving the needs of both producers and consumers while safeguarding environmental and economic sustainability.

Key Highlights

Enabling Bihar and Haryana to integrate energy efficiency into packhouse development via state policy and project preparation support

Improving cold room operations in Meghalaya through technical and operational performance assessments, and stakeholder trainings across farmer markets and cooperatives

Catalysing cold store modernisation in Uttar Pradesh, through the SANKALP scheme to mainstream energy-efficient practices and renewable energy integration

Developed Horticulture Cold Room Procurement Guidelines to empower stakeholders to select energy-efficient, climate-friendly cold room solutions for a sustainable and resilient agricultural value chain.

Our Levers

Policy Enablement and Implementation: Supporting central and state governments in strengthening cold-chain policies, standards, incentive frameworks, and procurement guidelines aligned with climate and development goals.

Proof of Concept and Adoption of Tailored, Evidence-Based Solutions: Demonstrating context-specific, evidence-based solutions through on-ground assessments and pilot interventions that validate scalable, energy-efficient technologies and operational best practices across diverse agro-climatic regions.

Mobilising Investments and Market Enablement: Mobilising investments by de-risking innovations, promoting outcome-based financial models, and strengthening ecosystem linkages to unlock market-driven adoption of distributed and sustainable cold chain infrastructure.

Awareness and Skill Development: Building capacity across stakeholders, including policymakers, cold store operators, farmer groups, and agri-preneurs, through targeted training, workshops, and engagement at national and international platforms.

Key Projects and Activities

Scaling-up Investment in Clean and Efficient Cold Chain in India

Supporting the states of Bihar and Haryana, AEEE worked with UNEP to promote sustainable, energy-efficient packhouses. Efforts included policy development, model tender documents, and standardisation of detailed project reports. Capacity-building sessions empowered officials, agri-preneurs, and beneficiaries to adopt best practices for energy-efficient packhouses.

Meghalaya Cold Room Assessment

AEEE supported the Meghalaya Basin Management Agency in evaluating the operational performance of 17 cold rooms (5 MT, 10 MT, and 20 MT capacity) installed across Integrated Village Cooperative Societies (IVCS) and Farmers' Markets. The assessment covered equipment from multiple suppliers and focused on energy efficiency and effectiveness. Additionally, AEEE conducted targeted capacity-building sessions for Meghalaya Basin Management Agency field staff, IVCS members, farmer groups, and market committee representatives. Trainings emphasised best practices in post-harvest handling, optimal cold room use, and positioning cold rooms as service hubs to reduce produce losses and improve market access.

Facilitating Sustainable Cold Chain Development in Uttar Pradesh

To support the implementation of the State Action Plan on Climate Change in Uttar Pradesh, AEEE partnered with cold storage owners to promote energy-efficient modernisation. Through workshops and stakeholder consultations, AEEE conducted energy and modernisation audits and proposed tailored upgrades integrating energy efficiency, renewable energy, and clean refrigerants. These measures aimed to cut energy costs, reduce emissions, and minimise produce loss.

The initiative culminated in the conceptualisation of *Sheetgrih Sashaktikaran Aur Navinikaran Ki Pehel* (SANKALP), a cold store modernisation scheme designed to accelerate climate-aligned infrastructure transformation in the agricultural cold chain.

Scaling Up of Green Agri-focused Micro Cold Storage Solutions

In collaboration with the India Climate Collaborative, AEEE is advancing climate-resilient cold chain solutions in Maharashtra and Uttar Pradesh. The initiative focuses on strengthening policy linkages, de-risking investments, promoting renewable based micro cold rooms, and enhancing subsidy uptake. As a policy linkage partner, AEEE engages with governments, Farmer Producer Organisations, local Non-governmental Organisations, and financial institutions, laying the groundwork to scale micro cold room adoption and unlock inclusive, low-carbon growth across agricultural value chains.

Refrigerant Transition in the Commercial Refrigeration and Cold Chain Sector

AEEE, in collaboration with National Research Development Corporation, conducted a study to estimate refrigerant stock and assess Lifecycle Refrigerant Management (LRM) practices in India. The study identified gaps in current practices and recommended targeted interventions to strengthen refrigerant stewardship and climate mitigation.

Taskforce on Sustainable Cold Chain

Under the aegis of the India Cooling Coalition, AEEE has established a dedicated Task Force on Sustainable Cold Chain to accelerate the development of national standards for cold rooms. By promoting high-performance design and operational benchmarks, the initiative aims to advance India's cold chain ecosystem into a more efficient, reliable, and sustainable backbone for agricultural and perishable goods.

'Transforming India's legacy cold storage infrastructure: A study of energy, economic and environmental impact,' *The Energy Journal*

AEEE, in collaboration with academic partners, published a study showcasing how targeted technological upgrades – such as modern refrigeration, improved insulation, and smart energy management – can dramatically improve the energy efficiency, sustainability, and economic viability of India's cold storage sector. Based on in-depth field audits in Uttar Pradesh and West Bengal, the study offers a compelling case for modernising cold chain infrastructure.

Scan to know more

Championing Data-Driven Cold Chains – AEEE at the World Cold Chain Expo 2024

As Knowledge Partner at the World Cold Chain Expo 2024 in Dubai, AEEE led a high-impact panel titled 'Data-Driven Cold Chain: Boosting Efficiency and Investment Potential'. The session spotlighted how data integration can optimise cold chain efficiency across design, manufacturing, and operations. Experts called for stronger data tracking, system-level equipment standards, and policy shifts from Capital Expenditure subsidies to outcome-based incentives. AEEE also launched new horticulture procurement guidelines to drive sustainable, efficiency-focused practices across the value chain.

Enabling Sustainable Cooling for a Billion Lives

Our Goal

Facilitate India's thermal comfort needs by driving innovation, market penetration, and widespread adoption of cutting-edge and energy-efficient space cooling technologies

India's aggregated demand for cooling is expected to increase eightfold while space cooling demand in buildings is projected to surge to nearly 11 times by 2037-38 (baseline 2017-18), underscoring the urgent need for a coordinated national response. With over 3,000 annual cooling degree days and summer temperatures frequently exceeding 45°C, thermal comfort is no longer a luxury, it is a survival imperative. Yet, for millions, particularly in low-income communities, access to affordable and sustainable cooling remains limited. In the absence of a unified institutional home and formal recognition as an essential service, cooling straddles multiple ministries and departments, presenting both a challenge and an opportunity for systemic collaboration.

AEEE addresses this complex challenge through a systems-led approach, engaging with state and central institutions to advance policy and market readiness and support technological innovation. Our initiatives are focused on ensuring that cooling solutions are not only efficient and low-carbon but also accessible, context-responsive, and aligned with India's developmental and climate priorities.

Key Highlights

India Cooling Coalition reinforced its role as a unifying platform for sustainable cooling by hosting its first Annual Conclave and deepening cross-sectoral engagement to accelerate climate-resilient, energy-efficient cooling solutions

Supported India's largest power PSU in techno-economic evaluation and pilot of waste heat reuse and solar thermal cooling solutions for enhanced energy efficiency across its plant and townships

Facilitating DCS adoption in India by activating critical levers – policy roadmaps, guidelines, and engagement with key ecosystem enablers

Our Levers

Policy Development and Technological Standards: Collaborating with BEE, MoEFCC, and other nodal institutions to support regulatory frameworks, develop guidelines and standards, and embed cooling in broader climate and energy policies at the sub-national level aligned with India Cooling Action Plan (ICAP) recommendations and international commitments.

