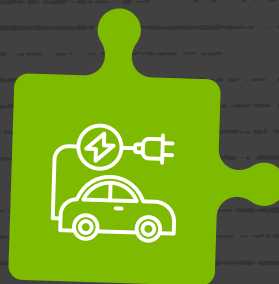




# Decade of Action to Fulfill **2070 PROMISES**



2020



2070

Annual Report  
2021-22

**The clock and the timeline:**

The clock signifies the time that is left with us to avoid the inevitable symbolic death that is caused by the irreversible change humans are making through their egocentric approach. It represents the situation of urgency for action, efforts and operation towards the common sustainability goals. The 2022-2070 timeline on the clock is like an idiomatic expression whose two ends portray the present and the target year promised for achieving Net Zero in India by our Honourable Prime Minister, Narendra Modi at the COP 26 Summit.

**The jigsaw puzzle pattern:**

The jigsaw puzzle characterises the collaborative approach we have to take to ensure the realisation of the set target. The small pieces represent an individual field or sector which has to come together to craft a whole picture to win the battle against climate change. Even one missing piece can cost us repercussions beyond our tolerable capacity. Thus, interlinked cross-sectoral collaboration is required to triumph over the aftermath of a climate crisis.

**The intent:**

The intent is to conceptualise the journey from our current climate change and global warming situation to net-zero, where we can observe a shift to the circular economy with an eco-centric approach. With an aspiration to see electric vehicles, zero-emission industries, net positive buildings, use of renewable energy sources, and people who follow a resource-efficient lifestyle, the cover design emphasises accelerating the adoption of sustainable solutions to the existing challenges. The end goal eventually is to get to an economic system that is in balance with our planet's resources.

**Cover Theme and Design:** Arzoo, Sanjay, Tanuj

# Inside the Report

1. Message from the Chairman	3
2. Message from President and Executive Director	5
3. Generating Impact	8
4. Research Landscape Insight into AEEE's Thematic Areas	14
5. Partnerships/MoUs	23
6. Energy Enablers	25
7. Outreach	29
8. Operations and Financials	30







# Message from the Chairman



## **Aligning, evolving and accelerating clean energy transition**

It is my privilege and pleasure to present the 2021-2022 Annual Report of the Alliance for an Energy Efficient Economy (AEEE).

Amid the extraordinary macro environment driven by Covid 19, the multi-dimensional and transnational geopolitical situation which poses clear challenges to progress made in the sustainability and climate change agenda, India has renewed its efforts in mainstreaming energy efficiency. The finance minister's admission (and budgeting for) about the importance of energy in her recent budget and the union power minister stressing the need for a state-specific agency dedicated to energy conservation and efficiency have paved the way for resource allocation and attention towards this much-acknowledged need. AEEE has been at the forefront in the arena of energy efficiency for over 14 years and has helped move towards the shared vision of 'sustainable growth in more ways than one.

AEEE is evolving meaningfully to ensure continued support for developing policies and undertaking forward-looking research. While AEEE has sharply focused on energy efficiency and sustainable growth, our thematic areas of Building and Communities, Power Utility & Electric Mobility, State and Local Action and Energy Data Services continue to explore new dimensions of the ecosystem in these domains. We are aligning AEEE to the vast and changing energy landscape through explorations in areas such as Demand Response, Sustainable Aviation, Embodied Carbon in the construction sector and Sustainable Cold Chain for improving the livelihood of farmers through efficiencies in the value chain.

To support India's food security goals, AEEE is specifically renewing its focus on the Sustainable Cold Chain for reducing food loss and enhancing farmers' welfare. AEEE also intends to accelerate interventions in decarbonising the building and construction sector which is one of the hard-to-abate sectors. It is a significant area for intervention basis seminal research and work of AEEE in the ICAP (India Cooling Action Plan) report as we expect India to grow rapidly in the coming decades. AEEE has adopted a unique two-pronged approach to mainstream material efficiency in construction and facilitating operational energy efficiency of buildings. AEEE also continues to work on the Demand Response as a resource to solve the challenges in operations and planning of the power sector. It is now critical to focus on flexible demand as a balancing resource which needs to be included in the Integrated Resource Planning process by enabling performance-based regulations besides driving the renewable energy agenda in India. AEEE will be working towards enabling this ecosystem.

AEEE is directly involved in the areas of the 'Panchamrit Proclamations' made by India at the COP 26 summit and is uniquely positioned as an industry body to integrate energy efficiency into India's Net Zero and Sustainable Development Goals besides impacting shorter-term commitments by India until 2030.

AEEE's strategic priorities on the base of well-accepted credible research, best-in-class people and a triple sector approach-Government, Industry and Civil Society is opening new pathways for policies, standards and market transformation. I continue to be inspired by the passion and commitment of AEEE's employees, members, partners and donors towards sustainability and express my gratitude for their support and encouragement.

Mr. Chirag Bajjal  
*Managing Director, Commercial  
HVAC India Region of Carrier  
Air-conditioning and Refrigeration  
Ltd*





# Message from President and Executive Director



As India comes out of the throes of the Covid-19 pandemic, the AEEE office reopened with all safety protocols in place with a dedicated team that continued to deliver quality work in some of the most trying circumstances. Our team, our *raison d'être*, returned to work with enthusiasm, full of new ideas and perspectives. Keeping up with the changing protocols our HR manual was revised to ensure that we can offer a high-impact and challenging workspace – where one can learn through cross-functional projects, having the freedom to develop and work on novel ideas.

Our team members began field visits as the restrictions eased, continuing the legacy of AEEE's triple-sector leadership approach of creating a symbiosis between industry, government and non-profits, with diligence, passion, aplomb.

I would like to express my gratitude to our members, partners, funders, and supporters, for their unfailing guidance and support towards the vision and mission of AEEE. The year 2021 was a year of partnerships to drive energy efficiency goals of the country with over 16 new members coming on board. Our partnerships with United for Efficiency (U4E), under the United Nations Environment Programme (UNEP) and the Asia Pacific Urban Energy Authority (APUEA) enhanced our brand visibility and credibility as one of India's leading enablers of energy efficiency practices. We enhanced our collaborations with central and state governments with JEEViKA (Bihar Rural Livelihoods Promotion Society) to deploy energy-efficient cold chain solutions in Bihar and initiated work with the Airports Authority of India (AAI) to enhance airport terminals' energy efficiency.