Mobilising Investments for Local Cooling Initiatives: Designing financial tools and business models to attract public and private investment for enhancing thermal comfort, and promoting sustainable cooling solutions as shared cooling infrastructure, particularly in urban and industrial applications.

Innovation and Adoption of Advanced Cooling Solutions: Driving innovation and uptake of context-specific, scalable and replicable solutions such as shared cooling infrastructure, LRM, heat pumps, energy-efficient fans, and advanced thermal energy storage, etc., to support India's cooling transition.

Awareness, Skill Development, and Behavioural Transformation: Delivering stakeholder trainings, practitioner guidelines, and awareness campaigns to embed long-term behavioural shifts in favour of sustainable cooling practices.

Market Transformation and Stakeholder Engagement: Bringing together diverse actors such as utilities, ULBs, public sector units, research organisations, and industry bodies through different forums and alliances like the India Cooling Coalition to foster alignment and unlock scale.

Key Project and Activities

Energy Efficient Cooling (EE-Cool)

EE-Cool is a bilateral project being carried out by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Affairs and Climate Action (BMWK), International Climate Initiative (IKI) and the BEE, India. The project supports the BEE and the Ozone Cell, MoEFCC Government of India, in the implementation of the ICAP with regard to energy-efficient DCS. AEEE supports the project as the PMU for all the major research and knowledge outputs. The project focuses on removing the identified barriers and developing techno-economic viable solutions and innovative business models to successfully implement DCS in India. AEEE is co-leading the development of a national DCS Roadmap and advanced the implementation of the District Cooling Guidelines (2023) through stakeholder trainings. Financial tools and innovative business models tailored for Indian cities are also being designed. Strategic outreach through platforms like India Smart Utility Week, ASHRAE Conferences, and AEEE's Forum for Energy Efficiency and Decarbonisation (FEED) expanded visibility and built momentum for energy-efficient cooling.

Alleviating Heat Stress by Enhancing Production of Affordable Cooling Devices (AHEAD)

As part of the World Bank's AHEAD programme, AEEE is supporting efforts to mainstream DCS by strengthening the ecosystem for strategic adoption, domestic manufacturing, research and development, and financing. A major milestone in the programme was the National Stakeholder Consultation, which convened actors across four key cooling value chains, room air conditioners, cold chain, ceiling fans, and DCS to propel the vision for India becoming a manufacturing hub for cooling technologies and components across the value chains and reduce the dependence on critical component imports. These efforts support India's commitment to climate mitigation and its goal to emerge as a global leader in sustainable and affordable cooling technologies.

Scan QR code
to view the website

The India Cooling Coalition (ICC) is a growing platform of 23* member organisations, spanning non-profits, academia, research institutions, and industry associations, committed to enabling sustainable cooling research and application. It serves as a national platform for stakeholder dialogues and support for policy implementation for national initiatives and global commitments such as the Kigali Amendment, Paris Agreement, and Sustainable Development Goals (SDGs).

Phase VI (October 2024-September 2025) of ICC commenced with a renewed strategic focus, strengthening ICC's internal fabric while enhancing its influence across the sustainable cooling ecosystem. This phase marks a crucial turning point: ICC has not only begun building internal coherence but is now creating a pull, drawing interest, participation, and alignment from a wider network of actors who recognise the coalition's value as a credible and convening voice in the cooling sector.

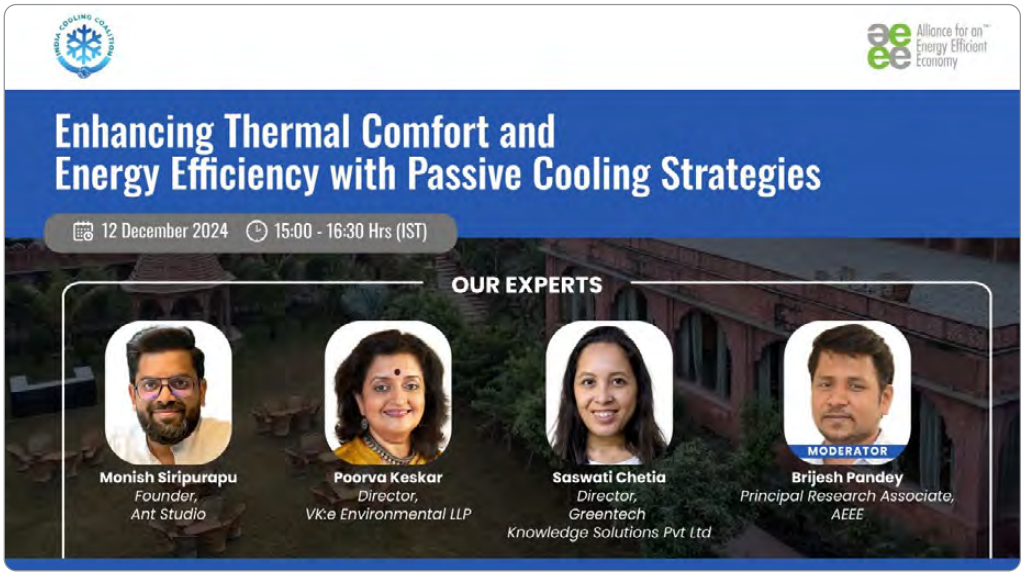
To strengthen its internal network, ICC focused on enhancing internal communications and strategic stakeholder engagement. The activation of two mission-critical task forces – Strategic Communications and Sustainable Cold Chain, is catalysing structured, member-led action in key thematic areas. These task forces are not only building technical depth but also offer channels for sustained dialogue and innovation.

In parallel, ICC is expanding its thought leadership footprint by launching a series of topical webinars and content initiatives that highlight emerging challenges and the coalition's collective expertise. A centralised knowledge repository is also under development, aimed at capturing and curating insights, innovations, and experiences from across the membership.

The ICC Annual Conclave is emerging as a flagship forum, drawing stakeholders from government, industry, and civil society to co-create solutions for India's cooling future. Its growing scale and participation signal ICC's rising role as a convener of influence to shape high-level discourse on sustainable cooling and forge new partnerships for impactful action.

Together, these initiatives are reinforcing ICC's position as a trusted platform for cross-sectoral collaboration. With growing credibility and momentum, the coalition is no longer just convening - it is catalysing action and is poised to shape the sustainable cooling narrative across India.

**as on 31 March 2025*



Scan to watch
webinar

Catalysing responsible and sustainable lifestyles through inclusive, people-centric energy solutions

Our Goal

Facilitate a sustainable and inclusive energy transition through strategic demand-side interventions and smart mobility solutions

The grid electricity generation requirement is likely to increase fourfold, from 1,210 TWh in 2019 (India Climate and Energy Dashboard) to 4,985 TWh in 2050 (TERI, 2024) by 2050. The peak electricity demand is also expected to increase from 185 GW in 2019 to around 700 GW by 2050. The transport sector, with increasing adoption of electric vehicles, is expected to contribute to around 3-5% of total electricity consumption by 2030 and 11-19% of total electricity consumption by 2050, from the present level of ~1%. Despite this, consumer participation in energy usage optimisation remains limited, and demand-side flexibility is vastly underexploited.

AEEE addresses these challenges by enabling smarter energy and mobility systems that are people-centric. Through research, data-driven policy support, market transformation, and institutional capacity building, AEEE promotes responsible consumption, demand flexibility, and low-carbon mobility to advance a resilient and inclusive energy future. Crucially, AEEE supports local innovations, developing proof-of-concept models that demonstrate scalable and contextual solutions.

Key Highlights

Piloted inclusive rural e-commerce logistics through the deployment of 20 electric vehicles, resulting in a 30% rise in average monthly income among women drivers in Telangana

Co-developed report "Response-enabled Room Air Conditioners: A Call to Action on Scaling Demand" that shows how grid interactive room ACs can cut up to 10 GW of peak demand by 2030, equivalent to Delhi's demand, while supporting affordable, scalable cooling in India

Demonstrated demand-side impact through behavioural nudges, achieving a 3.4% reduction in electricity consumption among AC users in Haryana and Rajasthan, and up to a 78% reduction in peak load in Delhi through automated demand response pilots

Initiated a residential Behavioural Demand Response (DR) pilot under Mission LiFE in Kerala, integrating real-time data monitoring and citizen engagement to shift consumption patterns at the household level

Our Levers

Policy Enablement and Implementation: Enabling policies and institutional action by supporting evidence-based regulation, programme design, and multi-stakeholder collaboration including government, power and transport utilities, electricity regulatory commissions, and solution providers to advance energy and transport decarbonisation.

Proof of concept for innovations and scalable solutions: Driving local innovations and scalable solutions by promoting technology pilots and contextual models that demonstrate the viability of inclusive and low-carbon energy and mobility futures, and support utility-led initiatives to optimise electricity consumption, reduce peak demand, and support grid decarbonisation

Market Enablement and Behaviour Transformation: Activating markets and shaping behaviour by designing frameworks, incentives, and information tools that empower consumers, unlock demand flexibility, and transform usage patterns.

Creating Opportunities and Skill Development: Fostering local capacity and livelihoods by building skills, knowledge systems, and entrepreneurship opportunities that support inclusive participation in India's energy transition.

Key Projects and Activities

Electrification of Rural Last-Mile E-Commerce

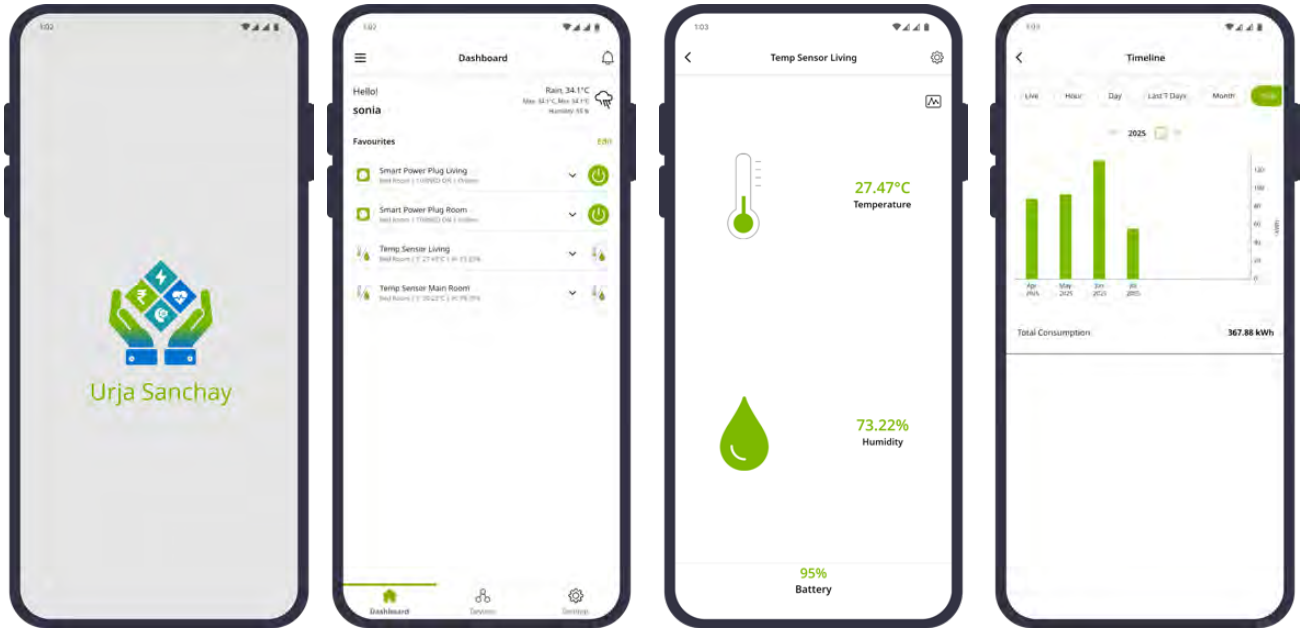
AEEE, in collaboration with the Villgro Foundation, conducted an in-depth market study on rural e-commerce electrification, focusing on women's economic inclusion. As part of the project, 20 electric vehicles were deployed in Sangareddy and Warangal, with women drivers engaged through MOWO Social Initiatives Foundation and Hala Mobility. The initiative created new livelihood opportunities, led to a 30% increase in the average monthly income of pilot participants, and demonstrated the viability of inclusive, low-carbon rural logistics ecosystems.

Decarbonising India's Cold Chain – A Transport and Energy Nexus

AEEE is driving the decarbonisation of India's cold food supply chain by piloting electric reefer vehicles in emission-intensive farm-to-market logistics. By introducing clean, temperature-controlled transport, the initiative enhances energy efficiency, reduces food loss, and supports sustainable agriculture. It addresses a critical gap in rural logistics and building a scalable model for low-carbon cold chains, aligning with national climate goals and unlocking long-term benefits for both farmers and consumers.

Dynamic Display of Power in Room Air Conditioners (ACs) for Nudging User Behaviour

AEEE piloted a real-time power display intervention on AC through smart plug, temperature and humidity sensor, and *Urja Sanchay* mobile application across three cities, Panchkula, Jaipur and Delhi to nudge households towards efficient air conditioner usage. The initiative resulted in a 3.4% average electricity reduction among the participating households receiving real time display of ACs power consumption, and nudge related to sustainable ACs usage practices, demonstrating the potential of behavioural cues in lowering residential energy demand.



Automated Demand Response Pilot for Residential Consumers in Delhi

The Automated Demand Response (ADR) Pilot in Delhi, was a collaborative initiative between Schneider Electric, Bombay Suburban Electric Supply Ltd (BSES), Yamuna Power Ltd, and AEEE. Through a smart technology setup across 50 homes in Delhi, this ADR pilot achieved up to 78% demand reduction during peak hours, offering a scalable model for residential peak load management and enhancing grid reliability in high-AC use zones. This demonstrated the effectiveness of ADR in reducing residential peak electricity demand in Delhi, a city increasingly vulnerable to heatwaves and energy stress due to the rising use of ACs.

Demand Response Standards Roadmap for RACs

AEEE co-authored the report “Response-enabled Room Air Conditioners: A Call to Action on Scaling Demand” with CLASP that revealed the role of Demand Response-Ready Room ACs (DR-RACs) in transforming the way India meets its cooling needs, easing pressure on the grid, slashing energy costs, and supporting a more resilient energy future. The report highlights that India’s cooling demand is growing exponentially, with AC sales set to soar, adding up to 130-165 million units by 2030 and in this scenario, DR-RACs can reduce 8-10 GW of peak load, equal to Delhi’s total demand, saving USD 12.8 billion in grid investments. Moreover, with Internet of Things (IoT) and cloud-based controls, DR-RACs can become affordable and market-ready adding only USD 10-30 per unit, without increasing long-term costs for users.

Interactive Forum on Demand Flexibility

AEEE co-hosted a high-impact Interactive Forum on Demand Flexibility in partnership with CLASP, and with strategic support from Rocky Mountain Institute, MP Ensystems, EESL, and SEforALL as knowledge partners. This convening brought together key energy sector stakeholders, including DISCOMs, regulators, government leaders, think tanks, and academic institutions, to build consensus and catalyse action on strengthening grid reliability and managing peak demand more effectively.