We continued our collaboration with the Bureau of Energy Efficiency (BEE), the Government of India and the German Federal Ministry of Economic Affairs and Climate Action (BMUK) on an ongoing project for advancing the agenda of energy-efficient and sustainable District Cooling Systems (DCS) in India and also became the core member of ISHRAE's Technical Group to promote energy efficiency in the country. Under the SHEETAL programme, AEEE launched reports on promoting behaviour change in energy efficiency and developing sustainable affordable housing. AEEE also launched a report on 'Mapping of Existing Residential Sector Energy Efficiency Policies and Guidelines in Uttarakhand'. Our work on the cold chain study in Bihar was completed in collaboration with the UNEP. The AEEE team engaged with diverse stakeholders providing a well-rounded view of the state's present status of the cold-chain infrastructure, their perspectives on the cold-chain scenario in Bihar.

The 13th Annual General Meeting, held in September, 2021, elected the new Executive Council for the term 2021-2023. In keeping with the government's large-scale deployment of energy efficiency measures in potential sectors of the economy, AEEE scaled up its push toward achieving the goal of mainstreaming energy efficiency in the country. We shall not slacken our pace and with our partners shall take bold strides to foster a culture of energy efficiency in India.

Satish Kumar

*President and Executive Director*



# Who We Are

Alliance for an Energy Efficient Economy (AEEE) is a leading not-for-profit organisation in India that creates awareness about Energy Efficiency (EE) as a resource. We promote data-driven and evidence-based EE policies and research as an energy efficiency market enabler. With a vision to foster a culture of energy efficiency in India, we work with the government, industry and civil society organisations to accelerate the country's energy transition to a climate-resilient, energy-secure future. At AEEE, we undertake cutting-edge, research-based projects for global bilateral, multilateral foundations and government agencies specialising in Sustainable Cold Chains, Advanced Technologies, Sustainable Building Designs, State and Local Action, Power Utility and eMobility, Energy Data Services and Sustainable Aviation.

AEEE follows a 'Lean-Mean-Green' philosophy to design and construct net-zero energy-water-waste built environments, sustainable transportation and a robust energy data framework for better policymaking and implementation. We take pride in our commitment to aiding India in meeting its commitments to 2030 Nationally Determined Contributions (NDCs) and the United Nations (UN)' Sustainable Development Goals (SDGs).

## Our Vision

To be a leader in the responsible use of energy to transition to a climate-resilient, energy-secure future.



## Our Mission



Foster a culture of energy efficiency in India



Enable energy transition in collaboration and cooperation with the government, industry and civil society organisations



Accelerate impact as a policy enabler through thought leadership and research to meet India's 2030 Nationally Determined Contribution (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

I



INTEGRITY AT ALL TIMES

S



SYNERGY WITHIN AEEE

E



EXCELLENCE AT WORK

# Generating Impact

## Report On International Best Practices: Energy-Efficiency Practices And Policies In Cold Regions

The findings from this report contributed to the knowledge enhancement of policymakers in the state of Uttarakhand on how diverse “Residential Sector Decarbonisation and Energy Efficiency” models are running across the world, so that we can draft a streamlined implementation process. The findings can also help fellow researchers seeking consolidated information related to different international building energy codes. In the long term, the study will facilitate the drafting and effective implementation of the “Residential Building Construction Guidelines” that promote low-carbon development in Uttarakhand.



## Decoding Evaporative Air Coolers

Nudged industry stakeholders to fast-track the development of standards for Evaporative Air Coolers and contributed towards knowledge dissemination amongst the key actors about the Evaporative Air Cooler's technological feasibility and applicability, India's evaporative air cooler market scenario and the existing national institutional and regulatory mechanisms for improving appliance energy efficiency. In the long term, the study will facilitate increased access to efficient and sustainable space cooling technologies to achieve thermal comfort for all by promoting standardised Evaporative Air Coolers.

“

Climate Crisis has moved beyond the gamut of mitigation to an urgent need for adoption. AEEE's Decoding Evaporative Air Coolers report has nudged the industry stakeholders to fast-track the development of Evaporative Air Coolers standards in India and contributed significantly towards advocating the importance of the air coolers over conventional air conditioners.

Amit Kumar

Executive Director and Group Chief Executive Officer, Symphony

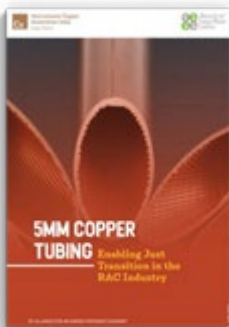
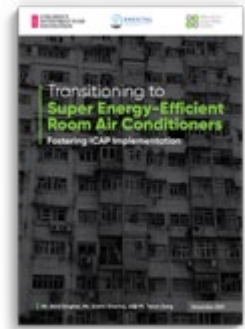


”



## Transitioning to Super Energy-Efficient Room Air-Conditioners: Fostering ICAP Implementation

Encouraged the industry to look at different enabling mechanisms for enhancing component-level efficiency gains and bringing about market transformation towards super energy-efficient Room Air Conditioners (RACs). This plan is being implemented in the ongoing project supported by the International Copper Association India, where a comparative assessment of performance (Energy and Refrigerant) of BAU ACs and ACs with 5mm copper tubing and identifying value chain benefits, including energy and refrigerant reduction, is underway.



## 5MM Copper Tubing: Enabling Just Transition in the RAC Industry

The project outputs can potentially lead to the execution of the India Cooling Action Plan (ICAP) recommendations and the Kigali Amendment by promoting sustainable space cooling and creating an indigenous copper-based manufacturing ecosystem. By fostering research and an innovation-driven manufacturing ecosystem of energy-efficient cooling appliances such as RACs, this report drives progress on the economy-wide climate goals, including carbon energy transitions.

“

Our partnership with AEEE has laid out the benefits of accelerating the transition to Smaller Diameter Inner Grooved Copper Tubing in Room Air Conditioners. The stakeholders are now able to understand the socio-economic and environmental value proposition of accelerating this transition. AEEE has supported us in identifying various future forward strategic initiatives that can be adopted in India and make the cooling sector more sustainable. We look forward to a continued partnership with them.

Avinash Khemka  
Chief Manager, International Copper Association India



”

## Substantiating the Scope of Code: Eco Niwas Samhita

The report will prod the states to assess the applicability criteria of the Eco Niwas Samhita (ENS) Code by providing a framework for policymakers, which can form the basis for redefining the scope of ENS implementation in the state/Urban Local Body (ULB). As a long-term impact, the study can facilitate increased access to ENS adoption and impact the energy-efficiency drive in India.

AEEE finalised the report, “Delineate the Implementation of Eco Niwas Samhita: Operationalising the implementation of ENS.”