The forum served as a collaborative platform for shaping priorities and driving systemic change. A key outcome was the collective endorsement of three transformative shifts: formalising demand flexibility as an integral element of resource adequacy planning; unlocking the aggregator role to enable the creation of a robust market for demand flexibility; and elevating demand response ready appliances as a policy priority to bolster grid resilience. These aligned actions will be significant in embedding demand-side strategies into India’s energy transition, contributing directly to long-term reliability, cost efficiency, and the country’s net-zero commitments.

M&V Fundamentals and International Performance Measurement and Verification Protocol (IPMVP®) Online Training and the Performance Measurement and Verification Analyst (PMVA) Certification Programme

Effective energy savings measurement and verification have emerged as essential prerequisites in various contexts, including the PAT programme, ECBC compliance, Standards and Labelling, DSM initiatives, implementation of building management systems, and the work of ESCOs. AEEE plays a pivotal role in providing comprehensive training on M&V fundamentals and the globally recognised International Performance Measurement and Verification Protocol (IPMVP). This meticulously crafted online training and certification curriculum leads to the prestigious Performance Measurement and Verification Analyst (PMVA) certification accredited by the Efficiency Valuation Organisation (EVO). This certification not only acknowledges proficient energy efficiency practitioners but also fosters elevated benchmarks in the realm of measurement and verification.

2024-25

03 Certification Programmes

65 Professionals Trained

51 Organisations Engaged

The training encompasses a wide array of methodologies employed in the M&V of energy efficiency undertakings, including the renowned IPMVP framework. Tailored to cater to the needs of engineers, architects, economists, managers, energy auditors, specialists, financial analysts, etc., deeply involved in the design and implementation of energy efficiency initiatives, this program provides a comprehensive understanding of the pivotal energy efficiency initiatives they oversee.

Market Creation for Energy-efficient Technologies and Services

Our Goal

To enhance productivity and facilitate a sustainable energy transition for MSMEs by creating a robust market for energy-efficient technologies and services

MSME sector, comprising over 63 million enterprises, contributes around 30% to the national Gross Domestic Product and supports over 110 million livelihoods. It is also a major industrial energy consumer, accounting for nearly 25%–30% of total industrial energy use. However, energy efficiency uptake remains low, with MSMEs typically operating at 15%–25% lower efficiency than larger firms, due to outdated technologies, limited technical knowledge, and inadequate financing. Enhancing energy efficiency in this sector presents a significant opportunity to reduce emissions, boost productivity, enhance global competitiveness, and strengthen energy security.

Recognising this, AEEE has been playing a catalytic role in advancing energy efficiency and low-carbon solutions for MSMEs across India. It fosters technology-market linkages and drives demand for efficient technologies through a comprehensive approach involving policy support, stakeholder coordination, technology enablement, capacity building, and knowledge dissemination. By aligning its efforts with national and sub-national climate priorities, AEEE supports MSMEs in adopting energy-efficient technologies, enhancing operational performance and competitiveness, and contributing to India's sustainable energy transition.

Key Highlights

Demonstrated gas-based furnace in Moradabad under the ESCO model, enabling zero-CAPEX adoption and achieving 20–25% energy savings

Surveyed 150+ brick kilns in East Uttar Pradesh; SOPs and training modules to scale Zigzag/Fixed Chimney Bull's Trench Kiln adoption are under development

Feasibility study for conversion of municipal waste to hydrogen for Pimpri Chinchwad Municipal Corporation

Demand aggregation for over 80,000 energy-efficient fans from government departments, colleges, universities, health centers, and other public and private sector institutions

Identified 3 high-impact MSME clusters in Maharashtra for low-carbon interventions; MoUs signed with industry associations and implementation initiated

Our Levers

Policy Enablement and Implementation: Supporting central and state governments in advancing MSME-centric energy efficiency strategies by contributing to policy formulation, regulatory design, and institutional frameworks aligned with India's climate, energy, and development goals.

Technology Upgradation and Implementation: Demonstrating scalable, energy-efficient technologies through field-level assessments and tailored interventions that validate operational feasibility, improve productivity, and promote low-carbon practices across diverse MSME clusters.

Mobilising Investments and Access to Financing Options: Facilitating access to sustainable technology finance for MSMEs by de-risking adoption through performance-based models such as ESCOs, risk guarantee instruments, strengthening standardisation and M&V capacity, and engaging financial institutions to embed energy efficiency in mainstream lending portfolios, while actively exploring financing opportunities under schemes like the SECF and BEE's ADEETIE (Assistance in Deploying Energy Efficient Technologies in Industries and Establishments) Scheme.

Market Development and Service Provider Network: Strengthening energy efficiency ecosystems by building service provider capacity, fostering technology-market linkages, and creating enabling conditions for decentralised and demand-responsive energy service delivery.

Awareness and Capacity Building: Enhancing awareness and technical capabilities across MSMEs, industry associations, and local institutions through targeted outreach, training programmes, and stakeholder dialogues to drive long-term behavioural change and informed decision-making.

Key Projects and Activities

Catalysing Sub-national Action Plan in MSME Sectors in Uttar Pradesh and Maharashtra

AEEE is spearheading the adoption of low-carbon technologies in MSME clusters across Uttar Pradesh and Maharashtra by fostering strong collaboration between policymakers, industry stakeholders, government agencies, and businesses. This initiative is driving a market-level shift towards energy-efficient practices by embedding sustainability within regional industrial ecosystems.


महानगर की आवाज दैनिक 26 फरवरी 2025 पृष्ठ:-4

गैस आधारित भट्टी के उद्घाटन एवं कार्यशाला का आयोजन

Through extensive scoping studies, key industrial clusters have been identified, and pilot sites selected for the implementation of targeted low-carbon strategies. These are being deployed in representative MSME units, with detailed case studies being developed to capture operational learnings, quantify energy savings, and assess emission reduction potential. To build local capacity and ensure sustainable outcomes, AEEE is conducting awareness campaigns, technical training, and stakeholder engagement sessions, addressing persistent barriers such as low awareness, high upfront costs, absence of monitoring and verification mechanisms, and limited coordination among value chain actors.

As part of the initiative, following key actions have been taken:

- Introduction of energy-efficient furnace technology through the ESCO model in the Moradabad cluster, enabling MSMEs to adopt clean technologies without upfront investment, while also promoting social inclusion and improved workplace health.
- In Eastern Uttar Pradesh, extensive survey work across brick kilns generated critical baseline data and insights on operational practices. AEEE is also working on developing an SOP, training module, and providing technical support interventions to promote cleaner technologies in the brick cluster, which will inform policy formulation and future programme design.
- Capacity-building initiative was undertaken in collaboration with the Lucknow Management Association to enhance understanding of the role ESCOs can play in accelerating energy efficiency within MSMEs. The effort supported ongoing initiatives in Uttar Pradesh and enabled discussions on financing strategies, policy frameworks, and effective ESCO implementation models.
- An initiative of the Institute of Indian Foundrymen Western Region, LEADCON and WESCON 2024 served as key platforms that convened over 250 foundry and aluminium industry leaders from Maharashtra and Madhya Pradesh. By showcasing low-carbon solutions tailored for MSMEs at these platforms, AEEE helped strengthen industry awareness and encouraged the adoption of advanced technologies, such as the installation of an energy-efficient screw compressor in a unit within the Pune cluster, demonstrating practical pathways to improved energy performance.

Together, these actions are enabling sub-national leadership in India's sustainable energy transition and building a replicable framework for scaling energy efficiency across MSME clusters.

Energy-Efficient Fans Programme

The Energy-Efficient Fans Programme is catalysing a nationwide shift toward sustainable appliance use by stimulating demand for energy-efficient fans. AEEE employed a multi-channel outreach strategy, spanning stakeholder meetings, email campaigns, digital media engagement, and educational content, to raise awareness and drive behavioural change among consumers, retailers, and industry partners. These coordinated efforts have significantly improved stakeholder understanding of the performance and benefits of energy-efficient fans. Despite persistent challenges such as low consumer awareness, high upfront costs, and limited access to financing, the programme is successfully shifting market perceptions and has uncovered substantial untapped demand for energy-efficient fans across India.

The initiative has not only laid the groundwork for large-scale adoption but also demonstrated AEEE's leadership in driving market transformation in the energy-efficient appliance sector, contributing meaningfully to India's clean energy goals and climate commitments.

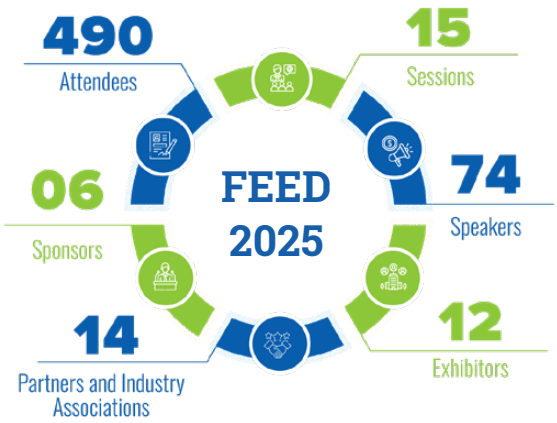
FORUM ON ENERGY EFFICIENCY & DECARBONISATION 2025

Scan QR code
to view the website

Driving Energy Efficiency, Smart Innovation, and Resilient Economies to Power India's Sustainable Future

30-31 January 2025 New Delhi

The Forum on Energy Efficiency and Decarbonisation (FEED) 2025 brought together key stakeholders from the industry, government, and communities to explore how data-driven innovation can enhance energy management, boost business competitiveness, and drive decarbonisation across sectors. The event spotlighted the importance of unlocking finance, advancing technology, creating green jobs, and leveraging data to advance energy efficiency progress and address critical energy and climate challenges.



Thematic Areas

- Implementing a systems approach to energy efficiency
- Adoption of innovative energy-efficient technologies
- Integration of energy efficiency and demand flexibility
- Driving sub-national initiatives for energy efficiency
- Advancing low-carbon building solutions
- Ensuring thermal comfort for all
- Sustainable cold chain for agriculture
- Promoting energy efficiency as a service
- Facilitating financing for energy efficiency projects
- Monitoring and assessing progress and impact of energy efficiency efforts

Suggested Strategic Interventions

Position Energy Efficiency as a National Resource

Recognise energy efficiency as a core national strategic resource at par with other energy supply resources, establish sector-specific targets till 2030 to achieve the G20 commitment of doubling the rate of energy efficiency improvements by 2030, and strengthen national institutions and delivery vectors in states.

Strengthen Sub-National Implementation

SDAs are central to India's energy efficiency ambitions. However, their potential remains underutilised due to structural, financial, and operational challenges. Addressing these gaps is essential for SDAs to evolve into impactful entities capable of balancing regulatory and implementation responsibilities and aligning SEEAPs with national goals.

Enhance Financial Mechanisms for Energy Efficiency

The sector requires upwards of INR 1 lakh crore (USD 12 billion) in annual investment, which cannot be supported through public funding alone. To mobilise the substantial capital required, it is necessary to leverage private sector investments, international partnerships, and diverse financial instruments. While capital is available, it requires a structured vehicle and aggregated bankable projects for the investments to flow in.

Promote Indigenous Cooling Solutions via a Unified Supply Chain Platform

There needs to be a common platform to integrate global brands, domestic manufacturers, and supporting OEMs to address the current fragmentation in the supply chain, enhance collaboration, and streamline the domestic development and adoption of next-generation energy-efficient cooling solutions.

Formalise the ESCO Model for Scalable Impact

Scaling up the ESCO market requires integrating energy savings with other resource savings and adopting longer-term contracts. It also calls for facilitators to connect customers with ESCOs and third-party digitalised M&V services for faster, dispute-free performance measurement.

Adopt Strategic Communication for Market Adoption and Behavioural Change

Develop a strategic, large-scale, people-centric communications campaign that positions energy efficiency as a pathway to economic growth and climate resilience and strengthens the public and policymakers' commitment.

Solar™ Decathlon India

Scan QR code
to view the website

Solar Decathlon India (SDI) addresses the urgent need for climate action in India. It is the largest site of urbanisation, growth, and innovation in the world. SDI is an annual competition that challenges undergraduate and postgraduate students to create innovative, net-zero solutions for India's building sector.

Since its inception in 2020, SDI has grown into the world's largest net-zero building challenge. Over the last four years, more than 8,200 students from over 300 colleges across 25 Indian States and 73 cities have collectively worked on approximately 125 million square feet of new buildings for over 250 real estate partners. More than 40% of the participating students have reported that their colleges have integrated SDI into their coursework. SDI has almost 50% participation from female students. Over 40 industry innovators competed for the Climate Smart Innovation Award 2024.

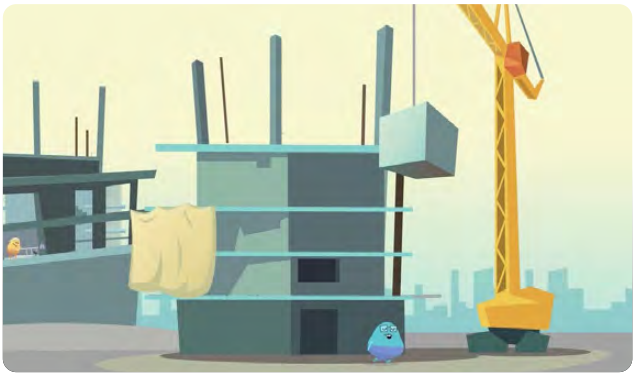
Solar Decathlon India 2024 Finals

SDI conducted its in-person, carbon-neutral finals event for the 2023-24 edition at the Infosys campus in Mysuru, with over 700 people participating. Out of the 175 teams comprising 2,111 students from 188 academic institutions that participated in the challenge, 37 teams qualified for the finals, and 6 division winners pitched their solutions to a grand jury consisting of real estate and media stalwarts. The energy of the event was unparalleled, as students, academics, industry, media, and building sector stakeholders gathered to celebrate this revolutionary spirit towards net-zero.

Keynote Address by innovator and entrepreneur Gagandeep Kaur Buller, SuperHuman Race

Nandan Nilekani, Chairman and Co-founder, Infosys and Founding Chairman UIDAI (Aadhaar), addressed the participants.

Grand Winner: Team Genesis from NMIM's Balwant Sheth School of Architecture with NMIMS's Mukesh Patel School of Technology Management and Engineering as the partner institution for their promising and investment-worthy net-zero design for Bhagnari Co-Operative Housing Society Ltd.



'Dumb Ways to Build,' video developed by SDI highlighting poor building practices and their negative impact on the environment, society, and economy.

Scan to
watch video

SDI Climate Smart Innovation Award 2024

The second edition of the SDI Climate Smart Innovation Award was held alongside the SDI 2023-24 Finals. A Building Industry Innovation Exhibit was organised, where cutting-edge building solutions showcase a significant potential to address climate change. Eight finalists out of 25 shortlisted exhibitors pitched their innovations.