## Harnessing behaviour change to promote energy efficiency

**Impact:** The report provides a foundational understanding of how behavioural science can be leveraged to optimize cooling energy demand in the Indian residential sector. In the long term, the report contributes toward awareness generation and promoting efficient energy practices amongst end-consumers through behavioural interventions. It also advances the implementation of ICAP recommendations for adopting adaptive thermal comfort standards.

## Mapping of existing residential sector energy efficiency policies and guidelines in Uttarakhand

AEEE launched its report 'Mapping of Existing Residential Sector Energy Efficiency Policies and Guidelines in Uttarakhand' in August, 2021. The findings from this report enhanced the knowledge amongst various stakeholders on the current energy-efficiency promoting landscape. The existing policy framework can be further strengthened to elevate the adaptive thermal comfort within every Indian home in cold regions.

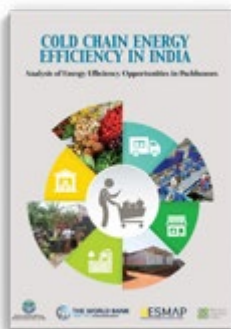


## Analysis of Potato Value Chain in West Bengal: Roadmap for Modernisation of Cold Storages

**Impact:** Modernisation of the existing traditional cold storages into multi-purpose cold storages will be the right first step, incentivising diversification of the cropping pattern and bringing new avenues of growth for the farmers. The modernisation will also help to maintain the potatoes' quality and minimise post-harvest losses. Moreover, it will help the farmers to realise a more significant economic value for their produce and boost their income.

## Enabling Cold-chain Infrastructure Development in India: Evolution and Assessment of Policies and Institutional Mapping

**Impact:** This report will be of particular interest to policymakers, research groups, and institutions trying to bridge India's cold-chain infrastructure gap. In addition, this may provide a starting point for the authorities within and outside India planning to develop the cold-chain infrastructure to identify the various actors playing an essential role in planning and implementing the cold-chain infrastructure.



## Cold Chain Energy Efficiency in India: Analysis of Energy Efficiency Opportunities in Pack-houses

**Impact:** A holistic phase-wise implementation of the study's recommendations can support a sustainable trajectory for the anticipated growth of pack-house infrastructure. The major impact will include elevating the economic well-being of farmers and enabling farmers to command better pricing by reducing economic losses due to food loss and minimising Green House Gas (GHG) emissions.



## National Cooling Action Plan Development Methodology

**Impact:** The National Cooling Action Plan Development Methodology is a critical milestone towards delivering efficient and sustainable cooling while also mitigating the climate crisis. They are a definitive way of driving change through a combination of policy, technology, and market interventions that address cooling across sectors with the lowest possible energy and GHG emissions footprint. The National Cooling Action Plan Development methodology is being piloted in Cambodia and Indonesia to develop their national cooling action plan.

“

I would like to thank AEEE for their outstanding efforts in helping lead the preparation of a holistic National Cooling Action Plan methodology, in the framework of the Cool Coalition, that can be adapted to any country's specific context and priorities. AEEE's collaborative leadership with other organizations in India and globally is inspiring rapid action towards delivering efficient and sustainable cooling while mitigating the climate crisis.

Lily Rihai  
Coordinator / Programme Manager, UNEP

”



## India Cooling Coalition

As the Secretariat of India Cooling Coalition, AEEE facilitates coordination to exchange knowledge and build synergies among the multi-stakeholder group of 22 organizations engaged extensively in sustainable cooling research and application. Through the India Cooling Coalition, AEEE advocates cooling as a critical area of focus and lends support to the prioritisation of cooling agenda in the Indian policy framework.



## Green Vehicle Rating, Phase II

AEEE has pioneered the Green Vehicle Rating (GVR), the country's only vehicle rating system based on environmental performance. In its previous phase, GVR identified high to low performing Internal Combustion Engine (ICE) vehicle models, in the two wheeler category. In the second phase, GVR has evolved to include electric two-wheelers and transformed into a user-friendly web-based tool. In an attempt to deter grave repercussions on health and the environment from vehicular pollutions, GVR provides a monetised metric to nudge consumers towards cleaner and more sustainable choices.



# FORUM ON ENERGY EFFICIENCY & DECARBONISATION 2022

The Forum for Energy Efficiency and Decarbonisation (FEED) is a curated platform to bring together thought leaders and industry experts to build a dialogue towards enabling India to become an energy-efficient economy.

This year's event focused on decarbonising India's economy through sectoral collaboration and cooperation, with particular focus on construction sector, power sector, transportation, digitalisation of energy systems and sustainable cooling solutions.

## 1000+

REGISTRATIONS

## 550+

COMPANIES

## 80+

SPEAKERS

## 15

SESSIONS

## 4

INDUSTRY  
ASSOCIATIONS





# Sector-wise challenges to adopt and upscale energy efficient solutions in India



## Construction sector

- Lack of awareness on climate-responsive building design knowledge and implementation
- Lack of data on energy consumptions and GHG emissions associated with public building stock
- Lack of alternative building materials with low embodied carbon content to reduce the use of cement, steel, bricks in the Indian building sector



## Carbon Markets

- Absence of carbon pricing, which is key to accelerating adoption of carbon neutral solutions
- Absence of policy framework for operation in different markets
- Absence of standardisation across various markets for carbon credit trading
- Absence of common registry for interlinking different carbon credits to avoid duplication



## Transportation sector

- Absence of progress tracking mechanisms for policies related to EVs
- Inadequate focus and efforts towards moving the economy towards public transport through increased investments
- Lack of support to EV start ups to facilitate the shift to public and shared transportation



## Digitalisation of energy systems

- Absence of electricity mechanisms equipped with digital solutions for decarbonisation;
- Lack of incentive and push for consumers to adopt smart energy-saving technologies;
- Absence of a service-based market set up
- Encourage policy related to data disclosure on energy consumption and GHG emissions for energy-intensive buildings



## Sustainable cooling

- Lack of exploration of Cooling as a Service to solve the cooling crisis in India
- Absence of mechanisms to accelerate awareness and implementation of DCS
- Lack of awareness, training, and capacity building to facilitate transition towards super energy efficient technologies



# Research Landscape

## Insight into AEEE's Thematic Areas

### 1 Buildings and Communities



## Key Projects

**Sustainable Cooling:** AEEE is supporting the Bureau of Energy Efficiency (BEE) and the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU) on the initiative for advancing the agenda of energy-efficient and environment-friendly District Cooling Systems (DCS) in India.

The project aims to create enabling conditions for the adoption of DCS in India. Project activities will include, demonstration of DCS through pilot projects to provide data-backed evidence for the formulation of policies and viable business models for DCS uptake in India.