Winner, SDI Climate Smart Innovation Award 2024: Hexpressions Megatech Pvt Ltd and VayuJal Technologies Pvt Ltd were declared joint winners of the Climate Smart Innovation Award 2024.

Solar Decathlon India 5.0 (2024-25)

In its fifth year, SDI deepened its impact by driving innovation across five building divisions and a product division focused on residential cooling retrofits. The building division addressed urgent and diverse needs, ranging from homes and commercial spaces to educational facilities, worker housing, and disaster-resilient community shelters, enhancing thermal comfort and resilience where it's needed most. The product division targeted the vast stock of existing residential buildings, aiming to reduce heat stress and improve cooling efficiency. By focusing on affordable, off-the-shelf solutions that can be installed by homeowners or local technicians, this division empowers communities to take climate adaptation into their own hands.

This year, SDI placed strong emphasis on developing and testing component models and prototypes, accelerating innovation through rigorous performance evaluation. To further support this, finalist teams received scholarships to advance their prototypes, fueling a pipeline of solutions with the potential to scale.

Solar Decathlon India is conducted by the AEEE and the Indian Institute for Human Settlements under the aegis of the Indo-US Science and Technology Forum. Solar Decathlon India is supported by the Department of Science and Technology, Government of India.

Key Publications

Automated Demand Response Pilot in Delhi - Insights and Transferrable Learning to Scale-up Programme Designs

This report provides an overview of the current state of demand response in India and evaluates the impact of an ADR pilot programme implemented within the BSES Yamuna Power Limited DISCOM in Delhi. It offers a detailed analysis of the demand reduction potential achievable through ADR, assesses the costs and benefits associated with the programme, and explores potential business models that can facilitate widespread adoption of demand response. It also provides key learnings to guide the effective implementation of demand response programmes. The report identifies challenges in implementing ADR, captures the perspectives of both customers and DISCOMs, and serves as a valuable resource for stakeholders within India's power sector.

Scan QR code to read

Horticulture Cold Room Procurement Guidelines: Evaluation Guidelines for Procuring Sustainable Cold Rooms for Horticulture Applications

Designed to assist Farmer Producer Organisations, Farmer Producer Companies, Cooperative Societies, Agriculture Entrepreneurs, government stakeholders, and philanthropic organisations, these guidelines aim to empower stakeholders with the knowledge and insights needed to make informed decisions when procuring cold rooms. It offers a comprehensive framework for selecting energy-efficient, clean energy-powered, and climate-friendly solutions. The guidelines cover the essential processes for determining cold room requirements, defining their use cases, and a technical evaluation of available technologies. It supports adopting sustainable cold storage practices for a resilient agricultural value chain.

Scan QR code to read

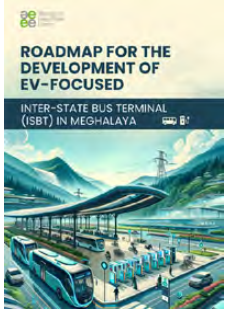
Life Cycle Assessment of Carbon Emissions: Progress and Barriers in Indian Building Sector

This report assesses current practices, challenges, and opportunities for using LCA as a tool to help decarbonise India's building sector. The report provides a detailed analysis of current LCA practices, standards, and frameworks followed globally as well as in India for buildings' life cycle energy and emission analysis. It provides insights into the impact of different system boundaries, embodied carbon datasets, life cycle stages, and functional units. The report identifies challenges in conducting LCA for buildings by analysing published studies and suggests necessary action. It serves as a critical resource for stakeholders in the construction and regulation of India's building sector.

Scan QR code to read

Roadmap for the Development of EV-Focused Inter-State Bus Terminal (ISBT) in Meghalaya

This report outlines a unique concept and strategic plan to transform the ISBT in Shillong into a sustainable, EV-centric hub. This innovative concept envisions ISBTs not only as charging hubs for buses but also as integrated facilities catering to two-wheelers, three-wheelers, and four-wheelers, driving demand across the EV ecosystem. It evaluates the technical, financial, and environmental aspects of the project, emphasising EV adoption, renewable energy integration, and reduced carbon emissions. By addressing charging infrastructure needs, stakeholder engagement, and the total cost of ownership, the report provides actionable recommendations to enhance public transportation efficiency and align with Meghalaya's EV policy and smart city goals



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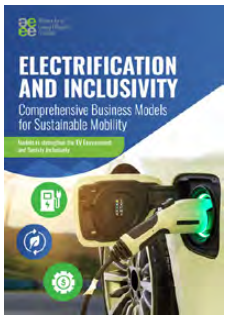
Assam State Transport Corporation: Roadmap for Electrification of Bus Fleet

This report explores the current state of bus transportation in Assam, assesses the feasibility and advantages of electrification, and proposes a roadmap for its implementation. By undertaking this analysis, the report aims to provide Assam State Transport Corporation with a comprehensive understanding of the potential benefits and strategic considerations surrounding the electrification of it's bus fleet, ultimately contributing to the state's journey towards a sustainable and inclusive future.

Electrification and Inclusivity: Comprehensive Business Models for Sustainable Mobility

This report presents innovative strategies to accelerate EV adoption in India, with a strong emphasis on inclusivity. It offers a comprehensive analysis of EV business models across various vehicle segments, alongside charging infrastructure and policy frameworks. By identifying key barriers to electrification and proposing solutions such as renewable energy integration, battery swapping, and community-based financing, the report outlines sustainable pathways for future mobility. Crucially, it highlights the need for inclusivity by focusing on the empowerment of women and marginalised communities. The study provides actionable insights to support India's transition towards a sustainable and equitable transportation ecosystem.



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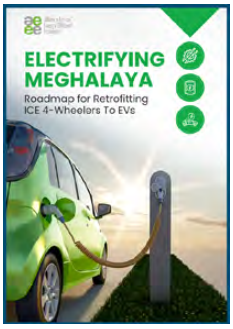


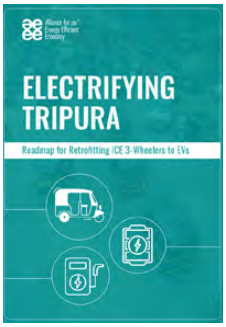
Scan QR code to read

Electrifying Meghalaya: Roadmap for Retrofitting ICE 4-Wheelers to EVs

This report offers a comprehensive framework for transitioning internal combustion engine (ICE) vehicles to EVs in Meghalaya. It highlights retrofitting as a cost-effective and sustainable solution, analysing the total cost of ownership, policy incentives, and technical challenges. The report emphasises consumer insights, stakeholder roles, and the importance of strategic infrastructure development. It provides actionable recommendations to foster adoption and enhance environmental sustainability, supporting Meghalaya's shift towards a greener and more efficient transportation system.

Electrifying Tripura: Roadmap for Retrofitting ICE 3-Wheelers to EVs

This report provides a strategic plan for transitioning ICE three-wheelers to EVs in Tripura. It highlights retrofitting as a cost-effective, sustainable solution to reduce carbon emissions and improve air quality. The report examines technical, economic, and policy dimensions, offering actionable recommendations, including battery leasing models, regulatory reforms, and stakeholder engagement. By addressing key challenges, it aims to accelerate EV adoption, enhance public awareness, and support Tripura's shift towards cleaner, greener transportation.



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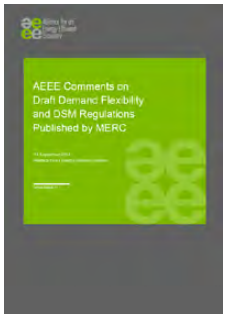

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AEEE Comments on Draft Demand Flexibility and DSM Regulations Published by MERC

Maharashtra Electricity Regulatory Commission issued Draft MERC (Demand Flexibility and Demand Side Management – Implementation Framework, Cost-effectiveness Assessment; and Evaluation, Measurement and Verification) Regulations, 2024. These regulations offer a framework for Maharashtra's DISCOMs to engage in DSM and efficiently manage electricity demand while integrating an increasing share of renewable energy into the grid. Therefore, this regulation is a timely and much-needed step. On behalf of its members, AEEE submitted the comments on the draft regulations.

Key Partnerships and MoUs

Confederation of Real Estate Developers' Associations of India (CREDAI) and National Real Estate Development Council (NAREDCO)

AEEE entered into strategic partnerships with CREDAI and NAREDCO to promote the design and construction of net-zero buildings in India. These collaborations aim to exchange knowledge, build capacity, and drive market transformation for energy efficiency, climate resilience, and sustainability in the building sector, with a key focus on advancing SDI, the world's largest net-zero building challenge for Indian youth.

Green Energy Transition Research Institute (GETRI)

AEEE signed an MoU with GETRI to advance the adoption of sustainable and energy-efficient technologies in Gujarat. The collaboration focuses on enhancing energy efficiency within Gujarat Urja Vikas Nigam Ltd and its subsidiaries, strengthening policies related to financing, M&V, and promoting efficient appliances, assisting in demand response programmes, and enabling ESCO models.

Jindal School of Art and Architecture, O P Jindal Global University

AEEE signed an MoU with the Jindal School of Art and Architecture, O P Jindal Global University, to promote joint research, knowledge exchange, and capacity building in energy-efficient design and the built environment. This academic collaboration includes conducting joint projects in urban planning and policy research, organising seminars and workshops, enabling experiential learning, sharing resources, and exploring funding and collaboration opportunities for large-scale initiatives.

Indian Institute of Technology (IIT) Kharagpur

AEEE signed an MoU with IIT Kharagpur to support its Green Vehicle Rating initiative and collaborate on research in sustainable transportation, including electric vehicles, alternative fuels, and innovative mobility solutions. The partnership also aims to develop training programs, host knowledge-sharing events, and support policy and regulatory efforts to advance sustainable mobility in India.

Indian Institute of Technology (IIT) Roorkee

AEEE signed an MoU with IIT Roorkee to advance joint research, knowledge exchange, and capacity building to enhance climate resilience with demand-side interventions and a sustainable energy transition. The partnership focuses on collaborative research and pilots in climate resilience, utility modernisation, built environment, and clean energy, while also promoting experiential learning, resource sharing, and joint efforts to secure funding for large-scale projects

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Institute of Indian Foundrymen Western Region (IIF WR)

AEEE signed an MoU with IIF WR to advance energy efficiency and decarbonisation in Maharashtra's energy-intensive MSME clusters. The collaboration focuses on analysing current technologies, demonstrating low-carbon solutions and innovative business models, and building MSME capacity in energy efficiency frameworks, technology operation, monitoring, and energy-saving estimation.

National Cooperative Union of India (NCUI)

AEEE signed an MoU with the NCUI to promote energy efficiency within cooperative societies across India. The partnership focuses on training and capacity building for sustainable cold chain solutions, developing model DPRs with energy-efficient measures, documenting best practices for replication, and exploring funding opportunities to scale innovative and sustainable solutions.

RICS School of Built Environment, Amity University

AEEE signed an MoU with the RICS School of Built Environment, Amity University, to promote sustainability and innovation in the built environment. The partnership aims to advance low-carbon development through joint research, training, knowledge exchange, and hands-on learning initiatives.

Thane Belapur Industry Association (TBIA)

AEEE signed an MoU with TBIA to boost energy efficiency and decarbonisation in Maharashtra's energy-intensive MSME clusters. The partnership aims to launch a technology database for low-carbon solutions, support their large-scale deployment, develop innovative financial mechanisms, including ESCOs and financial institutions, and provide technical support to strengthen energy efficiency frameworks and implementation.

Energy Enablers

AEEE serves as a dynamic platform, bringing together key energy stakeholders – industry leaders, government officials, civil society organisations, think tanks, and professionals with an aim to facilitate constructive dialogue, influence effective and impact-oriented policies, and build a robust ecosystem for sustainable energy transition.

AEEE Members

As of 31 March 2025, AEEE proudly counts **81** members representing key demand sectors such as buildings, industry, cooling and refrigeration, transport, and power distribution. Our members span diverse segments of the energy industry, including technology, equipment and service providers, research and academia, consulting companies, and a variety of energy end-users dedicated to energy efficiency.

AEEE adopts a participatory approach, involving members in collaborative research, industry working groups, high-impact events, knowledge exchange, stakeholder consultations, strategic guidance, outreach and communications to amplify impact and visibility. AEEE membership offers a unique opportunity to lead the growth and transformation of the energy sector through a host of benefits and customised services.

Premium Members

ABB, adani Energy Solutions, Capgemini, Carrier, Danfoss, DENSO, GRUNDFOS, KNAUF, SAINT-GOBAIN, Schneider Electric, SIEMENS, tabreed, THERMAX, TRANE TECHNOLOGIES

Large Members

BASF, Bizer, BLAZE, CBRE, ecozen, Kirloskar, ORACLE Utilities, Pidilite, TRILEGAL, VK:e environmental

General Members

ARMSTRONG, Armstrong, BROAD INDIA, bp refcool, CEPT UNIVERSITY, cKinetics, COPELAND, DESIRE, EESL, energeia, ensavier, forvis mazars, Idam, Inficold, MP ENSYSTEMS, PAHARPUR Business Centre, PLAKSHA, PLUSS, PRASHEETAN, 6th energy, SMART JOULES, STENUM Asia, Terra Viridis, xempla, VENTITRON

Associate Members

aeon, AMBIATOR, cygni, firmcompute, GREENLAND, GreenTree, HMX, HYDROMX, JITBAN, KES, MATEL, New leaf, promethean power systems, RECONNECT ENERGY, RENEWIFY, SUNMEISTER, Sustain & Save, SUSTENERGY SOLUTIONS, TWO, ZedBee

Governing Body of AEEE

Management Committee

Chairperson	Vice Chair	Treasurer
Venkat Garimella	**Rajan Rawal**	**Sanjiv Bhatia**

SUB-COMMITTEES

Finance and Audit
Sanjiv Bhatia

HR and Compensation
Rajan Rawal

Programmes and Projects
Mahesh Patankar

President and Executive Director
Satish Kumar

Executive Council Members

(as on 31 March 2025)

Madhur Sehgal
Danfoss Industries Pvt Ltd

Mahesh Patankar
MP Ensystems Advisory Pvt Ltd

Rajan Rawal
CEPT Research & Development Foundation

Sanjeev Arora
ABB India Ltd

Sanjiv Bhatia
STENUM Asia

Satish Kumar
Alliance for an Energy Efficient Economy

Sudheer Perla
Tabreed India Pvt Ltd

Upendra Bhatt
cKinetics Consulting Services Pvt Ltd

Usha Subramaniam
Grundfos Pumps India Pvt Ltd

Venkat Garimella
Schneider Electric

Vishal Garg
Plaksha University

Outreach

9 REPORTS AND PUBLICATIONS	**9** WEBINARS	**40** EVENTS AND WORKSHOPS	**5** TRAININGS
11 PARTNERSHIPS AND MOUs	**30** NEW MEMBERS	**11** NEWSLETTERS	**30K+*** SOCIAL MEDIA FOLLOWERS *as on 31 March 2025