### **The Alliance for Sustainable Habitat, Energy Efficiency and Thermal Comfort (SHEETAL)**

“The Alliance for Sustainable Habitat, Energy Efficiency and Thermal Comfort (SHEETAL) is a consortium of Civil society organizations led by The Energy and Resource Institute (TERI) with the Alliance for an Energy Efficient Economy (AEEE), and the Council on Energy, Environment and Water (CEEW) as partners.

Supported by Children's Investment Fund Foundation (CIFF), SHEETAL facilitates the roll out of India's sustainable cooling agenda enshrined in the India Cooling Action Plan. Engaging with national and international stakeholders, the consortium partners discuss, identify and test integrated approaches best suited to improve the development, access and use of energy efficient cooling practices and technologies for R&D, space cooling, cold chain, transport air-conditioning, and the servicing sector.

SHEETAL convenes different line ministries and international and domestic cooling policy experts to collaborate and synergise actions to accelerate sustainable cooling in India.”



- i. **SHEETAL: Evaporative Air Coolers:** AEEE became the core member of ISHRAE's Technical Group - F101: Evaporative Cooling System and supports the development of 'Standard for Construction, Performance, and Testing of Ducted and Non-Ducted Direct Evaporative Cooling Units.'

Additionally, AEEE signed an MoU with ISHRAE to support the advocacy of the HVAC&R industry and promote energy efficiency in the country.

AEEE also Signed an MoU with Eurovent Certita Certification (ECC) for facilitating the development of Minimum Energy Performance Standards for evaporative air coolers in the commercial sector.

- ii. **SHEETAL Cold-chain:** The following two reports-Analysis of Potato Value Chain in West Bengal: Roadmap for Modernization of Cold Storages, and Cold Chain Energy Efficiency in India: Analysis of Energy Efficiency Opportunities in Pack-houses were developed under the Alliance for Sustainable Habitat, Energy Efficiency and Thermal Comfort (SHEETAL) project, funded by the Children's Investment Fund Foundation. Under this program, the team also supported BEE in forming a technical committee on "Promoting Energy Efficiency in the Cold-chain sector" and developed a framework for pack-house design and operational guidelines with the committee members.

**GB Pant Institute (PMU):** GB Pant Institute and AEEE will assess to provide stakeholder consultations moving forward. The pool of chosen stakeholders represents developers, contractors, architects, NGOs, worker associations, government departments, etc.,

**PRANA: A Demonstration Project for Integrated Sustainable Cold-chain:** Prana is a collaborative initiative between the United Nations Environment Programme (UNEP), Auroville Consulting and Tabreed CSR to demonstrate integrated, market-linked and localised cold-chain services for the agricultural and vaccine supply chains. It is a pilot demonstration project in the Villupuram District, Auroville, Tamil Nadu, which aims to develop an integrated value chain embracing efficient, self-sustaining technologies coupled with first-of-its-kind "as a service" and participatory business models. AEEE supported this joint venture in conducting stakeholders' consultations and providing technical inputs to develop the PRANA pre-feasibility report.

**National Mission on Himalayan Studies (NMHS) project:** AEEE submitted a paper titled "Evaluation of Thermal Performance and Energy Conservation of Residential Buildings in Cold Climate of India" at PLEA 2022. PLEA (Passive and Low Energy Architecture) serves as an open, international, interdisciplinary forum to promote high-quality research, practice and education in environmentally sustainable design.

Researchers, Energy Efficiency specialists, organisations, AEEE employees, architects, people from the construction industry, etc., engaged our social media campaign: Sustainability Trends, SHEETAL Cooling Alliance, GITA (Global Innovation and Technology Alliance).



**Sustainable Cold-chain Study in Bihar:** United Nations Environment Programme (UNEP), in partnership with Alliance for an Energy Efficient Economy (AEEE) and Energy Efficiency Services Limited (EESL), have initiated a project titled ‘Scaling-up Investment in Clean and Efficient Cold-chain in India’ with funding support from the Clean Cooling Collaborative (formerly the Kigali Cooling Efficiency Program). As part of this project, Bihar has been selected as a pilot state where support will be provided, and a preliminary study was conducted. This study brings to light Bihar’s horticulture cold-chain scenario, policy and institutional landscape, the status of cold-chain infrastructure, GHG emissions due to food loss, identifying gaps and proposes recommendations to strengthen the cold-chain development in the state.

### Improving Rural Livelihoods Through Energy-Efficient Cooling and Refrigeration in India

The project, funded by Good Energies Foundation, is centred on the use of energy-efficient cold chain solutions for off-grid and weak-grid rural communities to:

- ➔ Reduce food loss through the uptake of agricultural applications such as pre-cooling, staging cold room, cold storage
- ➔ Provide cold-storage facilities in rural health centres
- ➔ Build additional income opportunities for rural productive businesses

AEEE surveyed 18 Farmer Producer Companies (FPCs) in six states (Andhra Pradesh, Bihar, Gujarat, Karnataka, Madhya Pradesh and Uttar Pradesh) to assess the need for cold chain solutions to reduce post-harvest losses and increase farmer incomes. Of the 18 FPCs, the AEEE team visited eight FPCs – four in Bihar, two in Gujarat and two in Karnataka. The AEEE team interacted with the FPC board of directors and farmers during these field visits to assess the potential for cold chain solutions and selected an FPC in Bihar to deploy a cold chain solution at the FPC’s distribution centre in Patna, Bihar. AEEE will collaborate with JEEViKA, Bihar Rural Livelihood Promotion Society, to deploy energy-efficient cold chain solutions at the distribution centre. The proposed solution consists of a 5 MT pre-cooler and two 10 MT cold rooms, selected based on the energy-efficiency criteria to demonstrate energy-efficient cold chain solutions for replication in other states.

“

AEEE is supporting Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Bureau of Energy Efficiency (BEE) in a project under the International Climate Initiative of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) on advancing the agenda of energy-efficient and environment-friendly District Cooling Systems (DCS) in India. The significant activities envisaged under the project are to create enabling conditions and build the capacity to adopt DCS in India. The activities of the project will include the demonstration of DCS in a few pilot projects to provide data-backed evidence for the formulation of policies and viable business models for DCS uptake in India.

Markus Wypior  
Deputy Programme Coordinator, GIZ India



”

## 2 Power Utility and Electric Mobility



### Key Projects

**Whitepaper on EV Market Transformation, International Copper Association India:** The whitepaper highlights the key concerns from stakeholder consultations and provides recommendations aimed at addressing the barriers to electric two-wheeler adoption in India. The whitepaper provides an overview of the electric two-wheeler models available in the Indian market and presents the current trends in the segment in terms of the vehicle category (L1 and L2), battery chemistry and capacity. AEEE carried out a consumer survey amongst Electric Vehicle users as well as owners of Internal Combustion Engines to identify the key challenges, apprehensions and expectations of consumers for electric two-wheelers in India. The electric two-wheeler whitepaper also provides an overview of the schemes and policies related to EVs at the national level and reviews the provisions for electric two-wheelers in the state electric vehicle policies.

---

**Whitepaper on “Rethinking Demand Response in India”:** Demand as a resource, can solve the short-term operation and long-term planning of low carbon electricity systems. As the first step to open the dialogue on leveraging ‘demand as a resource’, AEEE in association with AutoGrid India, prepared a whitepaper on **“Roadmap for Demand Flexibility in India”**. The whitepaper highlights how Demand Response can effectively help electricity distribution companies in India handle their increasing future electricity demand and operate reliably in a greener grid.

### Interventions with Energy Efficiency as a tool for green stimulus of Indian electricity distribution sector:

AEEE with the support of NVF undertook a project with an objective to create pathways for DISCOMs to ensure resiliency to shocks from future disruptions by focusing on digital technology, energy efficiency and demand side management (EE/DSM) interventions. Based on the different operational parameters and the on-going smart metering initiatives, Bihar was chosen as the focus state for the project.

Three workshops for the two Bihar DISCOMs – North Bihar & South Bihar were conducted as given below:

- ➔ **Ignite Session:** The session “Opportunities for Industry collaboration with DISCOMs on energy efficiency and demand-side management interventions” was conducted with several industry partners such as Siemens, Oracle (OPower) Utilities, Energy Efficiency Services Ltd (EESL), SuperFan by Versa Drives, IIT Hyderabad and Energeia Microgrid with an aim to generate awareness of the DISCOMs on EE, DSM and digitalization solutions to mobilize support for EE/ digital technology adoption.
- ➔ **Smart meter data analytics:** The workshop on “Smart meter data analytics” was conducted to illustrate several value propositions of smart meter data to the DISCOMs. Industry experts such as Bidgely, EDF, and OPower shared extensive knowledge and valuable insights on smart meter data analytics and associated use cases such as customer engagement, consumer profiling, behavioural energy efficiency, demand response, appliance energy analysis, theft detection, grid planning and load forecasting.
- ➔ **DISCOM driven Demand Side Management Interventions:** The workshop “DISCOM driven Demand Side Management Interventions” brought together experts from the leading Indian DISCOMs such as Tata Power Delhi Distribution Limited (TPDDL), BSES Rajdhani Power Limited (BRPL), BSES Yamuna Power Limited (BYPL) to develop the institutional capacity of the Bihar DISCOMs through knowledge sharing sessions on various demand-side management initiatives undertaken by them along with the challenges, opportunities, learnings, and outcomes of these initiatives.

---

**Utility consumer engagement practices as a lever for driving behavioural energy efficiency, Oracle:** In collaboration with Oracle (OPower) Utilities, AEEE developed a whitepaper titled “Utility consumer engagement practices as a lever for driving behavioural energy efficiency”. The whitepaper aims to depict the importance of active consumer engagement for a sustainable future for Indian DISCOMs. Behavioural energy efficiency is poised to be a low-cost consumer-driven solution for mitigating the adverse impacts of climate change. AEEE conducted several consultations with various public and private DISCOMs to understand the key challenges and barriers to adopting behavioural energy efficiency practices. Recommendations to enable behavioural Energy Efficiency practices among the DISCOMs are listed in the whitepaper.



### 3 Industrial Energy Efficiency



## Key Projects

**Adoption of Energy Efficiency & Renewable Energy Technologies in Small and Medium Enterprises (SMEs) as a measure for post-covid Green Economic Recovery:** The project aims to accelerate the adoption of energy efficiency and renewable energy technologies for boosting economic growth, employment and socio-economic conditions in rice mills (parboiled) and plywood industries located in Bihar. AEEE engaged with a wide range of stakeholders, including the Bureau of Energy Efficiency (BEE), SME units, industry associations, technology companies, ESCOs (Energy Service Companies) and RESCOs (Renewable Energy Service Companies), financing institutions, state government institutions (such as MSME-DI, Pollution Control, SDA, etc.), industry department, etc., to scale up implementation of energy efficiency/renewable energy solutions. The critical outcomes envisaged under this project are:

- ➔ Reduced energy intensity and enhanced competitiveness of SMEs
- ➔ Investment commitments from SMEs for Energy Efficiency and Clean Technologies
- ➔ Enhanced understanding of operators and technicians on energy use optimisation
- ➔ Increased employment opportunities in Energy Efficiency (EE) business



## 4 State and Local Action

### Key Projects

#### State Energy Efficiency Index 2020

The State Energy Efficiency Index 2020 was launched on 22 October, 2021 by Shri Raj Kumar Singh, Honourable Minister of Power and New & Renewable Energy, Government of India, in the presence of senior state officials.

Despite COVID-19-related difficulties, the State Designated Agencies (SDAs) made a concerted effort to participate in the State EE Index 2020. As many as 27 states and union territories improved their scores in SEEI 2020 as compared to SEEI 2019; seven states improved by more than 10 points. States were more proactive this time, providing more quality data, which has helped improve the scores of most states. The states' increased efforts in data collection are a step toward institutionalising the data capture and monitoring of energy-efficient activities by SDAs. Shri Raj Kumar Singh reiterated at the launch that the State EE Index is firmly institutionalised within BEE, Ministry of Power and the SDAs. This will further enhance the importance of energy efficiency in meeting India's NDC targets on emissions intensity at the state and national levels.

“

Climate change and environmental degradation will have enormous effects on the world of work, while there is much discussion about these issues, not enough attention is being paid to giving workers the skills needed to implement a sustainable, 'green' economy. The training by AEEE provides a hands-on understanding of how operational energy efficiency can be evolved in HVAC systems which has provided our team with strategic insights and helped our workforce skill up.

Syed Hidayath Ali  
Director of Business Development at 75F APAC.



”



## 5 Energy Data Services

### Key Projects

#### **Towards Climate-smart Hospitals in India: Assessing the energy footprint and associated GHG emissions of hospitals**

AEEE, in collaboration with the Centre for Chronic Disease Control (CCDC), is undertaking the first-ever nationwide energy survey in India to characterise the energy consumption, Scope I and II emissions, fuel types and Operations & Maintenance (O&M) practices of end-user systems in hospitals. The survey, comprising 75 data points per hospital, is being carried out in 1000 hospitals across 18 states covering the five climate zones in India. The hospitals to be surveyed include private hospitals of three typologies (single speciality, multi- and super-speciality, medical college) and public hospitals of seven typologies (sub-centres, primary health centres, health & wellness centres, community health centres, sub-district hospital, district hospital, medical college).