AEEE in News

Pushing the green wheel: India's drive towards sustainable transportation
Md Saddam Hussain

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Ensuring EV battery availability
Bhaskar Natarajan and Vikas Nimesh

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AEEE has collaborated with BEE and others to build momentum towards 'Doubling' target
Akash Goenka

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Unlocking the power of demand flexibility for a greener future
Pramod Kumar Singh

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Fuelling e-mobility with breakthroughs in battery technology
Vikas Nimesh

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What will Union Budget 2024 do for the renewable energy sector?
Pramod Kumar Singh

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Empowering the future: Skill development in India's electric vehicle sector
Anmol Jain and Md Saddam Hussain

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Empowering states for a sustainable energy future: India's data-driven path
Kashmeera Patel and Meghaa Gangahar

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Economic and social benefits of cold chain infrastructure in rural areas
Khushboo Gupta and Santosh Kumar Saini

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Why energy efficiency should matter this world Ozone Day

Akash Goenka

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PM's urban housing scheme could illuminate India's path to sustainable housing

Niyoshi Parekh

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Can PM E-Drive really drive EVs?

Vikas Nimesh

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District Cooling and India's City Gas Distribution (CGD) Infrastructure

Vibhu Saxena and Pramod Kumar Singh

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Lucknow workshop sparks energy efficiency revolution: ESCOs paving the way for a sustainable future

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Casting a greener future: Decarbonisation strategies for aluminium industries

Mrinal Bhaskar and Pramod Kumar Singh

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Why the Union Budget needs to provide more for energy efficiency measures

Pramod Kumar Singh

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Energy efficiency key to climate fight amid policy shifts

Brian Motherway

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Energy efficiency needs INR 1 lakh crore investment, say experts at FEED 2025

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Energy transition, security top global priorities

IEA official

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Govt must enable conditions to invest in energy efficient solutions

Brian Motherway

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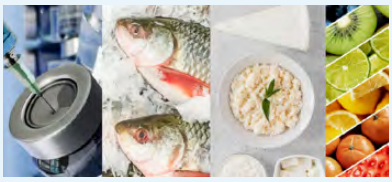
Revolutionising Bihar's mango trade: Breaking barriers with innovative business models

Alok Kumar



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Operations and Financial Statements

Alliance for an Energy Efficient Economy
37 Link Road, Ground Floor, Lajpat Nagar III, New Delhi-110024
Balance Sheet as at 31st March 2025
(consolidated Accounts)

	Particulars	Note	As at 31 March 2025 (in ₹)	As at 31 March 2024 (in ₹)
I	**Sources of Funds**			
1	**NPO Funds**	3		
(a)	Reserve Funds		8,25,85,419	6,48,99,316
(b)	Assets Funds		1,28,57,756	1,48,99,566
(c)	Project Funds		13,01,40,399	9,16,91,430
			-	-
2	**Non-current liabilities**		-	-
(a)	Other long-term liabilities	4	22,22,000	22,22,000
(b)	Long-term provisions	5	24,82,732	45,35,977
			-	-
3	**Current liabilities**		-	-
(a)	Other Payables	6	2,44,39,045	2,41,19,307
(b)	Other current liabilities	7	1,14,74,623	1,07,58,036
	Total		**26,62,01,974**	**21,31,25,632**
II	**Application of Funds**			
1	**Non-current assets**			-
(a)	Property, Plant and Equipment and Intangible assets	8	-	-
(i)	Property, Plant and Equipment		1,29,60,738	1,49,97,457
(ii)	Intangible assets		12,49,283	14,43,871
(iii)	Intangible asset under development		6,55,226	-
2	**Current assets**			
(a)	Current investments	9	15,58,85,448	13,55,15,856
(b)	Receivables	10	3,62,00,685	1,41,48,790
(c)	Cash and bank balances	11	4,57,12,534	3,60,02,013
(d)	Short Term Loans and Advances	12	1,12,23,154	89,32,165
(e)	Other current assets	13	23,14,906	20,85,480
	Total		**26,62,01,974**	**21,31,25,632**

Brief about the Entity & Summary of significant accounting policies 1&2
The accompanying notes are an integral part of the financial statements.

For & on behalf :
S. Sahoo & Co
Chartered Accountants
Firm No. 322952E

S. SAHOO & CO. FRN : 322952E NEW DELHI Chartered Accountants

CA (Dr.) Subhajit Sahoo, FCA, LLB
Partner
MM No. 057426
UDIN: 25057426BMJBX05244

Place: New Delhi
Date: 27/08/2024

For & on behalf :
Alliance for an Energy Efficient Economy

Secretary

Satish Kumar
Secretary
Alliance For an Energy Efficient Economy

Chairman

Chairperson
Executive Council
Alliance For an Energy Efficient Economy

Alliance for an Energy Efficient Economy
37 Link Road, Ground Floor, Lajpat Nagar III, New Delhi-110024
Income and Expenditure for the year ended on 31st March 2025
(consolidated Accounts)

	Particulars	Note	As at 31 March 2025 (in ₹)	As at 31 March 2024 (in ₹)
I	**Income**			
(a)	Donations and Grants	14	15,71,63,293	15,72,06,316
(b)	Other Project Receipts	14	7,71,57,797	7,33,37,212
(c)	Other Income	15	1,23,70,060	91,75,578
			-	-
II	**Total**		**24,66,91,150**	**23,97,19,106**
III	**Expenses:**			
(a)	Expenditure on Objects of Organization-Program Expenses	16	16,95,61,010	16,16,60,579
(b)	Establishment Expenses	17	5,70,26,429	5,38,14,699
(c)	Depreciation and amortization expense		31,67,607	35,62,719
	Total		**22,97,55,046**	**21,90,37,997**
IV	Excess of Income over Expenditure before exceptional and extraordinary items		1,69,36,104	2,06,81,109
V	Exceptional items			
VI	Excess of Income over Expenditure for the year before extraordinary items		1,69,36,104	2,06,81,109
VII	Extraordinary Items			
VIII	**Excess of Income over Expenditure for the year**		**1,69,36,104**	**2,06,81,109**
	Appropriations Transfer to funds:			
	Transfer to/(from) Project fund:		-	-
	Balance transferred to General Fund:		**1,69,36,104**	**2,06,81,109**
	Brief about the Entity & Summary of significant accounting policies	1&2		
	The accompanying notes are an integral part of the financial statements			

For & on behalf :
S. Sahoo & Co
Chartered Accountants
Firm No. 322952E

S. SAHOO & CO. FRN : 322952E NEW DELHI Chartered Accountants

CA (Dr.) Subhajit Sahoo, FCA, LLB
Partner
MM No. 057426
UDIN: 25057426BMJBX05244

Place: New Delhi
Date: 27/08/2025

For & on behalf :
Alliance for an Energy Efficient Economy

Secretary

Satish Kumar
Secretary
Alliance For an Energy Efficient Economy

Chairman

Chairperson
Executive Council
Alliance For an Energy Efficient Economy

AEEE FAMILY


Alliance for an
Energy Efficient
Economy
15TH
AUGUST


Driving Energy Efficiency, Smart Innovation, and
Resilient Economies to Power India's Sustainable Future
30-31 January 2025
Eros Hotel, New Delhi
ENSYSTEMS

Alliance for an Energy Efficient Economy™

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+91-11-41235600 info@aeee.in