AEEE and the CCDC conducted a pilot survey covering 20+ hospitals in Delhi-NCR and Bengaluru from December, 2021 to January, 2022. The survey generated much interest among public and private hospitals, keen to use the survey data to benchmark their energy performance with peers in similar climates as a definitive step towards energy management.

The intended survey outcomes:

- ➔ Hospital owners can benchmark their energy footprint against peers to manage energy consumption and strengthen ESG goals
- ➔ Policymakers can develop and update energy benchmarks, codes and standards for different hospital typologies
- ➔ Policymakers can mainstream renewable energy in rural hospitals to improve healthcare delivery
- ➔ Energy efficiency businesses can work with hospital owners to identify and implement climate-smart solutions



### Leveraging Energy Data to Drive Investments in Building Energy Efficiency

The Energy Data Services team organised a roundtable during FEED to explore the potential of data-driven enterprise energy and GHG emissions management for stronger climate action considering India's heightened COP26 goals. Senior executives from Infosys, ITC Hotels, Evercare Hospitals, CBRE, JLL, Siemens, Johnson Controls, Schneider Electric, Xempla and 75F participated in the meeting.

The key takeaways from the meeting:

- ➔ **The role of the private-sector post-COP26:** COP26 has made a strong push for creating clear and measurable corporate climate action plans that entail transparent reporting for energy use and GHG emissions data
- ➔ **Exception, not the norm:** Infosys and ITC Hotels have pioneered many innovations in enterprise energy management. However, these are the exception, not the norm. There is an urgent need to replicate/transfer such and similar models of long-term strategic energy management founded on reliable and robust end-use energy data
- ➔ **Changing perceptions:** Different companies/enterprises have access to varying levels of financial resources to actually implement enterprise-wide energy management. However, it is important to shed the perception that strategic energy management is prohibitively expensive with reliable energy intensity benchmarks, proofs of concept, evidence-based Roi estimations, and more acceptable financial models such as a pay-as-you-go arrangement
- ➔ **Up-skilling the facility management workforce:** There is a need to up-skill technicians at the facility management level to make use of energy data analytics and visualisation to effectively implement advanced energy management solutions. Is increasing automation the way forward?
- ➔ **Data privacy and security concerns:** Data privacy and security concerns continue to cause weariness among enterprises. This results in stretched approval timelines for sharing personal data with third parties. Here too there is a need to change perceptions by addressing customers' concerns

---

### Benchmarking of AAI managed airports

AEEE is working with the Airport Authority of India (AAI) to benchmark airport performance and for the Indian airports becoming carbon neutral. In this regard, AEEE analyzed data from 100 AAI managed airports and five privately managed airports. Data on energy consumption (grid and RE power generated and purchased), number of passengers and flights was collected for two financial years - FY20 and FY21. The exercise aims to establish energy consumption benchmarks for different categories of airports (based on area and number of passengers), identify key areas of intervention in various end-use segments that have been carried out and the steps taken to move the airports towards carbon neutrality. AEEE is supporting AAI in documenting the initiatives undertaken by AAI toward energy efficiency and clean energy deployment. In 2021, 13 airports had achieved operations with 100 per cent renewable energy and by 2024, the total number of renewable-powered airports will become 96. AEEE will continue to engage with AAI in its journey toward sustainable airport buildings and operations.

# Partnerships/MoUs



Signed an MoU with **ISHRAE** to promote energy efficiency in the country and protect the environment, improve indoor air quality, help provide a trained workforce to the HVAC and related user industries and promote the interests of the HVAC industry and other key players



Signed an MoU with **Passive House Institute** to synergistically enhance the energy efficiency of India's buildings sector through climate-appropriate building design solutions



Partnered with and is supporting the **International Copper Association India (ICA India)** for assessing component-level efficiency gains and refrigerant reduction potential by replacing the copper tubes in heat exchangers of RACs



The MoU with **Coal India Limited** in utilising their CSR budget for Solar Decathlon India. Under the MoU, CIL provides funding for 100 students who are provided access to learning and self development while they develop scalable and innovative solutions for achieving Net Zero buildings



सेंट्रल कोलफिल्ड्स लिमिटेड  
**Central Coalfields Limited**  
(A subsidiary of Coal India Limited)

This MoU provides of framework to collaborate on developing an overall energy efficiency roadmap identifying intervention areas for improvement for **Central Coalfields Limited**



Signed an MoU with the **Airports Authority of India (AAI)**, Government of India, to enhance airport terminals' energy efficiency



The MoU with Panitek enables AEEE to research increasing Demand Side Flexibility, Frequency Market Mechanism in India and Public and private e-mobility solutions for India.



The objective of this MoU is to establish the basis for a cooperative institutional relationship to explore and develop further businesses through execution of various assignments



Partnered with **United for Efficiency (U4E)** to advance the global agenda to transition toward efficient appliances and unlock significant economic, social and environmental benefits with affordable, higher-performance products and modern energy systems



Entered into a partnership with **Asia Pacific Urban Energy Authority (APUEA)**, which provides opportunities to explore collaborative funding as well as leverage cross-border resources and expertise related to urban energy systems



Partnered with **Consumer Information for Sustainable Consumption & Production Programme (CI-SCP)** under the 10-Year Framework of Programmes, One Planet Network. Together, we aim to achieve SDG 12 and deliver our promises on responsible, sustainable consumption and production by supporting the provision of quality information on goods and services and effective strategies to engage consumers in sustainable consumption

Partnered with **Sustainable Buildings and Construction (SBC) Programme**, One Planet Network, under 10 Year Framework of Programmes, One Planet Network. The partnership aims to improve the knowledge of sustainable construction and to support and mainstream sustainable building solutions



Signed an MoU with **Eurovent Certita Certification (ECC)** for the development of Minimum Energy Performance Standards (MEPS) of evaporative air coolers and facilitate knowledge exchange and transition to energy-efficient space cooling appliances



# Energy Enablers

AEEE is a convening platform bringing together key energy stakeholders- industry, government, civil society organisations, and professionals, to engage in a constructive dialogue, influencing effective and impact oriented policies to build a robust ecosystem for effective implementation.

## AEEE Members\*

At present, AEEE has 46 members, representing diverse segments of the energy efficiency (EE) industry such as technology, equipment and service providers, research and academia, consulting companies, and varied energy end-users committed to energy efficiency. AEEE follows a participatory approach involving members and seeking guidance from its knowledge partners and peer organisations. With a host of benefits and customised services, the AEEE membership offers an exclusive opportunity to lead the growth and transformation of the energy sector, participate in policy dialogues, and enhanced visibility and credibility for all its members.

### Premium Members




**BOSCH**  
Invented for life

**BSES**  
BSES Rajdhani Power Limited



**Danfoss**  
ENGINEERING  
TOMORROW

**DENSO**  
Crafting the Core

**GRUNDFOS**

**Infosys**

**SAINT-GOBAIN**

Life Is On | **Schneider**  
Electric

**SIEMENS**  
Ingenuity for life

**tabreed**

## Large Members



## General Members



## Associate



# AEEE Leadership

The 13th Annual General Meeting, held on 14 September, 2021, elected the Executive Council of Alliance for Energy Efficient Economy (AEEE) for the term 2021-2023. The new council will be chaired by Mr. Chirag Bajjal, Managing Director, Commercial HVAC India Region of Carrier Air-conditioning and Refrigeration Ltd, Mr. Venkat Garimella, Vice President, Strategy & Alliances, Efficiency & Sustainability, CSR, Schneider Electric and Mr. Sanjiv Bhatia, President, STENUM Asia, were elected as Vice-Chair and Treasurer respectively.



Chirag Bajjal,



Venkat Garimella



Sanjiv Bhatia

## Other elected EC members



Upendra Bhatt

Managing Director, cKinetics Consulting Services Pvt Ltd



Prabal Bose

Vice President, Siemens Ltd



Prof Rajan Rawal

Senior Advisor, CARBSE, CEPT University



Arjun Premchand Gupta

Founder & CEO, Smart Joules Pvt Ltd



Umesh Bhutoria

CEO, Xempla



George Rajkumar

George Rajkumar Country President, Grundfos Pumps India



Vishal Garg

Professor and Head of Department, IIT, Hyderabad



Mahesh Patankar

Managing Director, MP Ensystems Advisory Pvt Ltd



Sudheer Perla

Country Manager-India, Tabreed



Anil Rawal

MD and CEO, Intellismart, EESL



Satish Kumar

ED & President, AEEE



AEEE's President and Executive Director works directly with the Board, i.e., the Executive Council (EC). To enable effective governance and coordination, AEEE's operational matters are overseen by a Management Committee, comprising of the Chairperson, Vice-Chairperson, and a Treasurer.

Additionally, to guide the AEEE Secretariat, the EC is categorised into three sub-committees:

## Final Sub-Committees approved in EC Meeting on 18th October 2021

Management Committee	HR and Compensation Committee	F & A Committee	Programs and Projects Committee
Chirag Baijal – Chair	Venkat Garimella - Convener	Sanjiv Bhatia - Convener	Rajan Rawal - Convener
Venkat Garimella – Vice-Chair	Arjun Gupta	Venkat Garimella (past Treasurer)	Mahesh Patankar
Sanjiv Bhatia – Treasurer	Prabal Bose	Upendra Bhatt	Chirag Baijal
	George Rajkumar	Sudheer Perla	Satish Kumar
	Chirag Baijal	Chirag Baijal	Vishal Garg
			Umesh Bhutoria
			Arjun Gupta
			Anil Rawal

## Roles & Responsibility of Sub-Committees



### Management Committee

is responsible to enable effective governance & coordination



### Finance and Audit Committee:

provides oversight on budgets, organisational spends, budget approvals for capital expenditure, new projects, and programmes



### Remunerations and HR Policy Committee:

provides oversight on HR policies, conducts senior leadership performance reviews, approves annual increments and/or senior hires



### Programmes and Projects Oversight Committee:

ensures proper functioning and alignment of AEEE programmes with its vision and mission

# Outreach

09/



Reports and  
Publications

02/



Webinars

02/



Workshop

06/



Training

07/



Round Table  
Meeting

12/



Partnerships

14/



New  
Members

11/



Newsletters

04/



Members Call

“

Professional Certification programme in the field of the Measurement and Verification (M&V) is an important tool for assessing the energy savings scientifically for energy efficiency programmes which sets the pathway towards environmental protection. The IPMVP training and CMVP certification provided by AEEE will help trained resources to become entrepreneurs and acquire adequate knowledge on energy saving estimation. The studies by AEEE and standardisation of training and universal certification system are extremely important and topical, and will help us pursue the stated goals.

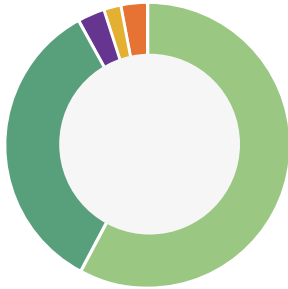
Girja Shankar Charan  
General Manager, EESL

”



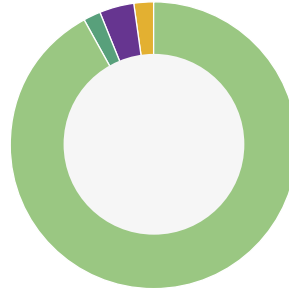
# Operations and Financials

## Income break up



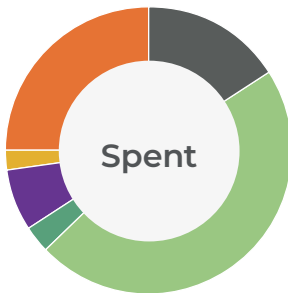
- 58% Grants
- 34% Local contributions
- 3% CMVP Training, Certification & Renewal
- 2% Membership Fees (New/Renewal)
- 3% Other Income

## Expense break up

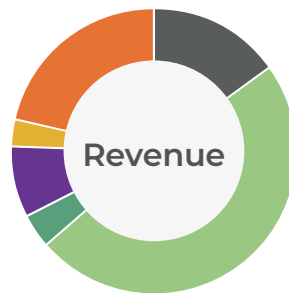


- 92% Projects
- 2% CMVP Training & Certification Expenses
- 4% Administrative Expenses
- 2% Depreciation

## Thematic revenue break up



- 16% State Local Action
- 47% Building & Communities
- 3% Industry Energy Efficiency
- 7% Power Utility & Electric Mobility
- 2% Training
- 25% Others



- 15% State Local Action
- 48% Building & Communities
- 4% Industry Energy Efficiency
- 8% Power Utility & Electric Mobility
- 3% Training
- 21% Others

## Top 5 sources for AEEE's funding in 2021-22





**ALLIANCE FOR AN ENERGY EFFICIENT ECONOMY**

**BALANCE SHEET AS AT 31ST MARCH 2022**

LIABILITIES	Note	As at 31 March 2022 (In Rs.)	As at March 2021 (In Rs.)	ASSETS	Note	As at March 2022 (In Rs.)	As at March 2021 (In Rs.)
<b>Corpus Fund</b>	1	2,37,05,517	2,29,55,517	<b>Property, Plant and Equipment</b>	6		
<b>Capital Grant Reserve</b>	2	1,01,54,268	1,07,84,603	Project Related		1,07,84,606	1,07,84,606
				Others		8,05,816	8,05,816
<b>Current Liabilities and Provisions</b>	3	1,30,70,056		<b>Investments</b>	7	2,66,65,538	97,36,675
Expenses Payables and Provisions			96,47,699	<b>Current Assets</b>			
Duties and Taxes	4	58,63,015	25,86,366	Interest Accrued on FDR		2,55,638	76,470
Grant Balances	5	2,16,23,164	7,02,58,505	<b>Cash &amp; Bank Balances</b>	8	2,98,73,449	9,63,18,726
Membership Fees Received in advance							
Project Advance from GIZ				<b>Other Current Assets</b>			
<b>Income &amp; Expenditure Account</b>				Prepaid Expenses	9	8,03,461	5,11,394
Opening Balance		1,10,21,234	1,26,79,471	TDS Receivable	10	10,82,197	6,02,310
Add: Excess of Income over				Income Receivable	11	1,83,77,350	94,26,972
Expenditure of Current Year		39,43,940	(16,58,237)	Other Current Assets		71,71,840	47,92,955
Less: Transferred to Corpus Fund		-	-	<b>Total</b>		<b>9,50,43,194</b>	<b>13,30,55,924</b>
<b>Total</b>		<b>9,50,43,194</b>	<b>13,30,55,924</b>				

For Alliance For An Energy Efficient Economy

As per our report of even date

For Singh K V Gupta & Co

Chartered Accountants (FRN 000133N)



*[Signature]*  
CA Rakesh K Agarwal  
(Partner)  
M. No. 085908

Place: New Delhi

Date: 30/08/2022

*[Signature]*  
Satish Kumar  
(Secretary)

**Satish Kumar**  
Secretary

Alliance For an Energy Efficient Economy

*[Signature]*  
(Chairman)

**Chairperson**  
Executive Council

Alliance For an Energy Efficient Economy

**ALLIANCE FOR AN ENERGY EFFICIENT ECONOMY**

**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2022**

EXPENDITURE	As at March 2022 (In Rs.)	As at March 2021 (In Rs.)	INCOME	As at March 2022 (In Rs.)	As at March 2021 (In Rs.)
<b>ECRA Project Related Expenditure</b>			<b>ECRA Projects Receipts &amp; Grants</b>		
MacArthur Foundation	2,52,34,142	3,46,95,063	Grant Received (MacArthur Foundation)	2,52,34,142	3,46,95,063
Good Energies Foundation	1,50,04,069	43,20,847	Grant Received (Good Energies Foundation)	1,50,04,069	43,20,847
Support in Building Capacity of Partner Org.	-	1,00,78,553	Grant Received (Support in Building Capacity of Partner Org.)	-	-
Electric Vehicle	-	30,88,256	Grant Received (Electric Vehicle)	-	30,88,256
Green Vehicle Rating- II	28,11,270	41,61,150	Grant Received (Green Vehicle Rating- II)	28,11,270	41,61,150
GBPN	21,60,467	20,07,395	Grant Received (GBPN)	21,60,467	20,07,395
CIFF	2,08,96,663	1,60,80,051	Grant Received (CIFF)	2,08,96,663	1,60,80,051
New Venture Fund	75,62,865	1,12,935	Grant Received (New Venture Fund)	75,62,865	1,12,935
SSEF- NMHS	22,31,424	7,25,700	Grant Received (SSEF- NMHS)	22,31,424	7,25,700
Climate Imperative Foundation - KCEP	-	43,85,745	Grant Received (Climate Imperative Foundation - KCEP)	-	43,85,745
<b>Non-ECRA Project Related Direct Expenditure</b>			<b>Non-ECRA Direct Income</b>		
Project Expenditure - GIZ	2,72,90,530	29,99,221	Project - GIZ	2,76,03,739	71,31,387
Project Expenditure -GCP- Department of Science & Technology	2,90,200	26,13,478	Project Grant -GCP- Department of Science & Technology	2,99,200	26,13,478
Project Expenditure- National Mission on Himalayan Studies	36,66,772	57,44,511	Project Grant- National Mission on Himalayan Studies	36,66,772	57,44,511
CNVP Training & Certification Expenses	29,12,274	21,32,464	CNVP Training, Certification & Renewal	45,17,547	29,59,605
Project Expenditure- United Nation Environment Programme	32,91,721	27,18,009	Project Grant- United Nation Environment Programme	32,91,721	27,18,009
Project Expenditure- Indo German Energy Forum	-	33,162	Project - Indo German Energy Forum	-	6,14,000
Project Expenses- Ministry of Environment, Forest and Climate Change	2,55,166	3,13,365	Project - Ministry of Environment, Forest and Climate Change	4,32,203	8,50,000
Project Expenditure - CSR	13,41,500	-	CSR Project Grants	13,41,500	-
Other Projects	53,56,907	-	Sponsorship / Other Receipts	80,83,382	-
Other Overheads	-	-	Membership Fees (New / Renewal)	21,70,000	14,67,002
Depreciation	21,56,336	21,89,364	<b>Other Income</b>	-	-
Administrative Expenses	50,52,315	6,35,782	Bank Interest Received	13,10,431	9,59,940
			Interest Received on FDR	7,10,125	6,00,400
			Interest on IT Refund	37,185	20,345
			Interest Received on Gratuity Fund	1,24,437	-
			Misc. Income	2,446	-
			Transfer from Capital Grant Reserve	19,75,974	20,20,996
Excess of Income over Expenditure	39,43,340	(16,58,237)			
<b>Total</b>	<b>13,14,58,562</b>	<b>9,73,76,815</b>	<b>Total</b>	<b>13,14,58,562</b>	<b>9,73,76,815</b>

As per our report of even date  
For Singh K V Gupta & Co  
Chartered Accountants (FRN 000133N)



CA Rakesh K Agarwal  
(Partner)  
M. No. 085908

Place: New Delhi  
Date: 26/08/2022

For Alliance For An Energy Efficient Economy

*Satish Kumar*

(Secretary)

**Satish Kumar**  
Secretary

**Chairperson**  
**Executive Council**  
**Alliance For an Energy Efficient Economy**







37 Link Road, Ground Floor  
Lajpat Nagar III, New Delhi, 110 024

+91-11-41235600  
info@aeee.in

